

Appendix 3.14 Sensitivity Test on the Potential Air Quality Impact of the Maximum Emission Rate of Representative Industrial Sources at Non SP Premises

Emission Rates of the Non SP Industrial Chimneys within the Assessment Area for Sensitivity Test

The maximum emission rates among the industrial sources of CH1_1A, CH4_EP2, CH4_EP3, CH2_S1 and CH3_EP2 are presented below and are adopted in the sensitivity test. All other emission parameters (e.g. exit velocity, exit temperature, diameter, height, etc.) remains unchange as presented in Appendix 3.4.

Source	Emission Point ID	NO ₂ / NO _x Ratio	Emission Rate (g/s)	
			NO _x	SO ₂
Nestlé Hong Kong Ltd.	CH5_1	10%	3.2222E-01	1.3528E+00
Eu Yan Sang	CH8_1	10%	3.2222E-01	1.3528E+00

Note:

All emission rates of other industrial sources, YLEPP and vehicular sources remain unchanged as Ultimate Scenario in the sensitivity test.

Appendix 3.14 Sensitivity Test on the Potential Air Quality Impact of the Maximum Emission Rate of Representative Industrial Sources at Non SP Premises

Ultimate

19th Highest Hourly NO2 Concentration (µg/m³)

Receptor ID	Height (mAG)	Vehicle	YLEPP	Industrial	Ambient Background	Total
A01	1.5	0.25	0.32	0.31	105.54	106.42
A01	5	0.17	0.42	0.29	105.54	106.42
A02	1.5	0.06	0.61	0.00	111.57	112.24
A02	5	0.06	0.61	0.00	111.57	112.24
A02	10	0.36	0.00	12.61	99.54	112.50
A02	15	0.05	0.01	0.37	119.28	119.70
A03	1.5	0.43	0.00	20.65	86.43	107.51
A03	5	0.40	0.01	21.03	86.43	107.87
A03	10	0.07	0.00	0.00	107.55	107.61
A04	1.5	0.47	0.00	7.04	98.67	106.18
A04	5	0.17	0.00	0.34	105.54	106.05
A04	10	0.14	0.00	7.34	98.67	106.16
A05	1.5	0.23	0.00	0.02	105.40	105.65
A05	5	0.19	0.00	0.02	105.40	105.60
A06	1.5	1.38	0.00	45.37	62.65	109.40
A06	5	0.42	0.00	49.31	57.02	106.75
A06	10	0.09	0.02	0.23	109.03	109.38
A07	1.5	1.71	0.00	0.19	103.82	105.73
A07	5	0.00	0.00	0.00	105.54	105.54
A07	10	0.00	0.00	0.00	106.46	106.46
A08	1.5	1.01	0.00	0.85	103.82	105.69
A08	5	0.86	0.00	0.85	103.82	105.54
A08	10	0.00	0.00	0.00	105.54	105.54
A09	1.5	0.47	0.00	23.88	85.83	110.18
A09	5	0.50	0.03	0.85	109.03	110.40
A09	10	0.04	0.02	0.00	111.57	111.63
A09	15	0.08	0.00	7.55	106.46	114.10
A10	1.5	0.00	0.00	0.00	96.18	96.18
A10	5	0.00	0.00	0.00	96.18	96.18
A11	1.5	0.08	35.36	0.00	75.31	110.74
A11	5	0.59	0.00	15.81	95.08	111.48
P1	15	0.01	1.11	0.01	108.00	109.13
P1	20	0.00	0.07	0.00	111.70	111.77
P2	15	0.11	41.06	2.28	63.95	107.40
P2	20	0.13	27.46	8.99	77.12	113.71
P3	15	0.01	0.00	0.00	108.95	108.97
P3	20	0.00	0.07	0.00	111.70	111.77
P4	15	0.09	44.92	2.18	63.14	110.33
P4	20	0.01	79.07	0.09	35.13	114.31

Appendix 3.14 Sensitivity Test on the Potential Air Quality Impact of the Maximum Emission Rate of Representative Industrial Sources at Non SP Premises

Ultimate

Annual NO2 Concentration (µg/m³)

Receptor ID	Height (mAG)	Vehicle	YLEPP	Industrial	Ambient Background	Total
A01	1.5	0.16	0.44	2.34	18.47	21.42
A01	5	0.14	0.43	2.24	18.47	21.29
A02	1.5	0.31	2.46	5.52	18.47	26.76
A02	5	0.25	2.60	5.61	18.47	26.93
A02	10	0.16	3.09	5.64	18.47	27.36
A02	15	0.10	3.85	6.53	18.47	28.96
A03	1.5	0.38	0.41	2.50	18.47	21.76
A03	5	0.27	0.41	2.56	18.47	21.71
A03	10	0.13	0.43	2.82	18.47	21.86
A04	1.5	0.19	0.22	2.14	18.47	21.02
A04	5	0.16	0.21	1.83	18.47	20.68
A04	10	0.12	0.22	2.27	18.47	21.08
A05	1.5	0.06	0.25	0.76	18.47	19.55
A05	5	0.05	0.25	0.74	18.47	19.52
A06	1.5	0.25	0.82	9.82	18.47	29.36
A06	5	0.22	0.84	8.88	18.47	28.41
A06	10	0.16	0.95	7.24	18.47	26.82
A07	1.5	0.33	0.67	5.82	18.47	25.30
A07	5	0.21	0.68	5.81	18.47	25.18
A07	10	0.14	0.76	5.84	18.47	25.22
A08	1.5	0.10	0.92	3.82	18.47	23.32
A08	5	0.09	0.94	3.79	18.47	23.29
A08	10	0.08	1.01	3.75	18.47	23.31
A09	1.5	0.23	2.44	3.62	18.47	24.76
A09	5	0.20	2.56	3.59	18.47	24.81
A09	10	0.13	3.08	3.62	18.47	25.31
A09	15	0.08	4.01	3.72	18.47	26.29
A10	1.5	0.03	0.59	0.84	16.79	18.24
A10	5	0.02	0.59	0.83	16.79	18.23
A11	1.5	0.18	2.36	4.40	18.47	25.43
A11	5	0.16	2.49	4.39	18.47	25.52
P1	15	0.03	1.28	1.40	16.79	19.51
P1	20	0.03	1.43	1.42	16.79	19.67
P2	15	0.03	1.49	1.51	16.79	19.83
P2	20	0.03	1.70	1.53	16.79	20.05
P3	15	0.03	1.12	1.40	16.79	19.34
P3	20	0.03	1.25	1.41	16.79	19.48
P4	15	0.04	1.18	1.59	18.47	21.28
P4	20	0.03	1.32	1.59	18.47	21.42

Appendix 3.14 Sensitivity Test on the Potential Air Quality Impact of the Maximum Emission Rate of Representative Industrial Sources at Non SP Premises

Ultimate

4th Highest 10min SO2 Concentration (µg/m³)

Receptor ID	Height (mAG)	YLEPP	Industrial	Ambient Background	Total
A01	1.5	0.02	70.72	109.50	180.24
A01	5	0.02	63.69	109.50	173.21
A02	1.5	0.00	102.42	68.75	171.17
A02	5	0.00	102.21	68.75	170.96
A02	10	0.00	101.51	68.75	170.26
A02	15	0.01	100.30	68.75	169.06
A03	1.5	0.00	127.63	38.08	165.71
A03	5	0.00	128.28	38.08	166.36
A03	10	0.00	130.14	38.08	168.22
A04	1.5	0.68	221.41	38.10	260.19
A04	5	0.66	146.08	38.10	184.85
A04	10	0.57	271.75	8.19	280.51
A05	1.5	0.48	53.60	85.70	139.78
A05	5	0.39	52.71	85.70	138.81
A06	1.5	6.82	168.61	37.34	212.77
A06	5	6.78	168.27	37.34	212.39
A06	10	6.73	167.49	37.34	211.56
A07	1.5	5.51	109.48	37.34	152.33
A07	5	5.47	109.26	37.34	152.07
A07	10	13.39	146.52	5.35	165.26
A08	1.5	1.82	81.97	47.66	131.46
A08	5	1.76	81.39	47.66	130.82
A08	10	0.00	127.56	12.66	140.22
A09	1.5	0.00	122.91	39.18	162.09
A09	5	0.00	122.86	39.18	162.04
A09	10	0.00	122.64	39.18	161.82
A09	15	143.49	0.00	24.49	167.99
A10	1.5	3.85	94.54	32.11	130.50
A10	5	3.89	94.42	32.11	130.41
A11	1.5	0.00	105.95	39.18	145.13
A11	5	0.00	105.64	39.18	144.81
P1	15	0.03	134.26	32.11	166.40
P1	20	0.06	134.49	32.11	166.66
P2	15	0.20	133.51	32.11	165.82
P2	20	0.28	134.63	32.11	167.01
P3	15	0.00	132.24	32.11	164.35
P3	20	0.03	131.89	32.11	164.03
P4	15	0.01	135.28	50.35	185.63
P4	20	0.03	136.45	50.35	186.82

Appendix 3.14 Sensitivity Test on the Potential Air Quality Impact of the Maximum Emission Rate of Representative Industrial Sources at Non SP Premises

Ultimate

4th Highest Daily SO2 Concentration (µg/m³)

Receptor ID	Height (mAG)	YLEPP	Industrial	Ambient Background	Total
A01	1.5	0.24	6.70	28.34	35.28
A01	5	0.25	6.54	28.34	35.14
A02	1.5	5.21	9.73	17.84	32.77
A02	5	5.69	9.75	17.84	33.28
A02	10	7.21	10.09	17.84	35.14
A02	15	9.40	10.79	17.84	38.03
A03	1.5	0.02	10.01	26.12	36.15
A03	5	0.12	18.63	17.68	36.44
A03	10	1.42	15.69	20.42	37.54
A04	1.5	0.09	21.91	17.94	39.94
A04	5	0.15	12.60	21.94	34.68
A04	10	0.02	27.53	12.37	39.92
A05	1.5	0.32	3.55	23.13	27.00
A05	5	0.32	3.53	23.13	26.97
A06	1.5	1.09	12.63	23.43	37.15
A06	5	1.10	12.57	23.43	37.10
A06	10	1.12	12.56	23.43	37.12
A07	1.5	0.78	10.22	23.43	34.43
A07	5	0.77	10.20	23.43	34.41
A07	10	0.78	10.32	23.43	34.53
A08	1.5	0.57	1.32	28.34	30.23
A08	5	0.57	1.30	28.34	30.22
A08	10	0.60	1.29	28.34	30.23
A09	1.5	0.56	10.13	28.34	39.04
A09	5	0.57	10.15	28.34	39.05
A09	10	0.60	10.36	28.34	39.31
A09	15	0.68	15.62	23.18	39.48
A10	1.5	1.43	4.50	23.44	29.37
A10	5	1.50	4.49	23.44	29.43
A11	1.5	0.67	5.22	28.34	34.22
A11	5	0.69	5.21	28.34	34.24
P1	15	2.75	7.44	23.44	33.63
P1	20	3.55	7.82	23.44	34.81
P2	15	2.96	7.73	23.44	34.12
P2	20	3.97	8.08	23.44	35.49
P3	15	3.52	7.43	23.44	34.38
P3	20	4.50	7.87	23.44	35.81
P4	15	1.63	4.93	28.34	34.89
P4	20	1.84	5.47	28.34	35.65