

Annex A5-2 - Health Risk Assessment for Benzene & Vinyl Chloride during Operation/Restoration Phase

Note : Assessment was only carried within 500m from the Extension site boundary

Benzene

Unit Risk Factor

7.80E-06

ASR	Name	Approx. Maximum Height of Building (m)	Annual Concentration ($\mu\text{g}/\text{m}^3$)				Health Risk Level				
			GD	10m	20m	30m	GD	10m	20m	30m	Highest
A1-1	Proposed C&DM Handling Facility	30	0.00003	0.00003	0.00005	0.00009	2.3E-10	2.3E-10	3.9E-10	7.0E-10	7.0E-10
A1-2 (1)	Planned Industrial Uses in TKO 137 (South of Extension) - 1	30	0.00002	0.00007	0.00041	0.002	1.6E-10	5.5E-10	3.2E-09	1.6E-08	1.6E-08
A1-2 (2)	137 (South of extension) - 2 (outside 200m HKSG buffer distance)	30	0.00002	0.00003	0.00006	0.00012	1.6E-10	2.3E-10	4.7E-10	9.4E-10	9.4E-10
A1-3 (1)	Planned Industrial Uses in TKO 137 - (South of TVB City) 1	30	0.00005	0.00006	0.00006	0.00008	3.9E-10	4.7E-10	4.7E-10	6.2E-10	6.2E-10
A1-3 (2)	137 - (South of TVB City) - 2 (outside 200m HKPSG buffer distance)	30	0.00005	0.00005	0.00007	0.00011	3.9E-10	3.9E-10	5.5E-10	8.6E-10	8.6E-10
A2	TVB City	30	0.00005	0.00005	0.00006	0.00008	3.9E-10	3.9E-10	4.7E-10	6.2E-10	6.2E-10
A3	HAESL	30	0.00004	0.00004	0.00005	0.00006	3.1E-10	3.1E-10	3.9E-10	4.7E-10	4.7E-10
A4	HAECO Component Overhaul Building	30	0.00004	0.00004	0.00005	0.00006	3.1E-10	3.1E-10	3.9E-10	4.7E-10	4.7E-10
A7	Yan Hing Machinery Industrial Building	30	0.00006	0.00006	0.00008	0.00013	4.7E-10	4.7E-10	6.2E-10	1.0E-09	1.0E-09
A8	Apple Daily	30	0.00005	0.00006	0.00008	0.00011	3.9E-10	4.7E-10	6.2E-10	8.6E-10	8.6E-10

Vinyl Chloride

Unit Risk Factor

8.80E-06

ASR	Name	Approx. Maximum Height of Building (m)	Annual Concentration ($\mu\text{g}/\text{m}^3$)				Health Risk Level				
			GD	10m	20m	30m	GD	10m	20m	30m	Highest
A1-1	Proposed C&DM Handling Facility	30	0.00001	0.00001	0.00002	0.00004	8.8E-11	8.8E-11	1.8E-10	3.5E-10	3.5E-10
A1-2 (1)	Planned Industrial Uses in TKO 137 (South of Extension) - 1	30	0.00001	0.00004	0.00025	0.00089	8.8E-11	3.5E-10	2.2E-09	7.8E-09	7.8E-09
A1-2 (2)	137 (South of extension) - 2 (outside 200m HKSG buffer distance)	30	0.00001	0.00001	0.00002	0.00005	8.8E-11	8.8E-11	1.8E-10	4.4E-10	4.4E-10
A1-3 (1)	Planned Industrial Uses in TKO 137 - (South of TVB City) 1	30	0.00002	0.00002	0.00003	0.00004	1.8E-10	1.8E-10	2.6E-10	3.5E-10	3.5E-10
A1-3 (2)	137 - (South of TVB City) - 2 (outside 200m HKPSG buffer distance)	30	0.00002	0.00002	0.00003	0.00005	1.8E-10	1.8E-10	2.6E-10	4.4E-10	4.4E-10
A2	TVB City	30	0.00002	0.00002	0.00003	0.00003	1.8E-10	1.8E-10	2.6E-10	2.6E-10	2.6E-10
A3	HAESL	30	0.00002	0.00002	0.00002	0.00003	1.8E-10	1.8E-10	1.8E-10	2.6E-10	2.6E-10
A4	HAECO Component Overhaul Building	30	0.00002	0.00002	0.00002	0.00003	1.8E-10	1.8E-10	1.8E-10	2.6E-10	2.6E-10
A7	Yan Hing Machinery Industrial Building	30	0.00003	0.00003	0.00004	0.00006	2.6E-10	2.6E-10	3.5E-10	5.3E-10	5.3E-10
A8	Apple Daily	30	0.00002	0.00003	0.00004	0.00005	1.8E-10	2.6E-10	3.5E-10	4.4E-10	4.4E-10

Total Risk

ASR	Name	Approx. Maximum Height of Building (m)	Total Health Risk Level				
			GD	10m	20m	30m	Highest
A1-1	Proposed C&DM Handling Facility	30	3.2E-10	3.2E-10	5.7E-10	1.1E-09	1.1E-09
A1-2 (1)	Planned Industrial Uses in TKO 137 (South of Extension) - 1	30	2.4E-10	9.0E-10	5.4E-09	2.3E-08	2.3E-08
A1-2 (2)	137 (South of extension) - 2 (outside 200m HKSG buffer distance)	30	2.4E-10	3.2E-10	6.4E-10	1.4E-09	1.4E-09
A1-3 (1)	Planned Industrial Uses in TKO 137 - (South of TVB City) 1	30	5.7E-10	6.4E-10	7.3E-10	9.8E-10	9.8E-10
A1-3 (2)	137 - (South of TVB City) - 2 (outside 200m HKPSG buffer distance)	30	5.7E-10	5.7E-10	8.1E-10	1.3E-09	1.3E-09
A2	TVB City	30	5.7E-10	5.7E-10	7.3E-10	8.9E-10	8.9E-10
A3	HAELO	30	4.9E-10	4.9E-10	5.7E-10	7.3E-10	7.3E-10
A4	HAECO Component Overhaul Building	30	4.9E-10	4.9E-10	5.7E-10	7.3E-10	7.3E-10
A7	Yan Hing Machinery Industrial Building	30	7.3E-10	7.3E-10	9.8E-10	1.5E-09	1.5E-09
A8	Apple Daily	30	5.7E-10	7.3E-10	9.8E-10	1.3E-09	1.3E-09