

APPENDIX 4.14 Emission Inventory of Portal Emissions (Operation)

Emission Inventory of Tunnel Portal for Operation Phase (Year 2029)

Road No.	Emission Source ID	Portal Description	Tunnel Length (km)	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical	Hourly Emission Rate (g/s)			
							(m)	(m)	(m)	NO ₂	NO	RSP	FSP
1e	1eN01	Tsing Lun Rd (NB)	0.0260	Volume	815696	830585	2.85	3.74	2.65	2.16E-04	1.35E-03	6.85E-05	6.30E-05
	1eN02		0.0260	Volume	815699	830593	2.85	3.74	2.65	2.16E-04	1.35E-03	6.85E-05	6.30E-05
	1eN03		0.0260	Volume	815701	830601	2.85	3.74	2.65	1.08E-04	6.73E-04	3.42E-05	3.15E-05
	1eN04		0.0260	Volume	815704	830608	2.85	3.74	2.65	1.08E-04	6.73E-04	3.42E-05	3.15E-05
1e	1eS01	Tsing Lun Rd (SB)	0.0260	Volume	815676	830557	2.85	3.74	2.65	2.16E-04	1.35E-03	6.85E-05	6.30E-05
	1eS02		0.0260	Volume	815674	830549	2.85	3.74	2.65	2.16E-04	1.35E-03	6.85E-05	6.30E-05
	1eS03		0.0260	Volume	815672	830542	2.85	3.74	2.65	1.08E-04	6.73E-04	3.42E-05	3.15E-05
	1eS04		0.0260	Volume	815674	830532	2.85	3.74	2.65	1.08E-04	6.73E-04	3.42E-05	3.15E-05

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

Initial Vertical Dimension, m = "Height of tunnel" / 2.15

Emissions from portals were predicted assuming the emissions behave a volume sources in accordance with the recommendations in the 1991 Permanent International Association of Road Congress Report (1991 PIARC Report) as adopted in Route 3 Tai Lam Tunnel & Yuen Long Approach Northern Section - Volume 1 Detailed Environmental Impact Assessment - Final Report

Emission Inventory of Tunnel Portal for Operation Phase (Year 2033 without Project)

Road No.	Emission Source ID	Portal Description	Tunnel Length (km)	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical	Hourly Emission Rate (g/s)			
							(m)	(m)	(m)	NO ₂	NO	RSP	FSP
1e	1eN01	Tsing Lun Rd (NB)	0.0260	Volume	815696	830585	2.85	3.74	2.65	1.35E-04	7.78E-04	4.03E-05	3.70E-05
	1eN02		0.0260	Volume	815699	830593	2.85	3.74	2.65	1.35E-04	7.78E-04	4.03E-05	3.70E-05
	1eN03		0.0260	Volume	815701	830601	2.85	3.74	2.65	6.75E-05	3.89E-04	2.01E-05	1.85E-05
	1eN04		0.0260	Volume	815704	830608	2.85	3.74	2.65	6.75E-05	3.89E-04	2.01E-05	1.85E-05
1e	1eS01	Tsing Lun Rd (SB)	0.0260	Volume	815676	830557	2.85	3.74	2.65	1.35E-04	7.78E-04	4.03E-05	3.70E-05
	1eS02		0.0260	Volume	815674	830549	2.85	3.74	2.65	1.35E-04	7.78E-04	4.03E-05	3.70E-05
	1eS03		0.0260	Volume	815672	830542	2.85	3.74	2.65	6.75E-05	3.89E-04	2.01E-05	1.85E-05
	1eS04		0.0260	Volume	815674	830532	2.85	3.74	2.65	6.75E-05	3.89E-04	2.01E-05	1.85E-05

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

Initial Lateral Dimension, m = "Width of tunnel" / 2.15

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Emission Inventory of Tunnel Portal for Operation Phase (Year 2033 with Project)

Road No.	Emission Source ID	Portal Description	Tunnel Length (km)	Source Type	x-coordinate	y-coordinate	Release Height	Initial Lateral Dimension	Initial Vertical	Hourly Emission Rate (g/s)			
							(m)	(m)	(m)	NO ₂	NO	RSP	FSP
1e	1eN01	Tsing Lun Rd (NB)	0.0260	Volume	815696	830585	2.85	3.74	2.65	1.40E-04	8.06E-04	4.16E-05	3.82E-05
	1eN02		0.0260	Volume	815699	830593	2.85	3.74	2.65	1.40E-04	8.06E-04	4.16E-05	3.82E-05
	1eN03		0.0260	Volume	815701	830601	2.85	3.74	2.65	7.02E-05	4.03E-04	2.08E-05	1.91E-05
	1eN04		0.0260	Volume	815704	830608	2.85	3.74	2.65	7.02E-05	4.03E-04	2.08E-05	1.91E-05
1e	1eS01	Tsing Lun Rd (SB)	0.0260	Volume	815676	830557	2.85	3.74	2.65	1.40E-04	8.06E-04	4.16E-05	3.82E-05
	1eS02		0.0260	Volume	815674	830549	2.85	3.74	2.65	1.40E-04	8.06E-04	4.16E-05	3.82E-05
	1eS03		0.0260	Volume	815672	830542	2.85	3.74	2.65	7.02E-05	4.03E-04	2.08E-05	1.91E-05
	1eS04		0.0260	Volume	815674	830532	2.85	3.74	2.65	7.02E-05	4.03E-04	2.08E-05	1.91E-05

Calculated AERMOD input data:

Release Height, m = "Height of Tunnel" / 2

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