

Appendix 10C Predicted Cumulative Chronic Non-carcinogenic Health Risk

Representative HSR	Assessment Height (mAG)	Exposure Factor (EF) ^[1]	Cumulative Annual Average Concentration (ug/m ³)										
			Antimony (Sb)	Arsenic (As)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr(VI))	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Manganese (Mn)	Mercury (Hg)	Nickel (Ni)
Chronic Inhalation RfC			2.00E-01	N/A	2.00E-02	5.00E-03	1.00E-01	1.00E-01	2.00E+00	5.00E-01	1.50E-01	1.00E+00	N/A
Compliance (YES/NO)			YES	N/A	YES	YES	YES	YES	YES	YES	YES	YES	N/A
BPS1	1.5	2.40E-01	2.24E-03	3.09E-03	3.93E-05	8.31E-04	8.00E-04	2.24E-03	5.32E-02	1.68E-02	1.99E-02	4.17E-04	6.72E-03
BPS1	5	2.40E-01	2.23E-03	3.09E-03	3.93E-05	8.30E-04	7.92E-04	2.23E-03	5.32E-02	1.68E-02	1.99E-02	4.15E-04	6.71E-03
BPS1	10	2.40E-01	2.23E-03	3.08E-03	3.93E-05	8.29E-04	7.84E-04	2.23E-03	5.32E-02	1.68E-02	1.99E-02	4.14E-04	6.71E-03
LKT2	1.5	1.00E+00	2.85E-03	3.99E-03	3.89E-05	8.98E-04	1.71E-03	2.85E-03	5.38E-02	1.74E-02	2.05E-02	4.89E-04	7.59E-03
LKT2	5	1.00E+00	2.85E-03	3.99E-03	3.89E-05	8.97E-04	1.70E-03	2.85E-03	5.38E-02	1.74E-02	2.05E-02	4.88E-04	7.59E-03
LKT2	10	1.00E+00	2.84E-03	3.97E-03	3.89E-05	8.94E-04	1.68E-03	2.84E-03	5.38E-02	1.74E-02	2.05E-02	4.86E-04	7.57E-03
LKT1	1.5	2.40E-01	9.52E-04	2.87E-03	3.78E-05	7.07E-04	6.02E-04	9.52E-04	5.19E-02	1.55E-02	1.86E-02	2.91E-04	6.39E-03
TTC1	4	2.40E-01	5.25E-03	3.11E-03	4.35E-05	9.98E-04	7.35E-04	5.25E-03	5.62E-02	1.98E-02	2.29E-02	5.82E-04	7.04E-03
TPO1	39	2.40E-01	3.27E-03	2.77E-03	4.12E-05	8.28E-04	4.42E-04	3.27E-03	5.42E-02	1.78E-02	2.09E-02	4.16E-04	6.54E-03
TPO2	42	2.40E-01	3.40E-03	2.80E-03	4.14E-05	8.41E-04	4.67E-04	3.40E-03	5.44E-02	1.80E-02	2.10E-02	4.28E-04	6.58E-03
WXO1	1.5	2.40E-01	1.77E-03	2.80E-03	3.90E-05	7.57E-04	5.13E-04	1.77E-03	5.28E-02	1.64E-02	1.94E-02	3.44E-04	6.41E-03
HPN7	1.5	1.00E+00	3.06E-03	3.87E-03	3.93E-05	9.40E-04	1.57E-03	3.06E-03	5.40E-02	1.76E-02	2.07E-02	5.89E-04	7.50E-03
HPN5	1.5	1.00E+00	3.65E-03	4.01E-03	4.00E-05	1.03E-03	1.70E-03	3.65E-03	5.46E-02	1.82E-02	2.13E-02	6.61E-04	7.69E-03
HPN6	1.5	1.00E+00	3.66E-03	4.02E-03	4.00E-05	1.03E-03	1.71E-03	3.66E-03	5.46E-02	1.82E-02	2.13E-02	6.62E-04	7.70E-03
HPN4	1.5	1.00E+00	2.80E-03	3.67E-03	3.93E-05	9.04E-04	1.38E-03	2.80E-03	5.38E-02	1.74E-02	2.04E-02	5.44E-04	7.30E-03
NWR1	1.5	1.00E+00	3.04E-03	3.77E-03	3.95E-05	9.37E-04	1.47E-03	3.04E-03	5.40E-02	1.76E-02	2.07E-02	5.74E-04	7.41E-03
SPN1	1.5	1.00E+00	2.50E-03	3.40E-03	3.82E-05	8.67E-04	1.11E-03	2.50E-03	5.35E-02	1.71E-02	2.01E-02	4.82E-04	7.02E-03
HPN1	1.5	1.00E+00	2.60E-03	3.44E-03	3.93E-05	8.78E-04	1.14E-03	2.60E-03	5.36E-02	1.72E-02	2.03E-02	5.03E-04	7.07E-03
HPN2	1.5	1.00E+00	2.63E-03	3.45E-03	3.93E-05	8.81E-04	1.16E-03	2.63E-03	5.36E-02	1.72E-02	2.03E-02	5.07E-04	7.09E-03
HPN3	1.5	1.00E+00	2.82E-03	3.53E-03	3.95E-05	9.04E-04	1.23E-03	2.82E-03	5.38E-02	1.74E-02	2.05E-02	5.28E-04	7.17E-03
NWR2	1.5	1.00E+00	2.21E-03	3.30E-03	3.90E-05	8.39E-04	1.01E-03	2.21E-03	5.32E-02	1.68E-02	1.99E-02	4.61E-04	6.90E-03
NWR3	1.5	1.00E+00	2.20E-03	3.29E-03	3.89E-05	8.38E-04	1.00E-03	2.20E-03	5.32E-02	1.68E-02	1.98E-02	4.59E-04	6.89E-03
NWR4	1.5	1.00E+00	2.13E-03	3.27E-03	3.89E-05	8.30E-04	9.79E-04	2.13E-03	5.31E-02	1.67E-02	1.98E-02	4.52E-04	6.87E-03

Representative HSR	Assessment Height (mAG)	Exposure Factor (EF) ^[1]	Cumulative Annual Average Concentration (ug/m ³)										
			Thallium (Tl)	Vanadium (V)	Zinc (Zn)	PCBs	Dioxins and Furans	PAHs	Hydrochloric acid (HCl)	Hydrogen Fluoride (HF)	Ammonia (NH ₃)	Selenium (Se)	TOC
Chronic Inhalation RfC			N/A	1.00E+00	N/A	N/A	4.00E-05	3.00E+00	2.00E+01	1.40E+01	8.00E+00	2.00E+01	N/A
Compliance (YES/NO)			N/A	YES	N/A	N/A	YES	YES	YES	YES	YES	YES	N/A
BPS1	1.5	2.40E-01	2.26E-04	1.40E-02	7.80E-02	1.71E-06	1.84E-08	3.18E-01	1.62E-01	1.87E-02	9.38E-02	5.17E-04	1.09E-01
BPS1	5	2.40E-01	2.25E-04	1.40E-02	7.80E-02	1.72E-06	1.84E-08	3.18E-01	1.61E-01	1.86E-02	9.40E-02	5.17E-04	1.08E-01
BPS1	10	2.40E-01	2.24E-04	1.40E-02	7.80E-02	1.73E-06	1.84E-08	3.18E-01	1.59E-01	1.86E-02	9.49E-02	5.17E-04	1.07E-01
LKT2	1.5	1.00E+00	2.93E-04	1.46E-02	7.76E-02	1.39E-06	1.85E-08	3.18E-01	1.64E-01	1.60E-02	1.37E-01	5.14E-04	1.72E-01
LKT2	5	1.00E+00	2.92E-04	1.46E-02	7.76E-02	1.40E-06	1.85E-08	3.18E-01	1.62E-01	1.59E-02	1.37E-01	5.14E-04	1.71E-01
LKT2	10	1.00E+00	2.89E-04	1.46E-02	7.76E-02	1.40E-06	1.85E-08	3.18E-01	1.59E-01	1.58E-02	1.36E-01	5.14E-04	1.70E-01
LKT1	1.5	2.40E-01	1.02E-04	1.27E-02	7.65E-02	5.10E-07	1.81E-08	3.17E-01	6.48E-02	6.51E-03	4.26E-02	5.05E-04	5.28E-02
TTC1	4	2.40E-01	3.93E-04	1.70E-02	8.23E-02	5.13E-06	1.87E-08	3.18E-01	1.97E-01	3.70E-02	3.01E-01	5.51E-04	1.94E-01
TPO1	39	2.40E-01	2.23E-04	1.50E-02	7.99E-02	3.25E-06	1.84E-08	3.18E-01	8.75E-02	2.09E-02	1.95E-01	5.33E-04	1.15E-01
TPO2	42	2.40E-01	2.36E-04	1.52E-02	8.01E-02	3.38E-06	1.84E-08	3.18E-01	9.62E-02	2.21E-02	2.01E-01	5.34E-04	1.21E-01
WXO1	1.5	2.40E-01	1.52E-04	1.35E-02	7.78E-02	1.52E-06	1.82E-08	3.18E-01	8.87E-02	1.29E-02	1.11E-01	5.15E-04	7.64E-02
HPN7	1.5	1.00E+00	3.35E-04	1.48E-02	7.81E-02	1.77E-06	1.86E-08	3.18E-01	2.32E-01	2.29E-02	2.07E-01	5.18E-04	1.76E-01
HPN5	1.5	1.00E+00	4.22E-04	1.54E-02	7.87E-02	2.28E-06	1.88E-08	3.18E-01	3.29E-01	3.21E-02	2.43E-01	5.23E-04	2.06E-01
HPN6	1.5	1.00E+00	4.20E-04	1.54E-02	7.87E-02	2.29E-06	1.88E-08	3.18E-01	3.24E-01	3.17E-02	2.44E-01	5.23E-04	2.07E-01
HPN4	1.5	1.00E+00	2.99E-04	1.46E-02	7.80E-02	1.70E-06	1.85E-08	3.18E-01	2.03E-01	2.07E-02	2.14E-01	5.17E-04	1.57E-01
NWR1	1.5	1.00E+00	3.32E-04	1.48E-02	7.82E-02	1.85E-06	1.86E-08	3.18E-01	2.36E-01	2.37E-02	2.23E-01	5.19E-04	1.71E-01
SPN1	1.5	1.00E+00	2.62E-04	1.43E-02	7.80E-02	1.67E-06	1.84E-08	3.18E-01	1.82E-01	1.95E-02	2.10E-01	5.17E-04	1.33E-01
HPN1	1.5	1.00E+00	2.73E-04	1.44E-02	7.81E-02	1.74E-06	1.85E-08	3.18E-01	1.90E-01	2.03E-02	2.17E-01	5.17E-04	1.39E-01
HPN2	1.5	1.00E+00	2.76E-04	1.44E-02	7.81E-02	1.76E-06	1.85E-08	3.18E-01	1.91E-01	2.04E-02	2.19E-01	5.18E-04	1.41E-01
HPN3	1.5	1.00E+00	2.99E-04	1.46E-02	7.82E-02	1.89E-06	1.85E-08	3.18E-01	2.11E-01	2.24E-02	2.29E-01	5.19E-04	1.51E-01
NWR2	1.5	1.00E+00	2.34E-04	1.40E-02	7.77E-02	1.46E-06	1.84E-08	3.18E-01	1.64E-01	1.73E-02	1.86E-01	5.15E-04	1.19E-01
NWR3	1.5	1.00E+00	2.33E-04	1.39E-02	7.77E-02	1.45E-06	1.84E-08	3.18E-01	1.63E-01	1.72E-02	1.85E-01	5.14E-04	1.19E-01
NWR4	1.5	1.00E+00	2.25E-04	1.39E-02	7.76E-02	1.40E-06	1.84E-08	3.18E-01	1.57E-01	1.65E-02	1.81E-01	5.14E-04	1.15E-01

Notes

[1] Reference was made to Agency for Toxic Substances and Disease Registry. 2020. Guidance for Inhalation Exposures. Atlanta, Ga: U.S. Department of Health and Human Services, Public Health Service, December 1.

Cumulative Annual Average Concentration = Total Predicted annual average concentration x Exposure Factor + Background concentration

[2] The inhalation RfC (ug/m³) adopted in the approved IWMF Phase 1 EIA report are as follows - Sb:1, Be:0.02, Cr(VI): 0.1, Co: 0.2, Cu: 2, HCL: 20, HF: 3, Pb: 0.5, Mn: 0.15, Hg: 1, PAHs: 3, Tl: 0.2, V:1. The above assessment result also complies with these criteria.