

AGREEMENT NO: CE 38/2008 (HY) KAI TAK DEVELOPMENT - TRUNK ROAD T2 AND INFRASTRUCTURE AT SOUTH APRON INVESTIGATION, DESIGN AND CONSTRUCTION



# Appendix 4H

# Ventilation Building and Portal Emission of Trunk Road T2

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No	Shaft ID	X-Coordinate	Y-Coordinate	Base	NOx Emission	Stack Height	Stack Temp.	Stack Exit	Stack	Subject	<b>RSP Emission</b>
No.	onartib	X Ocoramate	1 ooonamate	Elevation (m)	Rate (g/s)	(m)	(K)	Velocity (m/s)	Diameter (m)	Premises	Rate (g/s)
1	T2-KT-EB	839391	819987	1.5	2.4041	13.8	298	5.70	7.57	T2 Ventilation Shaft at Kai Tak for EB	0.0984
2	T2-KT-WB	839379	819976	1.5	2.6038	13.8	298	5.70	7.57	T2 Ventilation Shaft at Kai Tak for WB	0.1035
3	T2-CKL-EB	841814	818040	4.5	2.4041	12	298	5.70	7.57	T2 Ventilation Shaft atCha Kwo Ling for EB	0.0984
4	T2-CKL-WB	841816	818024	4.5	2.6038	12	298	5.70	7.57	T2 Ventilation Shaft atCha Kwo Ling for WB	0.1035

Notes:

(1) Area of the Exhasut of EB is 45m2(2) Area of the Exhasut of WB is 45m2

## Hourly Profile for Ventilation Builling Emissions of the Project - T2

Hour	T2-KT-EB		T2-K	T-WB	T2-C	KL-EB	T2-CKL-WB		
nour	NOx	RSP	NOx	RSP	NOx	RSP	NOx	RSP	
Hour 1	2.2%	2.6%	1.8%	1.7%	2.2%	2.6%	1.8%	1.7%	
Hour 2	0.8%	0.6%	1.1%	1.0%	0.8%	0.6%	1.1%	1.0%	
Hour 3	0.8%	0.6%	1.1%	1.0%	0.8%	0.6%	1.1%	1.0%	
Hour 4	0.8%	0.6%	1.1%	1.0%	0.8%	0.6%	1.1%	1.0%	
Hour 5	0.8%	0.6%	1.2%	1.0%	0.8%	0.6%	1.2%	1.0%	
Hour 6	0.9%	0.9%	1.2%	1.2%	0.9%	0.9%	1.2%	1.2%	
Hour 7	0.9%	0.9%	1.2%	1.2%	0.9%	0.9%	1.2%	1.2%	
Hour 8	3.9%	3.9%	5.3%	5.7%	3.9%	3.9%	5.3%	5.7%	
Hour 9	6.9%	7.0%	9.8%	10.5%	6.9%	7.0%	9.8%	10.5%	
Hour 10	7.0%	7.1%	9.4%	10.3%	7.0%	7.1%	9.4%	10.3%	
Hour 11	6.1%	6.3%	7.4%	8.0%	6.1%	6.3%	7.4%	8.0%	
Hour 12	6.2%	6.4%	7.0%	7.1%	6.2%	6.4%	7.0%	7.1%	
Hour 13	4.7%	4.6%	5.7%	6.1%	4.7%	4.6%	5.7%	6.1%	
Hour 14	4.8%	4.7%	5.1%	5.1%	4.8%	4.7%	5.1%	5.1%	
Hour 15	4.9%	4.8%	4.9%	4.9%	4.9%	4.8%	4.9%	4.9%	
Hour 16	6.3%	6.4%	5.5%	5.5%	6.3%	6.4%	5.5%	5.5%	
Hour 17	6.3%	6.3%	4.9%	4.8%	6.3%	6.3%	4.9%	4.8%	
Hour 18	7.2%	7.1%	5.1%	4.6%	7.2%	7.1%	5.1%	4.6%	
Hour 19	8.4%	7.9%	5.6%	4.8%	8.4%	7.9%	5.6%	4.8%	
Hour 20	7.2%	7.1%	5.1%	4.5%	7.2%	7.1%	5.1%	4.5%	
Hour 21	4.0%	4.0%	2.9%	2.5%	4.0%	4.0%	2.9%	2.5%	
Hour 22	3.0%	3.2%	2.3%	2.1%	3.0%	3.2%	2.3%	2.1%	
Hour 23	3.0%	3.2%	2.4%	2.2%	3.0%	3.2%	2.4%	2.2%	
Hour 24	2.9%	3.1%	2.8%	3.0%	2.9%	3.1%	2.8%	3.0%	

#### Appendix 4H

CE 38/2008(HY) Kai Tak Development - Trunk Road T2 and Infrastructure at South Apron Investigation, Design and Construction Ventilation Building and Portal Emission of Trunk Road T2

No.	Portal ID	X-Coordinate	Y-Coordinate	Height (m)	Base Elevation (m)	Vol. Flow (m <sup>3</sup> /s)	RSP (g/s)	NOx (g/s)	Width (m)	Subject Premises
1	T2-KT	839438.5	819847.0	7.0	0.0	43.76	0.023	0.579	11	Portal of T2 at Kai Tak
2	T2-CKL	841837.8	818056.5	7.0	0.0	29.74	0.022	0.534	11	Portal of T2 at Cha Kwo Ling

According to PIARC 91, pollutant is assumed to emit completely out of the full enclosure and each "portal" emits one-half (1/2) of the total mass. For each "portal", two-thirds (2/3) and one-thirds (1/3) of the emitted mass are assumed to accumulate in the first and second 50 meters, respectively. This is the case for 2-way traffic lanes.

#### For First 50m Out of the Portal

No.	Portal ID	NOx (g/s)	RSP (g/s)	X-Coordinate	Y-Coordinate	Elevation (m)	NOx (g/s) of Each Source	Release Height (m)	Sigma Y	Sigma Z	Number of Volume Source	RSP (g/s) of Each Source
1	T2-KT	0.386	0.015	839434.7	819849.4	0.0	0.0772	3.5	5.12	3.26	5	0.00307
	T2-KT			839427.7	819856.5	0.0	0.0772	3.5	5.12	3.26		0.00307
	T2-KT			839420.8	819863.7	0.0	0.0772	3.5	5.12	3.26		0.00307
	T2-KT			839413.8	819870.9	0.0	0.0772	3.5	5.12	3.26		0.00307
	T2-KT			839406.9	819878.1	0.0	0.0772	3.5	5.12	3.26		0.00307
2	T2-CKL	0.356	0.015	841842.8	818057.2	0.0	0.0712	3.5	5.12	3.26	5	0.00292
	T2-CKL			841852.7	818058.6	0.0	0.0712	3.5	5.12	3.26		0.00292
	T2-CKL			841862.6	818059.9	0.0	0.0712	3.5	5.12	3.26		0.00292
	T2-CKL			841872.5	818061.3	0.0	0.0712	3.5	5.12	3.26		0.00292
	T2-CKL			841882.4	818062.7	0.0	0.0712	3.5	5.12	3.26		0.00292

### For Second 50m Out of the Portal

No.	Portal ID	NOx (g/s)	RSP (g/s)	X-Coordinate	Y-Coordinate	Elevation (m)	NOx (g/s) of Each Source	Release Height (m)	Sigma Y	Sigma Z	Number of Volume Source	RSP (g/s) of Each Source
1	T2-KT	0.2	0.008	839399.9	819885.3	0.0	0.0386	3.5	5.12	3.26	5	0.00153
	T2-KT			839392.9	819892.4	0.0	0.0386	3.5	5.12	3.26		0.00153
	T2-KT			839386.0	819899.6	0.0	0.0386	3.5	5.12	3.26		0.00153
	T2-KT			839379.0	819906.8	0.0	0.0386	3.5	5.12	3.26		0.00153
	T2-KT			839372.1	819914.0	0.0	0.0386	3.5	5.12	3.26		0.00153
2	T2-CKL	0.2	0.007	841892.3	818064.1	0.0	0.0356	3.5	5.12	3.26	5	0.00146
	T2-CKL			841902.2	818065.4	0.0	0.0356	3.5	5.12	3.26		0.00146
	T2-CKL			841912.1	818066.8	0.0	0.0356	3.5	5.12	3.26		0.00146
	T2-CKL			841922.0	818068.2	0.0	0.0356	3.5	5.12	3.26		0.00146
	T2-CKL			841931.9	818069.5	0.0	0.0356	3.5	5.12	3.26		0.00146