

Appendix V6-5H

Predicted Metal Concentrations in Soil from
Dust Deposition during the Construction Phase

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D06 (0-10)			D06 (10-20)			D10 (0-10)			D10 (10-20)			D20 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	15200	5.50E+01	15255	14300	5.50E+01	14355	7230	3.53E+01	7265	7250	3.53E+01	7285	10300	1.05E+02	10405
Antimony	0.1 - 10	5.00	1.90E-04	5.00	5.00	1.90E-04	5.00	5.00	1.22E-04	5.00	5.00	1.22E-04	5.00	5.00	3.61E-04	5.00
Arsenic	0.05 - 5	2.50	9.48E-04	2.50	2.50	9.48E-04	2.50	2.50	6.08E-04	2.50	5.60	6.08E-04	5.60	2.50	1.81E-03	2.50
Barium	0.5 - 1	82.7	5.69E-03	82.7	76.2	5.69E-03	76.2	21.8	3.65E-03	21.8	29.2	3.65E-03	29.2	81.4	1.08E-02	81.4
Beryllium	0.2 - 0.5	0.250	6.26E-04	0.251	0.250	6.26E-04	0.251	0.250	4.01E-04	0.250	0.250	4.01E-04	0.250	0.250	1.19E-03	0.251
Bismuth	0.2 - 20	10.0	1.90E-04	10.0	10.0	1.90E-04	10.0	10.0	1.22E-04	10.0	10.0	1.22E-04	10.0	10.0	3.61E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.90E-04	0.250	0.250	1.90E-04	0.250	0.250	1.22E-04	0.250	0.250	1.22E-04	0.250	0.250	3.61E-04	0.250
Calcium	50.0	3040	6.07E+01	3101	3170	6.07E+01	3231	1780	3.89E+01	1819	2120	3.89E+01	2159	11100	1.16E+02	11216
Chromium	0.5 - 2	47.6	2.84E-01	47.9	48.1	2.84E-01	48.4	23.8	1.82E-01	24.0	22.1	1.82E-01	22.3	81.8	5.42E-01	82.3
Cobalt	0.1 - 2	9.80	6.64E-02	9.87	11.9	6.64E-02	12.0	7.90	4.26E-02	7.94	8.30	4.26E-02	8.34	16.7	1.26E-01	16.8
Copper	0.5 - 1	20.1	2.09E-01	20.3	16.9	2.09E-01	17.1	21.3	1.34E-01	21.4	31.4	1.34E-01	31.5	38.2	3.97E-01	38.6
Iron	50.0	23200	9.29E+01	23293	23800	9.29E+01	23893	15100	5.96E+01	15160	15100	5.96E+01	15160	23600	1.77E+02	23777
Lead	0.5 - 30	15.0	1.14E-03	15.0	15.0	1.14E-03	15.0	15.0	7.30E-04	15.0	15.0	7.30E-04	15.0	15.0	2.17E-03	15.0
Magnesium	20 - 50	8480	4.36E+01	8524	7980	4.36E+01	8024	4710	2.80E+01	4738	4790	2.80E+01	4818	7790	8.31E+01	7873
Manganese	1.00	243	1.76E+00	245	340	1.76E+00	342	212	1.13E+00	213	192	1.13E+00	193	790	3.36E+00	793
Mercury	0.005 - 0.005	0.00940	1.90E-05	0.00942	0.00250	1.90E-05	0.00252	0.00690	1.22E-05	0.00691	0.00250	1.22E-05	0.00251	0.0543	3.61E-05	0.0543
Molybdenum	0.5 - 4	2.00	9.48E-04	2.00	2.00	9.48E-04	2.00	2.00	6.08E-04	2.00	2.00	6.08E-04	2.00	2.00	1.81E-03	2.00
Nickel	0.5 - 5	24.7	1.37E-01	24.8	25.2	1.37E-01	25.3	15.2	8.75E-02	15.3	16.0	8.75E-02	16.1	53.5	2.60E-01	53.8
Phosphorus	50.0	395	4.17E-01	395	413	4.17E-01	413	235	2.68E-01	235	269	2.68E-01	269	715	7.95E-01	716
Potassium	100 - 200	2950	1.90E-01	2950	2520	1.90E-01	2520	550	1.22E-01	550	820	1.22E-01	820	1110	3.61E-01	1110
Selenium	0.2 - 0.5	0.250	9.48E-04	0.251	0.250	9.48E-04	0.251	0.250	6.08E-04	0.251	0.250	6.08E-04	0.251	0.250	1.81E-03	0.252
Silver	0.1 - 2	1.00	1.90E-04	1.00	1.00	1.90E-04	1.00	1.00	1.22E-04	1.00	1.00	1.22E-04	1.00	1.00	3.61E-04	1.00
Sodium	100 - 200	480	4.74E-01	480	310	4.74E-01	310	100	3.04E-01	100	100	3.04E-01	100	100	9.03E-01	101
Strontium	0.50	21.3	2.66E-02	21.3	19.5	2.66E-02	19.5	8.21	1.70E-02	8.23	9.02	1.70E-02	9.04	33.3	5.06E-02	33.4
Thallium	0.05 - 1	0.500	1.90E-04	0.500	0.500	1.90E-04	0.500	0.500	1.22E-04	0.500	0.500	1.22E-04	0.500	0.500	3.61E-04	0.500
Tin	2 - 5	2.50	3.79E-03	2.50	2.50	3.79E-03	2.50	2.50	2.43E-03	2.50	2.50	2.43E-03	2.50	2.50	7.22E-03	2.51
Titanium	1.00	1180	4.17E+00	1184	1060	4.17E+00	1064	509	2.68E+00	512	527	2.68E+00	530	351	7.95E+00	359
Uranium	0.05	1.37	1.90E-04	1.37	1.32	1.90E-04	1.32	0.297	1.22E-04	0.297	0.370	1.22E-04	0.370	0.378	3.61E-04	0.378
Vanadium	0.2 - 2	51.2	1.90E-01	51.4	50.9	1.90E-01	51.1	32.0	1.22E-01	32.1	32.8	1.22E-01	32.9	46.3	3.61E-01	46.7
Zinc	1.00	44.7	1.12E-01	44.8	39.7	1.12E-01	39.8	25.3	7.17E-02	25.4	30.1	7.17E-02	30.2	47.1	2.13E-01	47.3

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D20 (10-20)			D21 (0-10)			D21 (10-20)			D29 (0-10)			D29 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	12200	1.05E+02	12305	21100	4.52E+01	21145	19500	4.52E+01	19545	18600	3.09E+01	18631	20900	3.09E+01	20931
Antimony	0.1 - 10	5.00	3.61E-04	5.00	5.00	1.56E-04	5.00	5.00	1.56E-04	5.00	5.00	1.06E-04	5.00	5.00	1.06E-04	5.00
Arsenic	0.05 - 5	2.50	1.81E-03	2.50	2.50	7.79E-04	2.50	2.50	7.79E-04	2.50	2.50	5.32E-04	2.50	5.20	5.32E-04	5.20
Barium	0.5 - 1	39.7	1.08E-02	39.7	112	4.67E-03	112	107	4.67E-03	107	100	3.19E-03	100	121	3.19E-03	121
Beryllium	0.2 - 0.5	0.250	1.19E-03	0.251	0.640	5.14E-04	0.641	0.590	5.14E-04	0.591	0.530	3.51E-04	0.530	0.580	3.51E-04	0.580
Bismuth	0.2 - 20	10.0	3.61E-04	10.0	10.0	1.56E-04	10.0	10.0	1.56E-04	10.0	10.0	1.06E-04	10.0	10.0	1.06E-04	10.0
Cadmium	0.05 - 0.5	0.250	3.61E-04	0.250	0.250	1.56E-04	0.250	0.250	1.56E-04	0.250	0.250	1.06E-04	0.250	0.250	1.06E-04	0.250
Calcium	50.0	7590	1.16E+02	7706	3760	4.98E+01	3810	3630	4.98E+01	3680	9020	3.41E+01	9054	7320	3.41E+01	7354
Chromium	0.5 - 2	74.5	5.42E-01	75.0	62.8	2.34E-01	63.0	58.6	2.34E-01	58.8	51.8	1.60E-01	52.0	60.6	1.60E-01	60.8
Cobalt	0.1 - 2	17.1	1.26E-01	17.2	11.4	5.45E-02	11.5	10.1	5.45E-02	10.2	10.3	3.73E-02	10.3	12.9	3.73E-02	12.9
Copper	0.5 - 1	67.7	3.97E-01	68.1	25.4	1.71E-01	25.6	24.4	1.71E-01	24.6	28.4	1.17E-01	28.5	31.0	1.17E-01	31.1
Iron	50.0	26700	1.77E+02	26877	29000	7.63E+01	29076	27400	7.63E+01	27476	25500	5.22E+01	25552	30500	5.22E+01	30552
Lead	0.5 - 30	15.0	2.17E-03	15.0	15.0	9.35E-04	15.0	15.0	9.35E-04	15.0	15.0	6.39E-04	15.0	15.0	6.39E-04	15.0
Magnesium	20 - 50	10700	8.31E+01	10783	10900	3.58E+01	10936	10200	3.58E+01	10236	10000	2.45E+01	10024	11700	2.45E+01	11724
Manganese	1.00	619	3.36E+00	622	255	1.45E+00	256	225	1.45E+00	226	358	9.90E-01	359	368	9.90E-01	369
Mercury	0.005 - 0.005	0.0155	3.61E-05	0.0155	0.0159	1.56E-05	0.0159	0.0100	1.56E-05	0.0100	0.0263	1.06E-05	0.0263	0.0141	1.06E-05	0.0141
Molybdenum	0.5 - 4	2.00	1.81E-03	2.00	2.00	7.79E-04	2.00	2.00	7.79E-04	2.00	2.00	5.32E-04	2.00	2.00	5.32E-04	2.00
Nickel	0.5 - 5	48.3	2.60E-01	48.6	31.1	1.12E-01	31.2	28.6	1.12E-01	28.7	26.2	7.67E-02	26.3	32.5	7.67E-02	32.6
Phosphorus	50.0	321	7.95E-01	322	602	3.43E-01	602	552	3.43E-01	552	536	2.34E-01	536	516	2.34E-01	516
Potassium	100 - 200	1160	3.61E-01	1160	4390	1.56E-01	4390	3930	1.56E-01	3930	3330	1.06E-01	3330	3790	1.06E-01	3790
Selenium	0.2 - 0.5	0.250	1.81E-03	0.252	0.250	7.79E-04	0.251	0.250	7.79E-04	0.251	0.250	5.32E-04	0.251	0.250	5.32E-04	0.251
Silver	0.1 - 2	1.00	3.61E-04	1.00	1.00	1.56E-04	1.00	1.00	1.56E-04	1.00	1.00	1.06E-04	1.00	1.00	1.06E-04	1.00
Sodium	100 - 200	100	9.03E-01	101	510	3.89E-01	510	480	3.89E-01	480	1030	2.66E-01	1030	730	2.66E-01	730
Strontium	0.50	23.4	5.06E-02	23.5	30.0	2.18E-02	30.0	28.0	2.18E-02	28.0	36.4	1.49E-02	36.4	29.8	1.49E-02	29.8
Thallium	0.05 - 1	0.500	3.61E-04	0.500	0.500	1.56E-04	0.500	0.500	1.56E-04	0.500	0.500	1.06E-04	0.500	0.500	1.06E-04	0.500
Tin	2 - 5	2.50	7.22E-03	2.51	2.50	3.12E-03	2.50	2.50	3.12E-03	2.50	2.50	2.13E-03	2.50	2.50	2.13E-03	2.50
Titanium	1.00	746	7.95E+00	754	1440	3.43E+00	1443	1340	3.43E+00	1343	1210	2.34E+00	1212	1400	2.34E+00	1402
Uranium	0.05	0.774	3.61E-04	0.774	1.63	1.56E-04	1.63	1.62	1.56E-04	1.62	1.03	1.06E-04	1.03	1.47	1.06E-04	1.47
Vanadium	0.2 - 2	50.3	3.61E-01	50.7	64.3	1.56E-01	64.5	60.2	1.56E-01	60.4	53.8	1.06E-01	53.9	64.6	1.06E-01	64.7
Zinc	1.00	46.5	2.13E-01	46.7	54.2	9.19E-02	54.3	50.4	9.19E-02	50.5	55.8	6.28E-02	55.9	60.9	6.28E-02	61.0

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D32 (0-10)			D32 (10-20)			D38 (0-10)			D38 (10-20)			D43 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	8640	3.09E+01	8671	8250	3.09E+01	8281	3380	2.94E+01	3409	3630	2.94E+01	3659	16400	2.94E+01	16429
Antimony	0.1 - 10	5.00	1.07E-04	5.00	5.00	1.07E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00
Arsenic	0.05 - 5	2.50	5.33E-04	2.50	2.50	5.33E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50
Barium	0.5 - 1	39.7	3.20E-03	39.7	44.0	3.20E-03	44.0	12.8	3.04E-03	12.8	15.4	3.04E-03	15.4	93.0	3.04E-03	93.0
Beryllium	0.2 - 0.5	0.250	3.52E-04	0.250	0.250	3.52E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.560	3.35E-04	0.560
Bismuth	0.2 - 20	10.0	1.07E-04	10.0	10.0	1.07E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.07E-04	0.250	0.250	1.07E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	2270	3.41E+01	2304	2120	3.41E+01	2154	984	3.25E+01	1016	1270	3.25E+01	1302	9410	3.25E+01	9442
Chromium	0.5 - 2	26.2	1.60E-01	26.4	25.7	1.60E-01	25.9	8.20	1.52E-01	8.35	9.60	1.52E-01	9.75	45.7	1.52E-01	45.9
Cobalt	0.1 - 2	6.10	3.73E-02	6.14	5.20	3.73E-02	5.24	2.70	3.55E-02	2.74	3.60	3.55E-02	3.64	9.40	3.55E-02	9.44
Copper	0.5 - 1	12.1	1.17E-01	12.2	13.8	1.17E-01	13.9	2.50	1.12E-01	2.61	3.70	1.12E-01	3.81	16.5	1.12E-01	16.6
Iron	50.0	15300	5.22E+01	15352	13100	5.22E+01	13152	7800	4.97E+01	7850	8610	4.97E+01	8660	22800	4.97E+01	22850
Lead	0.5 - 30	15.0	6.40E-04	15.0	15.0	6.40E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0
Magnesium	20 - 50	5280	2.45E+01	5305	4810	2.45E+01	4835	2040	2.33E+01	2063	2320	2.33E+01	2343	9550	2.33E+01	9573
Manganese	1.00	132	9.91E-01	133	116	9.91E-01	117	68.3	9.44E-01	69.2	84.3	9.44E-01	85.2	248	9.44E-01	249
Mercury	0.005 - 0.005	0.00560	1.07E-05	0.00561	0.00820	1.07E-05	0.00821	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251	0.0175	1.01E-05	0.0175
Molybdenum	0.5 - 4	2.00	5.33E-04	2.00	2.00	5.33E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00
Nickel	0.5 - 5	14.6	7.68E-02	14.7	14.1	7.68E-02	14.2	2.50	7.31E-02	2.57	5.30	7.31E-02	5.37	24.3	7.30E-02	24.4
Phosphorus	50.0	478	2.35E-01	478	456	2.35E-01	456	125	2.23E-01	125	211	2.23E-01	211	406	2.23E-01	406
Potassium	100 - 200	1220	1.07E-01	1220	1280	1.07E-01	1280	380	1.01E-01	380	410	1.01E-01	410	3960	1.01E-01	3960
Selenium	0.2 - 0.5	0.250	5.33E-04	0.251	0.250	5.33E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Silver	0.1 - 2	1.00	1.07E-04	1.00	1.00	1.07E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00
Sodium	100 - 200	240	2.67E-01	240	250	2.67E-01	250	100	2.54E-01	100	100	2.54E-01	100	630	2.54E-01	630
Strontium	0.50	13.0	1.49E-02	13.0	12.5	1.49E-02	12.5	5.88	1.42E-02	5.89	6.67	1.42E-02	6.68	79.9	1.42E-02	79.9
Thallium	0.05 - 1	0.500	1.07E-04	0.500	0.500	1.07E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	2.13E-03	2.50	2.50	2.13E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	584	2.35E+00	586	527	2.35E+00	529	335	2.23E+00	337	344	2.23E+00	346	996	2.23E+00	998
Uranium	0.05	0.748	1.07E-04	0.748	0.735	1.07E-04	0.735	0.249	1.01E-04	0.249	0.332	1.01E-04	0.332	0.837	1.01E-04	0.837
Vanadium	0.2 - 2	31.8	1.07E-01	31.9	29.2	1.07E-01	29.3	19.1	1.01E-01	19.2	20.9	1.01E-01	21.0	47.2	1.01E-01	47.3
Zinc	1.00	28.9	6.29E-02	29.0	30.6	6.29E-02	30.7	10.7	5.99E-02	10.8	11.6	5.99E-02	11.7	51.0	5.99E-02	51.1

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg-m² /kg-cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D43 (10-20)			D54 (0-10)			D54 (10-20)			D57 (0-10)			D57 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	16000	2.94E+01	16029	626	3.53E+01	661	2390	3.53E+01	2425	17400	3.09E+01	17431	19700	3.09E+01	19731
Antimony	0.1 - 10	5.00	1.01E-04	5.00	5.00	1.22E-04	5.00	5.00	1.22E-04	5.00	5.00	1.06E-04	5.00	5.00	1.06E-04	5.00
Arsenic	0.05 - 5	2.50	5.07E-04	2.50	2.50	6.08E-04	2.50	2.50	6.08E-04	2.50	2.50	5.32E-04	2.50	2.50	5.32E-04	2.50
Barium	0.5 - 1	102	3.04E-03	102	36.0	3.65E-03	36.0	48.4	3.65E-03	48.4	116	3.19E-03	116	136	3.19E-03	136
Beryllium	0.2 - 0.5	0.530	3.35E-04	0.530	0.250	4.01E-04	0.250	0.250	4.01E-04	0.250	0.560	3.51E-04	0.560	0.630	3.51E-04	0.630
Bismuth	0.2 - 20	10.0	1.01E-04	10.0	10.0	1.22E-04	10.0	10.0	1.22E-04	10.0	10.0	1.06E-04	10.0	10.0	1.06E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.01E-04	0.250	0.250	1.22E-04	0.250	0.250	1.22E-04	0.250	0.250	1.06E-04	0.250	0.250	1.06E-04	0.250
Calcium	50.0	9000	3.25E+01	9032	11700	3.89E+01	11739	14000	3.89E+01	14039	4610	3.41E+01	4644	4580	3.41E+01	4614
Chromium	0.5 - 2	43.6	1.52E-01	43.8	1.00	1.82E-01	1.18	5.80	1.82E-01	5.98	53.0	1.60E-01	53.2	62.4	1.60E-01	62.6
Cobalt	0.1 - 2	8.90	3.55E-02	8.94	3.60	4.26E-02	3.64	5.80	4.26E-02	5.84	11.5	3.73E-02	11.5	13.2	3.73E-02	13.2
Copper	0.5 - 1	21.8	1.12E-01	21.9	5.60	1.34E-01	5.73	9.10	1.34E-01	9.23	23.8	1.17E-01	23.9	26.5	1.17E-01	26.6
Iron	50.0	21900	4.97E+01	21950	4080	5.96E+01	4140	25200	5.96E+01	25260	25500	5.22E+01	25552	30300	5.22E+01	30352
Lead	0.5 - 30	15.0	6.09E-04	15.0	15.0	7.30E-04	15.0	15.0	7.30E-04	15.0	15.0	6.39E-04	15.0	15.0	6.39E-04	15.0
Magnesium	20 - 50	9200	2.33E+01	9223	2530	2.80E+01	2558	2100	2.80E+01	2128	10100	2.45E+01	10124	11500	2.45E+01	11524
Manganese	1.00	246	9.44E-01	247	226	1.13E+00	227	112	1.13E+00	113	308	9.90E-01	309	337	9.90E-01	338
Mercury	0.005 - 0.005	0.0108	1.01E-05	0.0108	0.158	1.22E-05	0.158	0.0695	1.22E-05	0.0695	0.0165	1.06E-05	0.0165	0.00910	1.06E-05	0.00911
Molybdenum	0.5 - 4	2.00	5.07E-04	2.00	2.00	6.08E-04	2.00	2.00	6.08E-04	2.00	2.00	5.32E-04	2.00	2.00	5.32E-04	2.00
Nickel	0.5 - 5	23.5	7.30E-02	23.6	2.50	8.75E-02	2.59	15.1	8.75E-02	15.2	28.1	7.67E-02	28.2	34.4	7.67E-02	34.5
Phosphorus	50.0	356	2.23E-01	356	674	2.68E-01	674	943	2.68E-01	943	591	2.34E-01	591	607	2.34E-01	607
Potassium	100 - 200	3140	1.01E-01	3140	830	1.22E-01	830	100	1.22E-01	100	4370	1.06E-01	4370	4840	1.06E-01	4840
Selenium	0.2 - 0.5	0.250	5.07E-04	0.251	0.250	6.08E-04	0.251	0.250	6.08E-04	0.251	0.250	5.32E-04	0.251	0.250	5.32E-04	0.251
Silver	0.1 - 2	1.00	1.01E-04	1.00	1.00	1.22E-04	1.00	1.00	1.22E-04	1.00	1.00	1.06E-04	1.00	1.00	1.06E-04	1.00
Sodium	100 - 200	640	2.54E-01	640	540	3.04E-01	540	380	3.04E-01	380	530	2.66E-01	530	450	2.66E-01	450
Strontium	0.50	77.3	1.42E-02	77.3	54.3	1.70E-02	54.3	61.9	1.70E-02	61.9	31.4	1.49E-02	31.4	31.5	1.49E-02	31.5
Thallium	0.05 - 1	0.500	1.01E-04	0.500	0.500	1.22E-04	0.500	0.500	1.22E-04	0.500	0.500	1.06E-04	0.500	0.500	1.06E-04	0.500
Tin	2 - 5	2.50	2.03E-03	2.50	2.50	2.43E-03	2.50	2.50	2.43E-03	2.50	2.50	2.13E-03	2.50	2.50	2.13E-03	2.50
Titanium	1.00	945	2.23E+00	947	18.7	2.68E+00	21.4	64.4	2.68E+00	67.1	1200	2.34E+00	1202	1250	2.34E+00	1252
Uranium	0.05	0.988	1.01E-04	0.988	0.0250	1.22E-04	0.0251	0.219	1.22E-04	0.219	1.88	1.06E-04	1.88	1.97	1.06E-04	1.97
Vanadium	0.2 - 2	47.2	1.01E-01	47.3	1.00	1.22E-01	1.12	9.40	1.22E-01	9.52	57.3	1.06E-01	57.4	64.9	1.06E-01	65.0
Zinc	1.00	48.6	5.99E-02	48.7	26.5	7.17E-02	26.6	9.00	7.17E-02	9.07	50.9	6.28E-02	51.0	59.1	6.28E-02	59.2

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg-m² /kg-cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D59 (0-10)			D59 (10-20)			D61 (0-10)			D61 (10-20)			D70 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	5000	2.94E+01	5029	3680	2.94E+01	3709	14200	2.94E+01	14229	11200	2.94E+01	11229	3580	4.87E+00	3585
Antimony	0.1 - 10	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	7.10E-04	5.00
Arsenic	0.05 - 5	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	3.95E-01	2.90
Barium	0.5 - 1	22.4	3.04E-03	22.4	21.7	3.04E-03	21.7	77.1	3.04E-03	77.1	60.0	3.04E-03	60.0	21.3	1.22E-02	21.3
Beryllium	0.2 - 0.5	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250
Bismuth	0.2 - 20	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	2470	3.24E+01	2502	2410	3.24E+01	2442	6190	3.24E+01	6222	4210	3.24E+01	4242	1800	6.89E+01	1869
Chromium	0.5 - 2	17.5	1.52E-01	17.7	13.8	1.52E-01	14.0	41.3	1.52E-01	41.5	34.7	1.52E-01	34.9	9.00	1.32E-01	9.13
Cobalt	0.1 - 2	6.20	3.55E-02	6.24	4.90	3.55E-02	4.94	7.20	3.55E-02	7.24	6.60	3.55E-02	6.64	1.00	4.56E-02	1.05
Copper	0.5 - 1	22.1	1.12E-01	22.2	16.2	1.12E-01	16.3	13.0	1.12E-01	13.1	12.6	1.12E-01	12.7	5.90	8.62E-02	5.99
Iron	50.0	10700	4.97E+01	10750	8910	4.97E+01	8960	19700	4.97E+01	19750	17300	4.97E+01	17350	6690	6.59E+01	6756
Lead	0.5 - 30	15.0	6.08E-04	15.0	15.0	6.08E-04	15.0	15.0	6.08E-04	15.0	15.0	6.08E-04	15.0	15.0	2.23E-03	15.0
Magnesium	20 - 50	3740	2.33E+01	3763	2370	2.33E+01	2393	7990	2.33E+01	8013	6340	2.33E+01	6363	1650	3.24E+01	1682
Manganese	1.00	108	9.43E-01	109	83.8	9.43E-01	84.7	240	9.43E-01	241	182	9.43E-01	183	41.5	1.42E+00	42.9
Mercury	0.005 - 0.005	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251	0.0201	1.01E-05	0.0201	0.00590	1.01E-05	0.00591	0.00990	1.01E-05	0.00991
Molybdenum	0.5 - 4	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	1.32E-03	2.00
Nickel	0.5 - 5	15.2	7.30E-02	15.3	10.5	7.30E-02	10.6	20.0	7.30E-02	20.1	16.0	7.30E-02	16.1	2.5	2.03E-01	3
Phosphorus	50.0	325	2.23E-01	325	363	2.23E-01	363	490	2.23E-01	490	579	2.23E-01	579	326	1.42E-01	326
Potassium	100 - 200	540	1.01E-01	540	490	1.01E-01	490	2890	1.01E-01	2890	2640	1.01E-01	2640	230	4.06E-01	230
Selenium	0.2 - 0.5	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	8.11E-04	0.251
Silver	0.1 - 2	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	6.08E-04	1.00
Sodium	100 - 200	100	2.53E-01	100	100	2.53E-01	100	510	2.53E-01	510	380	2.53E-01	380	210	4.06E-01	210
Strontium	0.50	8.52	1.42E-02	8.53	8.67	1.42E-02	8.68	32.0	1.42E-02	32.0	24.8	1.42E-02	24.8	8.51	5.98E-02	8.57
Thallium	0.05 - 1	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	381	2.23E+00	383	357	2.23E+00	359	815	2.23E+00	817	740	2.23E+00	742	235	1.01E-02	235
Uranium	0.05	0.345	1.01E-04	0.345	0.380	1.01E-04	0.380	1.10	1.01E-04	1.10	1.27	1.01E-04	1.27	0.344	1.01E-04	0.344
Vanadium	0.2 - 2	23.7	1.01E-01	23.8	20.9	1.01E-01	21.0	43.3	1.01E-01	43.4	40.3	1.01E-01	40.4	15.1	2.74E-02	15.1
Zinc	1.00	18.4	5.98E-02	18.5	15.5	5.98E-02	15.6	57.3	5.98E-02	57.4	33.7	5.98E-02	33.8	9.60	6.08E-02	9.7

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D70 (10-20)			D72 (0-10)			D72 (10-20)			D76 (0-10)			D76 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	3810	4.87E+00	3815	16600	2.94E+01	16629	16600	2.94E+01	16629	16700	2.94E+01	16729	8450	2.94E+01	8479
Antimony	0.1 - 10	5.00	7.10E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00
Arsenic	0.05 - 5	2.50	3.95E-01	2.90	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50
Barium	0.5 - 1	20.5	1.22E-02	20.5	73.1	3.04E-03	73.1	81.9	3.04E-03	81.9	102	3.04E-03	102	52.6	3.04E-03	52.6
Beryllium	0.2 - 0.5	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.510	3.35E-04	0.510	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250
Bismuth	0.2 - 20	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	1740	6.89E+01	1809	3280	3.25E+01	3312	3150	3.25E+01	3182	2550	3.25E+01	2582	2260	3.25E+01	2292
Chromium	0.5 - 2	9.00	1.32E-01	9.13	47.1	1.52E-01	47.3	47.9	1.52E-01	48.1	39.9	1.52E-01	40.1	22.8	1.52E-01	23.0
Cobalt	0.1 - 2	1.00	4.56E-02	1.05	6.40	3.55E-02	6.44	6.60	3.55E-02	6.64	8.40	3.55E-02	8.44	5.00	3.55E-02	5.04
Copper	0.5 - 1	4.70	8.62E-02	4.79	28.6	1.12E-01	28.7	30.4	1.12E-01	30.5	26.2	1.12E-01	26.3	12.7	1.12E-01	12.8
Iron	50.0	5160	6.59E+01	5226	19400	4.97E+01	19450	19200	4.97E+01	19250	22900	4.97E+01	22950	13800	4.97E+01	13850
Lead	0.5 - 30	15.0	2.23E-03	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0
Magnesium	20 - 50	1810	3.24E+01	1842	6430	2.33E+01	6453	6590	2.33E+01	6613	7200	2.33E+01	7223	4210	2.33E+01	4233
Manganese	1.00	44.8	1.42E+00	46.2	135	9.43E-01	136	130	9.43E-01	131	147	9.43E-01	148	108	9.43E-01	109
Mercury	0.005 - 0.005	0.00250	1.01E-05	0.00251	0.0193	1.01E-05	0.0193	0.0116	1.01E-05	0.0116	0.0206	1.01E-05	0.0206	0.00650	1.01E-05	0.00651
Molybdenum	0.5 - 4	2.00	1.32E-03	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00
Nickel	0.5 - 5	2.5	2.03E-01	3	17.4	7.30E-02	17.5	18.0	7.30E-02	18.1	20.8	7.30E-02	20.9	10.9	7.30E-02	11.0
Phosphorus	50.0	386	1.42E-01	386	531	2.23E-01	531	473	2.23E-01	473	412	2.23E-01	412	405	2.23E-01	405
Potassium	100 - 200	230	4.06E-01	230	1810	1.01E-01	1810	1680	1.01E-01	1680	3110	1.01E-01	3110	1710	1.01E-01	1710
Selenium	0.2 - 0.5	0.250	8.11E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Silver	0.1 - 2	1.00	6.08E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00
Sodium	100 - 200	100	4.06E-01	100	290	2.54E-01	290	250	2.54E-01	250	290	2.54E-01	290	220	2.54E-01	220
Strontium	0.50	7.89	5.98E-02	7.95	27.4	1.42E-02	27.4	23.8	1.42E-02	23.8	21.5	1.42E-02	21.5	15.1	1.42E-02	15.1
Thallium	0.05 - 1	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	283	1.01E-02	283	1080	2.23E+00	1082	992	2.23E+00	994	977	2.23E+00	979	646	2.23E+00	648
Uranium	0.05	0.393	1.01E-04	0.393	1.63	1.01E-04	1.63	1.71	1.01E-04	1.71	1.12	1.01E-04	1.12	0.790	1.01E-04	0.790
Vanadium	0.2 - 2	13.3	2.74E-02	13.3	50.6	1.01E-01	50.7	50.3	1.01E-01	50.4	46.0	1.01E-01	46.1	30.1	1.01E-01	30.2
Zinc	1.00	8.90	6.08E-02	8.96	34.6	5.98E-02	34.7	35.4	5.98E-02	35.5	46.3	5.99E-02	46.4	22.9	5.99E-02	23.0

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg-m² / kg-cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D108 (0-10)			D108 (10-20)			D109 (0-10)			D109 (10-20)			D96 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	10200	4.56E+01	10246	9060	4.56E+01	9106	907	2.94E+01	936	6910	2.94E+01	6939	2390	1.05E+02	2495
Antimony	0.1 - 10	5.00	1.57E-04	5.00	5.00	1.57E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	3.61E-04	5.00
Arsenic	0.05 - 5	2.50	7.87E-04	2.50	2.50	7.87E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	1.81E-03	2.50
Barium	0.5 - 1	30.2	4.72E-03	30.2	30.3	4.72E-03	30.3	24.0	3.04E-03	24.0	33.7	3.04E-03	33.7	9.30	1.08E-02	9.31
Beryllium	0.2 - 0.5	0.250	5.19E-04	0.251	0.250	5.19E-04	0.251	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	1.19E-03	0.251
Bismuth	0.2 - 20	10.0	1.57E-04	10.0	10.0	1.57E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	3.61E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.57E-04	0.250	0.250	1.57E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	3.61E-04	0.250
Calcium	50.0	3560	5.03E+01	3610	4940	5.03E+01	4990	4630	3.25E+01	4662	2760	3.25E+01	2792	1110	1.16E+02	1226
Chromium	0.5 - 2	24.3	2.36E-01	24.5	23.7	2.36E-01	23.9	1.00	1.52E-01	1.15	14.5	1.52E-01	14.7	6.50	5.42E-01	7.04
Cobalt	0.1 - 2	9.00	5.51E-02	9.06	6.40	5.51E-02	6.46	1.00	3.55E-02	1.04	2.30	3.55E-02	2.34	1.00	1.26E-01	1.13
Copper	0.5 - 1	20.9	1.73E-01	21.1	23.7	1.73E-01	23.9	4.30	1.12E-01	4.41	4.90	1.12E-01	5.01	1.60	3.97E-01	2.00
Iron	50.0	18400	7.71E+01	18477	17100	7.71E+01	17177	1200	4.97E+01	1250	9750	4.97E+01	9800	4620	1.77E+02	4797
Lead	0.5 - 30	15.0	9.44E-04	15.0	15.0	9.44E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	2.17E-03	15.0
Magnesium	20 - 50	5460	3.62E+01	5496	3400	3.62E+01	3436	1100	2.33E+01	1123	1390	2.33E+01	1413	1380	8.31E+01	1463
Manganese	1.00	327	1.46E+00	328	201	1.46E+00	202	10.4	9.44E-01	11.3	24.9	9.44E-01	25.8	59.7	3.36E+00	63.1
Mercury	0.005 - 0.005	0.0504	1.57E-05	0.0504	0.0620	1.57E-05	0.0620	0.104	1.01E-05	0.104	0.0442	1.01E-05	0.0442	0.00250	3.61E-05	0.00254
Molybdenum	0.5 - 4	2.00	7.87E-04	2.00	2.00	7.87E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	1.81E-03	2.00
Nickel	0.5 - 5	15.9	1.13E-01	16.0	12.8	1.13E-01	12.9	2.50	7.31E-02	2.57	8.10	7.31E-02	8.17	2.50	2.60E-01	2.76
Phosphorus	50.0	425	3.46E-01	425	770	3.46E-01	770	530	2.23E-01	530	735	2.23E-01	735	193	7.95E-01	194
Potassium	100 - 200	410	1.57E-01	410	370	1.57E-01	370	440	1.01E-01	440	590	1.01E-01	590	270	3.61E-01	270
Selenium	0.2 - 0.5	0.250	7.87E-04	0.251	0.250	7.87E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	1.81E-03	0.252
Silver	0.1 - 2	1.00	1.57E-04	1.00	1.00	1.57E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	3.61E-04	1.00
Sodium	100 - 200	100	3.93E-01	100	100	3.93E-01	100	100	2.54E-01	100	100	2.54E-01	100	100	9.03E-01	101
Strontium	0.50	16.2	2.20E-02	16.2	19.3	2.20E-02	19.3	29.3	1.42E-02	29.3	23.5	1.42E-02	23.5	5.01	5.06E-02	5.06
Thallium	0.05 - 1	0.500	1.57E-04	0.500	0.500	1.57E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	3.61E-04	0.500
Tin	2 - 5	2.50	3.15E-03	2.50	2.50	3.15E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	7.22E-03	2.51
Titanium	1.00	719	3.46E+00	722	454	3.46E+00	457	36.4	2.23E+00	38.6	260	2.23E+00	262	165	7.95E+00	173
Uranium	0.05	0.428	1.57E-04	0.428	0.798	1.57E-04	0.798	0.0620	1.01E-04	0.0621	0.609	1.01E-04	0.609	0.219	3.61E-04	0.219
Vanadium	0.2 - 2	36.0	1.57E-01	36.2	30.7	1.57E-01	30.9	2.50	1.01E-01	2.60	14.6	1.01E-01	14.7	9.90	3.61E-01	10.26
Zinc	1.00	38.6	9.28E-02	38.7	26.7	9.28E-02	26.8	17.3	5.99E-02	17.4	10.6	5.99E-02	10.7	9.70	2.13E-01	9.91

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D96 (10-20)			D99 (0-10)			D99 (10-20)			D82 (0-10)			D82 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	2300	1.05E+02	2405	16300	2.94E+01	16329	16600	2.94E+01	16629	3030	2.94E+01	3059	3480	2.94E+01	3509
Antimony	0.1 - 10	5.00	3.61E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00
Arsenic	0.05 - 5	2.50	1.81E-03	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50
Barium	0.5 - 1	9.50	1.08E-02	9.51	104	3.04E-03	104	105	3.04E-03	105	17.8	3.04E-03	17.8	23.1	3.04E-03	23.1
Beryllium	0.2 - 0.5	0.250	1.19E-03	0.251	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250
Bismuth	0.2 - 20	10.0	3.61E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	3.61E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	1200	1.16E+02	1316	4250	3.25E+01	4282	4470	3.25E+01	4502	1620	3.25E+01	1652	1930	3.25E+01	1962
Chromium	0.5 - 2	6.50	5.42E-01	7.04	46.3	1.52E-01	46.5	47.3	1.52E-01	47.5	11.1	1.52E-01	11.3	10.6	1.52E-01	10.8
Cobalt	0.1 - 2	1.00	1.26E-01	1.13	8.80	3.55E-02	8.84	10.2	3.55E-02	10.2	2.20	3.55E-02	2.24	2.60	3.55E-02	2.64
Copper	0.5 - 1	1.30	3.97E-01	1.70	18.8	1.12E-01	18.9	17.7	1.12E-01	17.8	4.40	1.12E-01	4.51	7.00	1.12E-01	7.11
Iron	50.0	4700	1.77E+02	4877	23100	4.97E+01	23150	22800	4.97E+01	22850	7960	4.97E+01	8010	8310	4.97E+01	8360
Lead	0.5 - 30	15.0	2.17E-03	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0
Magnesium	20 - 50	1400	8.31E+01	1483	7720	2.33E+01	7743	8000	2.33E+01	8023	1760	2.33E+01	1783	1920	2.33E+01	1943
Manganese	1.00	47.1	3.36E+00	50.5	202	9.44E-01	203	249	9.44E-01	250	56.4	9.44E-01	57.3	63.8	9.44E-01	64.7
Mercury	0.005 - 0.005	0.00250	3.61E-05	0.00254	0.00790	1.01E-05	0.00791	0.00900	1.01E-05	0	0.00250	1.01E-05	0.00251	0.00710	1.01E-05	0.00711
Molybdenum	0.5 - 4	2.00	1.81E-03	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00
Nickel	0.5 - 5	2.50	2.60E-01	2.76	21.6	7.31E-02	21.7	21.7	7.31E-02	21.8	2.50	7.31E-02	2.57	2.50	7.31E-02	2.57
Phosphorus	50.0	216	7.95E-01	217	523	2.23E-01	523	559	2.23E-01	559	292	2.23E-01	292	280	2.23E-01	280
Potassium	100 - 200	250	3.61E-01	250	3850	1.01E-01	3850	3970	1.01E-01	3970	510	1.01E-01	510	420	1.01E-01	420
Selenium	0.2 - 0.5	0.250	1.81E-03	0.252	0.250	5.07E-04	0.251	0.250	5.07E-04	0	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Silver	0.1 - 2	1.00	3.61E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00
Sodium	100 - 200	100	9.03E-01	101	370	2.54E-01	370	380	2.54E-01	380	100	2.54E-01	100	100	2.54E-01	100
Strontium	0.50	5.08	5.06E-02	5.13	25.2	1.42E-02	25.2	26.4	1.42E-02	26	7.27	1.42E-02	7.28	8.89	1.42E-02	8.90
Thallium	0.05 - 1	0.500	3.61E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	7.22E-03	2.51	2.50	2.03E-03	2.50	2.50	2.03E-03	3	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	187	7.95E+00	195	1210	2.23E+00	1212	1230	2.23E+00	1232	348	2.23E+00	350	357	2.23E+00	359
Uranium	0.05	0.218	3.61E-04	0.218	1.22	1.01E-04	1.22	1.21	1.01E-04	1	0.397	1.01E-04	0.397	0.453	1.01E-04	0.453
Vanadium	0.2 - 2	10.2	3.61E-01	10.6	53.2	1.01E-01	53.3	54.2	1.01E-01	54	19.4	1.01E-01	19.5	20.0	1.01E-01	20.1
Zinc	1.00	7.30	2.13E-01	7.51	46.2	5.99E-02	46.3	48.4	5.99E-02	48	8.80	5.99E-02	8.86	9.80	5.99E-02	9.86

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D88 (0-10)			D88 (10-20)			D65 (0-10)			D65 (10-20)			D119 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	3280	2.94E+01	3309	2910	2.94E+01	2939	2650	2.94E+01	2679	3670	2.94E+01	3699	2960	2.94E+01	2989
Antimony	0.1 - 10	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00
Arsenic	0.05 - 5	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50
Barium	0.5 - 1	18.3	3.04E-03	18.3	19.1	3.04E-03	19.1	16.6	3.04E-03	16.6	18.1	3.04E-03	18.1	21.3	3.04E-03	21.3
Beryllium	0.2 - 0.5	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250
Bismuth	0.2 - 20	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	1270	3.25E+01	1302	1310	3.25E+01	1342	1440	3.25E+01	1472	1340	3.25E+01	1372	1230	3.25E+01	1262
Chromium	0.5 - 2	8.50	1.52E-01	8.65	8.20	1.52E-01	8.35	8.80	1.52E-01	8.95	12.0	1.52E-01	12.2	10.3	1.52E-01	10.5
Cobalt	0.1 - 2	2.70	3.55E-02	2.74	3.00	3.55E-02	3.04	1.00	3.55E-02	1.04	2.60	3.55E-02	2.64	1.00	3.55E-02	1.04
Copper	0.5 - 1	5.70	1.12E-01	5.81	18.4	1.12E-01	18.5	5.20	1.12E-01	5.31	4.80	1.12E-01	4.91	2.30	1.12E-01	2.41
Iron	50.0	7500	4.97E+01	7550	7100	4.97E+01	7150	6310	4.97E+01	6360	7460	4.97E+01	7510	7600	4.97E+01	7650
Lead	0.5 - 30	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.08E-04	15.0	15.0	6.08E-04	15.0	15.0	6.09E-04	15.0
Magnesium	20 - 50	2000	2.33E+01	2023	1740	2.33E+01	1763	1620	2.33E+01	1643	2450	2.33E+01	2473	1960	2.33E+01	1983
Manganese	1.00	59.5	9.44E-01	60.4	62.3	9.44E-01	63.2	48.8	9.43E-01	49.7	57.9	9.43E-01	58.8	54.8	9.44E-01	55.7
Mercury	0.005 - 0.005	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251	0.0129	1.01E-05	0.0129	0.00250	1.01E-05	0.00251
Molybdenum	0.5 - 4	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00
Nickel	0.5 - 5	2.50	7.30E-02	2.57	2.50	7.30E-02	2.57	2.50	7.30E-02	2.57	5.40	7.30E-02	5.47	2.50	7.31E-02	2.57
Phosphorus	50.0	203	2.23E-01	203	259	2.23E-01	259	360	2.23E-01	360	267	2.23E-01	267	214	2.23E-01	214
Potassium	100 - 200	520	1.01E-01	520	470	1.01E-01	470	420	1.01E-01	420	530	1.01E-01	530	700	1.01E-01	700
Selenium	0.2 - 0.5	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Silver	0.1 - 2	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00
Sodium	100 - 200	100	2.54E-01	100	100	2.54E-01	100	100	2.54E-01	100	100	2.54E-01	100	100	2.54E-01	100
Strontium	0.50	6.86	1.42E-02	6.87	6.12	1.42E-02	6.13	6.58	1.42E-02	6.59	8.22	1.42E-02	8.23	6.74	1.42E-02	6.75
Thallium	0.05 - 1	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	357	2.23E+00	359	279	2.23E+00	281	231	2.23E+00	233	377	2.23E+00	379	407	2.23E+00	409
Uranium	0.05	0.392	1.01E-04	0.392	0.324	1.01E-04	0.324	0.422	1.01E-04	0.422	0.344	1.01E-04	0.344	0.281	1.01E-04	0.281
Vanadium	0.2 - 2	16.4	1.01E-01	16.5	14.9	1.01E-01	15.0	14.3	1.01E-01	14.4	17.5	1.01E-01	17.6	19.8	1.01E-01	19.9
Zinc	1.00	9.90	5.99E-02	9.96	8.30	5.99E-02	8.36	7.80	5.98E-02	7.86	11.2	5.98E-02	11.3	9.90	5.99E-02	9.96

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	D119 (10-20)			D122 (0-10)			D122 (10-20)			D132 (0-10)			D132 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	3480	2.94E+01	3509	6280	2.94E+01	6309	8800	2.94E+01	8829	3470	2.94E+01	3499	2850	2.94E+01	2879
Antimony	0.1 - 10	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00
Arsenic	0.05 - 5	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50
Barium	0.5 - 1	28.0	3.04E-03	28.0	35.0	3.04E-03	35.0	46.1	3.04E-03	46.1	21.4	3.04E-03	21.4	15.1	3.04E-03	15.1
Beryllium	0.2 - 0.5	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250
Bismuth	0.2 - 20	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250
Calcium	50.0	1350	3.25E+01	1382	2070	3.25E+01	2102	2550	3.25E+01	2582	1710	3.24E+01	1742	1340	3.24E+01	1372
Chromium	0.5 - 2	13.1	1.52E-01	13.3	18.6	1.52E-01	18.8	24.9	1.52E-01	25.1	10.5	1.52E-01	10.7	9.20	1.52E-01	9.35
Cobalt	0.1 - 2	2.50	3.55E-02	2.54	3.20	3.55E-02	3.24	3.70	3.55E-02	3.74	3.40	3.55E-02	3.44	2.40	3.55E-02	2.44
Copper	0.5 - 1	5.70	1.12E-01	5.81	6.90	1.12E-01	7.01	8.80	1.12E-01	8.91	9.10	1.12E-01	9.21	7.10	1.12E-01	7.21
Iron	50.0	7890	4.97E+01	7940	9940	4.97E+01	9990	13000	4.97E+01	13050	7340	4.97E+01	7390	6590	4.97E+01	6640
Lead	0.5 - 30	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	6.08E-04	15.0	15.0	6.08E-04	15.0
Magnesium	20 - 50	2270	2.33E+01	2293	3070	2.33E+01	3093	3910	2.33E+01	3933	1910	2.33E+01	1933	1590	2.33E+01	1613
Manganese	1.00	60.6	9.44E-01	61.5	70.9	9.44E-01	71.8	92.0	9.44E-01	92.9	64.8	9.43E-01	65.7	51.1	9.43E-01	52.0
Mercury	0.005 - 0.005	0.00250	1.01E-05	0.00251	0.00990	1.01E-05	0.00991	0.0160	1.01E-05	0.0160	0.0117	1.01E-05	0.0117	0.00250	1.01E-05	0.00251
Molybdenum	0.5 - 4	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00
Nickel	0.5 - 5	5.00	7.31E-02	5.07	8.30	7.31E-02	8.37	10.9	7.31E-02	11.0	5.60	7.30E-02	5.67	2.50	7.30E-02	2.57
Phosphorus	50.0	243	2.23E-01	243	489	2.23E-01	489	582	2.23E-01	582	295	2.23E-01	295	269	2.23E-01	269
Potassium	100 - 200	750	1.01E-01	750	890	1.01E-01	890	1130	1.01E-01	1130	480	1.01E-01	480	360	1.01E-01	360
Selenium	0.2 - 0.5	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Silver	0.1 - 2	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00
Sodium	100 - 200	240	2.54E-01	240	100	2.54E-01	100	240	2.54E-01	240	100	2.54E-01	100	100	2.54E-01	100
Strontium	0.50	7.77	1.42E-02	7.78	14.7	1.42E-02	14.7	19.3	1.42E-02	19.3	7.84	1.42E-02	7.85	5.50	1.42E-02	5.51
Thallium	0.05 - 1	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500
Tin	2 - 5	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50
Titanium	1.00	403	2.23E+00	405	415	2.23E+00	417	514	2.23E+00	516	280	2.23E+00	282	240	2.23E+00	242
Uranium	0.05	0.412	1.01E-04	0.412	0.807	1.01E-04	0.807	0.923	1.01E-04	0.923	0.482	1.01E-04	0.482	0.319	1.01E-04	0.319
Vanadium	0.2 - 2	20.7	1.01E-01	20.8	21.7	1.01E-01	21.8	27.3	1.01E-01	27.4	16.7	1.01E-01	16.8	15.3	1.01E-01	15.4
Zinc	1.00	12.2	5.99E-02	12.3	23.3	5.99E-02	23.4	33.4	5.99E-02	33.5	9.60	5.98E-02	9.66	7.70	5.98E-02	7.76

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	8 (0-10)			8 (10-20)			13 (0-10)			13 (10-20)			14 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	17300	4.11E+01	17341	19100	4.11E+01	19141	2700	2.94E+01	2729	3350	2.94E+01	3379	18700	1.26E+01	18713
Antimony	0.1 - 10	5.00	1.42E-04	5.00	5.00	1.42E-04	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.14E-03	5.00
Arsenic	0.05 - 5	2.50	7.09E-04	2.50	2.50	7.09E-04	2.50	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	5.36E-01	3.04
Barium	0.5 - 1	93.2	4.25E-03	93.2	106	4.25E-03	106	15.3	3.04E-03	15.3	22.6	3.04E-03	22.6	117	1.83E-02	117
Beryllium	0.2 - 0.5	0.250	4.68E-04	0.250	0.520	4.68E-04	0.520	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.590	2.28E-03	0.592
Bismuth	0.2 - 20	10.0	1.42E-04	10.0	10.0	1.42E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.14E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.42E-04	0.250	0.250	1.42E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.14E-04	0.250
Calcium	50.0	4100	4.54E+01	4145	5130	4.54E+01	5175	1210	3.25E+01	1242	1850	3.25E+01	1882	4620	7.76E+01	4698
Chromium	0.5 - 2	52.2	2.13E-01	52.4	56.8	2.13E-01	57.0	9.40	1.52E-01	9.55	10.5	1.52E-01	10.7	58.8	2.05E-01	59.0
Cobalt	0.1 - 2	10.4	4.96E-02	10.4	11.9	4.96E-02	11.9	1.00	3.55E-02	1.04	3.10	3.55E-02	3.14	13.8	6.50E-02	13.9
Copper	0.5 - 1	13.8	1.56E-01	14.0	17.0	1.56E-01	17.2	4.70	1.12E-01	4.81	7.80	1.12E-01	7.91	19.1	1.37E-01	19.2
Iron	50.0	26300	6.95E+01	26369	29100	6.95E+01	29169	7130	4.97E+01	7180	7950	4.97E+01	8000	29700	7.42E+01	29774
Lead	0.5 - 30	15.0	8.51E-04	15.0	15.0	8.51E-04	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	5.02E-03	15.0
Magnesium	20 - 50	10200	3.26E+01	10233	11400	3.26E+01	11433	1760	2.33E+01	1783	2250	2.33E+01	2273	11300	3.99E+01	11340
Manganese	1.00	286	1.32E+00	287	362	1.32E+00	363	47.7	9.44E-01	48.6	67.2	9.44E-01	68.1	330	1.71E+00	332
Mercury	0.005 - 0.005	0.0107	1.42E-05	0.0107	0.0205	1.42E-05	0.0205	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251	0.00790	1.14E-05	0.00791
Molybdenum	0.5 - 4	2.00	7.09E-04	2.00	2.00	7.09E-04	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	1.48E-03	2.00
Nickel	0.5 - 5	23.3	1.02E-01	23.4	27.3	1.02E-01	27.4	2.50	7.30E-02	2.57	5.30	7.30E-02	5.37	29.8	3.54E-01	30.2
Phosphorus	50.0	402	3.12E-01	402	512	3.12E-01	512	310	2.23E-01	310	393	2.23E-01	393	584	4.11E-01	584
Potassium	100 - 200	3890	1.42E-01	3890	4380	1.42E-01	4380	510	1.01E-01	510	760	1.01E-01	760	4400	1.14E+00	4401
Selenium	0.2 - 0.5	0.250	7.09E-04	0.251	0.250	7.09E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	1.03E-03	0.251
Silver	0.1 - 2	1.00	1.42E-04	1.00	1.00	1.42E-04	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.83E-03	1.00
Sodium	100 - 200	520	3.54E-01	520	510	3.54E-01	510	100	2.54E-01	100	100	2.54E-01	100	460	4.56E-01	460
Strontium	0.50	23.2	1.99E-02	23.2	29.5	1.99E-02	29.5	5.22	1.42E-02	5.23	7.10	1.42E-02	7.11	24.7	1.48E-01	24.8
Thallium	0.05 - 1	0.500	1.42E-04	0.500	0.500	1.42E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.14E-04	0.500
Tin	2 - 5	2.50	2.84E-03	2.50	2.50	2.84E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.28E-03	2.50
Titanium	1.00	1220	3.12E+00	1223	1330	3.12E+00	1333	255	2.23E+00	257	325	2.23E+00	327	1230	1.14E-02	1230
Uranium	0.05	1.06	1.42E-04	1.06	1.26	1.42E-04	1.26	0.396	1.01E-04	0.396	0.547	1.01E-04	0.55	1.75	1.14E-04	1.75
Vanadium	0.2 - 2	58.0	1.42E-01	58.1	63.5	1.42E-01	63.6	16.7	1.01E-01	16.8	17.6	1.01E-01	17.7	64.6	6.16E-02	64.7
Zinc	1.00	47.4	8.37E-02	47.5	54.8	8.37E-02	54.9	8.40	5.99E-02	8.46	10.4	5.99E-02	10.5	51.3	6.85E-02	51.4

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² /kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	14 (10-20)			18 (0-10)			18 (10-20)			21 (0-10)			21 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	19200	1.26E+01	19213	9170	1.58E+01	9186	10900	1.58E+01	10916	22500	3.71E+01	22537	23200	3.71E+01	23237
Antimony	0.1 - 10	5.00	1.14E-03	5.00	5.00	1.13E-04	5.00	5.00	1.13E-04	5.00	5.00	1.28E-04	5.00	5.00	1.28E-04	5.00
Arsenic	0.05 - 5	2.50	5.36E-01	3.04	2.50	6.78E-03	2.51	2.50	6.78E-03	2.51	2.50	6.39E-04	2.50	2.50	6.39E-04	2.50
Barium	0.5 - 1	112	1.83E-02	112	46.3	1.58E-02	46.3	53.5	1.58E-02	53.5	127	3.83E-03	127	135	3.83E-03	135
Beryllium	0.2 - 0.5	0.590	2.28E-03	0.592	0.250	3.73E-04	0.250	0.250	3.73E-04	0.250	0.610	4.22E-04	0.610	0.630	4.22E-04	0.630
Bismuth	0.2 - 20	10.0	1.14E-04	10.0	10.0	1.13E-04	10.0	10.0	1.13E-04	10.0	10.0	1.28E-04	10.0	10.0	1.28E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.14E-04	0.250	0.250	1.13E-04	0.250	0.250	1.13E-04	0.250	0.250	1.28E-04	0.250	0.250	1.28E-04	0.250
Calcium	50.0	4860	7.76E+01	4938	2560	4.18E+01	2602	3180	4.18E+01	3222	5470	4.09E+01	5511	5650	4.09E+01	5691
Chromium	0.5 - 2	60.9	2.05E-01	61.1	29.2	1.47E-01	29.3	33.1	1.47E-01	33.2	65.3	1.92E-01	65.5	65.8	1.92E-01	66.0
Cobalt	0.1 - 2	13.5	6.50E-02	13.6	5.40	3.62E-02	5.44	5.90	3.62E-02	5.94	13.6	4.47E-02	13.6	14.4	4.47E-02	14.4
Copper	0.5 - 1	17.8	1.37E-01	17.9	10.5	9.27E-02	10.6	12.4	9.27E-02	12.5	24.8	1.41E-01	24.9	27.7	1.41E-01	27.8
Iron	50.0	30600	7.42E+01	30674	14600	5.20E+01	14652	16200	5.20E+01	16252	33100	6.26E+01	33163	33800	6.26E+01	33863
Lead	0.5 - 30	15.0	5.02E-03	15.0	15.0	1.24E-03	15.0	15.0	1.24E-03	15.0	15.0	7.67E-04	15.0	15.0	7.67E-04	15.0
Magnesium	20 - 50	11300	3.99E+01	11340	5870	2.71E+01	5897	6740	2.71E+01	6767	13700	2.94E+01	13729	14200	2.94E+01	14229
Manganese	1.00	324	1.71E+00	326	122	1.03E+00	123	138	1.03E+00	139	345	1.19E+00	346	413	1.19E+00	414
Mercury	0.005 - 0.005	0.00690	1.14E-05	0.00691	0.00250	1.13E-05	0.00251	0.00250	1.13E-05	0.00251	0.00780	1.28E-05	0.00781	0.00990	1.28E-05	0.00991
Molybdenum	0.5 - 4	2.00	1.48E-03	2.00	2.00	3.39E-04	2.00	2.00	3.39E-04	2.00	2.00	6.39E-04	2.00	2.00	6.39E-04	2.00
Nickel	0.5 - 5	29.4	3.54E-01	29.8	14.8	8.48E-02	14.9	17.3	8.48E-02	17.4	32.3	9.20E-02	32.4	34.7	9.20E-02	34.8
Phosphorus	50.0	600	4.11E-01	600	448	2.37E-01	448	529	2.37E-01	529	446	2.81E-01	446	531	2.81E-01	531
Potassium	100 - 200	4500	1.14E+00	4501	2140	6.78E-01	2141	2660	6.78E-01	2661	5480	1.28E-01	5480	6020	1.28E-01	6020
Selenium	0.2 - 0.5	0.250	1.03E-03	0.251	0.250	5.65E-04	0.251	0.250	5.65E-04	0.251	0.250	6.39E-04	0.251	0.250	6.39E-04	0.251
Silver	0.1 - 2	1.00	1.83E-03	1.00	1.00	1.13E-04	1.00	1.00	1.13E-04	1.00	1.00	1.28E-04	1.00	1.00	1.28E-04	1.00
Sodium	100 - 200	490	4.56E-01	490	310	7.46E-01	311	410	7.46E-01	411	710	3.20E-01	710	680	3.20E-01	680
Strontium	0.50	27.1	1.48E-01	27.2	15.3	6.78E-02	15.4	20.4	6.78E-02	20.5	30.2	1.79E-02	30.2	33.3	1.79E-02	33.3
Thallium	0.05 - 1	0.500	1.14E-04	0.500	0.500	1.13E-04	0.500	0.500	1.13E-04	0.500	0.500	1.28E-04	0.500	0.500	1.28E-04	0.500
Tin	2 - 5	2.50	2.28E-03	2.50	2.50	2.26E-03	2.50	2.50	2.26E-03	2.50	2.50	2.56E-03	2.50	2.50	2.56E-03	2.50
Titanium	1.00	1330	1.14E-02	1330	660	1.13E-02	660	757	1.13E-02	757	1540	2.81E+00	1543	1490	2.81E+00	1493
Uranium	0.05	1.64	1.14E-04	1.64	0.841	1.13E-04	0.841	0.961	1.13E-04	0.961	1.57	1.28E-04	1.57	1.59	1.28E-04	1.59
Vanadium	0.2 - 2	66.6	6.16E-02	66.7	32.9	5.42E-02	33.0	37.2	5.42E-02	37.3	72.7	1.28E-01	72.8	72.0	1.28E-01	72.1
Zinc	1.00	52.0	6.85E-02	52.1	23.8	6.10E-02	23.9	29.0	6.10E-02	29.1	57.1	7.54E-02	57.2	61.2	7.54E-02	61.3

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² /kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	22 (0-10)			22 (10-20)			23 (0-10)			23 (10-20)			29 (0-10)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	8630	3.53E+01	8665	12800	3.53E+01	12835	21900	3.62E+01	21936	22500	3.62E+01	22536	12500	1.36E+01	12514
Antimony	0.1 - 10	5.00	1.22E-04	5.00	5.00	1.22E-04	5.00	5.00	1.25E-04	5.00	5.00	1.25E-04	5.00	5.00	1.24E-03	5.00
Arsenic	0.05 - 5	2.50	6.08E-04	2.50	2.50	6.08E-04	2.50	2.50	6.24E-04	2.50	2.50	6.24E-04	2.50	2.50	5.83E-01	3.08
Barium	0.5 - 1	33.6	3.65E-03	33.6	69.4	3.65E-03	69.4	134	3.74E-03	134	131	3.74E-03	131	71.0	1.99E-02	71.0
Beryllium	0.2 - 0.5	0.250	4.01E-04	0.250	0.250	4.01E-04	0.250	0.660	4.12E-04	0.660	0.650	4.12E-04	0.650	0.250	2.48E-03	0.252
Bismuth	0.2 - 20	10.0	1.22E-04	10.0	10.0	1.22E-04	10.0	10.0	1.25E-04	10.0	10.0	1.25E-04	10.0	10.0	1.24E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.22E-04	0.250	0.250	1.22E-04	0.250	0.250	1.25E-04	0.250	0.250	1.25E-04	0.250	0.250	1.24E-04	0.250
Calcium	50.0	3100	3.89E+01	3139	3940	3.89E+01	3979	4320	3.99E+01	4360	5040	3.99E+01	5080	4000	8.44E+01	4084
Chromium	0.5 - 2	34.5	1.82E-01	34.7	42.7	1.82E-01	42.9	65.6	1.87E-01	65.8	67.2	1.87E-01	67.4	35.8	2.23E-01	36.0
Cobalt	0.1 - 2	9.20	4.26E-02	9.24	11.3	4.26E-02	11.3	12.9	4.37E-02	12.9	14.7	4.37E-02	14.7	8.70	7.07E-02	8.77
Copper	0.5 - 1	22.6	1.34E-01	22.7	35.1	1.34E-01	35.2	26.2	1.37E-01	26.3	25.6	1.37E-01	25.7	15.3	1.49E-01	15.4
Iron	50.0	16800	5.96E+01	16860	22300	5.96E+01	22360	30900	6.12E+01	30961	32700	6.12E+01	32761	19900	8.07E+01	19981
Lead	0.5 - 30	15.0	7.29E-04	15.0	15.0	7.29E-04	15.0	15.0	7.49E-04	15.0	15.0	7.49E-04	15.0	15.0	5.46E-03	15.0
Magnesium	20 - 50	6540	2.80E+01	6568	9770	2.80E+01	9798	13000	2.87E+01	13029	13200	2.87E+01	13229	8750	4.34E+01	8793
Manganese	1.00	278	1.13E+00	279	301	1.13E+00	302	294	1.16E+00	295	360	1.16E+00	361	230	1.86E+00	232
Mercury	0.005 - 0.005	0.00670	1.22E-05	0.00671	0.00250	1.22E-05	0.00251	0.0101	1.25E-05	0.0101	0.0106	1.25E-05	0.0106	0.0273	1.24E-05	0.0273
Molybdenum	0.5 - 4	2.00	6.08E-04	2.00	2.00	6.08E-04	2.00	2.00	6.24E-04	2.00	2.00	6.24E-04	2.00	2.00	1.61E-03	2.00
Nickel	0.5 - 5	23.2	8.75E-02	23.3	30.2	8.75E-02	30.3	35.0	8.99E-02	35.1	35.7	8.99E-02	35.8	19.7	3.85E-01	20.1
Phosphorus	50.0	284	2.67E-01	284	442	2.67E-01	442	490	2.75E-01	490	578	2.75E-01	578	385	4.47E-01	385
Potassium	100 - 200	1040	1.22E-01	1040	2630	1.22E-01	2630	4770	1.25E-01	4770	4710	1.25E-01	4710	3580	1.24E+00	3581
Selenium	0.2 - 0.5	0.250	6.08E-04	0.251	0.250	6.08E-04	0.251	0.250	6.24E-04	0.251	0.250	6.24E-04	0.251	0.250	1.12E-03	0.251
Silver	0.1 - 2	1.00	1.22E-04	1.00	1.00	1.22E-04	1.00	1.00	1.25E-04	1.00	1.00	1.25E-04	1.00	1.00	1.99E-03	1.00
Sodium	100 - 200	240	3.04E-01	240	510	3.04E-01	510	510	3.12E-01	510	520	3.12E-01	520	530	4.96E-01	530
Strontium	0.50	11.1	1.70E-02	11.1	17.3	1.70E-02	17.3	26.8	1.75E-02	26.8	29.1	1.75E-02	29.1	24.2	1.61E-01	24.4
Thallium	0.05 - 1	0.500	1.22E-04	0.500	0.500	1.22E-04	0.500	0.500	1.25E-04	0.500	0.500	1.25E-04	0.500	0.500	1.24E-04	0.500
Tin	2 - 5	2.50	2.43E-03	2.50	2.50	2.43E-03	2.50	2.50	2.50E-03	2.50	2.50	2.50E-03	2.50	2.50	2.48E-03	2.50
Titanium	1.00	523	2.67E+00	526	744	2.67E+00	747	1470	2.75E+00	1473	1510	2.75E+00	1513	928	1.24E-02	928
Uranium	0.05	0.342	1.22E-04	0.342	0.416	1.22E-04	0.416	2.23	1.25E-04	2.23	2.05	1.25E-04	2.05	1.35	1.24E-04	1.35
Vanadium	0.2 - 2	35.2	1.22E-01	35.3	46.0	1.22E-01	46.1	71.7	1.25E-01	71.8	73.3	1.25E-01	73.4	43.6	6.70E-02	43.7
Zinc	1.00	22.8	7.17E-02	22.9	37.9	7.17E-02	38.0	59.0	7.36E-02	59.1	61.0	7.36E-02	61.1	36.8	7.44E-02	36.9

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	29 (10-20)			11 (0-10)			11 (10-20)			16 (0-10)			16 (10-20)		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	21300	1.36E+01	21314	3450	2.94E+01	3479	9250	2.94E+01	9279	2190	1.58E+01	2206	13600	1.58E+01	13616
Antimony	0.1 - 10	5.00	1.24E-03	5.00	5.00	1.01E-04	5.00	5.00	1.01E-04	5.00	5.00	1.13E-04	5.00	5.00	1.13E-04	5.00
Arsenic	0.05 - 5	2.50	5.83E-01	3.08	2.50	5.07E-04	2.50	2.50	5.07E-04	2.50	2.50	6.76E-03	2.51	2.50	6.76E-03	2.51
Barium	0.5 - 1	128	1.99E-02	128	19.2	3.04E-03	19.2	60.5	3.04E-03	60.5	13.8	1.58E-02	13.8	109	1.58E-02	109
Beryllium	0.2 - 0.5	0.560	2.48E-03	0.562	0.250	3.35E-04	0.250	0.250	3.35E-04	0.250	0.250	3.72E-04	0.250	0.250	3.72E-04	0.250
Bismuth	0.2 - 20	10.0	1.24E-04	10.0	10.0	1.01E-04	10.0	10.0	1.01E-04	10.0	10.0	1.13E-04	10.0	10.0	1.13E-04	10.0
Cadmium	0.05 - 0.5	0.250	1.24E-04	0.250	0.250	1.01E-04	0.250	0.250	1.01E-04	0.250	0.250	1.13E-04	0.250	0.250	1.13E-04	0.2501
Calcium	50.0	5910	8.44E+01	5994	1070	3.25E+01	1102	3580	3.25E+01	3612	1240	4.17E+01	1282	13800	4.17E+01	13842
Chromium	0.5 - 2	59.4	2.23E-01	59.6	8.50	1.52E-01	8.65	30.5	1.52E-01	30.7	7.60	1.46E-01	7.75	41.8	1.46E-01	41.9
Cobalt	0.1 - 2	13.7	7.07E-02	13.8	2.20	3.55E-02	2.24	8.30	3.55E-02	8.34	2.00	3.60E-02	2.04	9.30	3.60E-02	9.34
Copper	0.5 - 1	27.6	1.49E-01	27.7	6.20	1.12E-01	6.31	19.4	1.12E-01	19.5	5.70	9.24E-02	5.79	40.3	9.24E-02	40.4
Iron	50.0	32000	8.07E+01	32081	7470	4.97E+01	7520	16200	4.97E+01	16250	6020	5.18E+01	6072	20400	5.18E+01	20452
Lead	0.5 - 30	15.0	5.46E-03	15.0	15.0	6.09E-04	15.0	15.0	6.09E-04	15.0	15.0	1.24E-03	15.0	15.0	1.24E-03	15.0
Magnesium	20 - 50	13900	4.34E+01	13943	1910	2.33E+01	1933	6360	2.33E+01	6383	1390	2.70E+01	1417	8730	2.70E+01	8757
Manganese	1.00	369	1.86E+00	371	48.2	9.44E-01	49.1	211	9.44E-01	212	39.7	1.02E+00	40.7	234	1.02E+00	235
Mercury	0.005 - 0.005	0.00840	1.24E-05	0.00841	0.00640	1.01E-05	0.00641	0.00250	1.01E-05	0.00251	0.00250	1.13E-05	0.00251	0.0239	1.13E-05	0.0239
Molybdenum	0.5 - 4	2.00	1.61E-03	2.00	2.00	5.07E-04	2.00	2.00	5.07E-04	2.00	2.00	3.38E-04	2.00	2.00	3.38E-04	2.00
Nickel	0.5 - 5	32.0	3.85E-01	32.4	2.50	7.31E-02	2.57	18.9	7.31E-02	19.0	2.50	8.45E-02	2.58	28.5	8.45E-02	28.6
Phosphorus	50.0	538	4.47E-01	538	177	2.23E-01	177	303	2.23E-01	303	288	2.37E-01	288	521	2.37E-01	521
Potassium	100 - 200	5200	1.24E+00	5201	480	1.01E-01	480	1910	1.01E-01	1910	370	6.76E-01	371	2860	6.76E-01	2861
Selenium	0.2 - 0.5	0.250	1.12E-03	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.63E-04	0.251	0.250	5.63E-04	0.251
Silver	0.1 - 2	1.00	1.99E-03	1.00	1.00	1.01E-04	1.00	1.00	1.01E-04	1.00	1.00	1.13E-04	1.00	1.00	1.13E-04	1.00
Sodium	100 - 200	840	4.96E-01	840	100	2.54E-01	100	320	2.54E-01	320	100	7.43E-01	101	550	7.43E-01	551
Strontium	0.50	35.3	1.61E-01	35.5	6.93	1.42E-02	6.94	13.7	1.42E-02	13.7	4.56	6.76E-02	4.63	30.9	6.76E-02	31.0
Thallium	0.05 - 1	0.500	1.24E-04	0.500	0.500	1.01E-04	0.500	0.500	1.01E-04	0.500	0.500	1.13E-04	0.500	0.500	1.13E-04	0.500
Tin	2 - 5	2.50	2.48E-03	2.50	2.50	2.03E-03	2.50	2.50	2.03E-03	2.50	2.50	2.25E-03	2.50	2.50	2.25E-03	2.50
Titanium	1.00	1470	1.24E-02	1470	309	2.23E+00	311	665	2.23E+00	667	176	1.13E-02	176	746	1.13E-02	746
Uranium	0.05	1.94	1.24E-04	1.94	0.379	1.01E-04	0.379	1.06	1.01E-04	1.06	0.345	1.13E-04	0.345	1.30	1.13E-04	1.30
Vanadium	0.2 - 2	69.9	6.70E-02	70.0	16.8	1.01E-01	16.9	35.6	1.01E-01	35.7	14.0	5.41E-02	14.1	41.3	5.41E-02	41.4
Zinc	1.00	59.4	7.44E-02	59.5	10.5	5.99E-02	10.6	25.1	5.99E-02	25.2	6.90	6.08E-02	6.96	36.4	6.08E-02	36.5

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	REFA-01			REFA-02			REFA-03			REFB-01			REFB-02		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	7330	3.01E+01	7360	19600	3.01E+01	19630	5570	3.01E+01	5600	4750	2.94E+01	4779	9360	2.94E+01	9389
Antimony	0.1 - 10	0.0500	1.04E-04	0.0501	0.0500	1.04E-04	0.0501	0.0500	1.04E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501
Arsenic	0.05 - 5	2.44	5.19E-04	2.44	2.39	5.19E-04	2.39	0.724	5.18E-04	0.725	0.921	5.08E-04	0.922	0.949	5.08E-04	0.950
Barium	0.5 - 1	23.7	3.11E-03	23.7	131	3.12E-03	131	14.5	3.11E-03	14.5	16.0	3.05E-03	16.0	18.7	3.05E-03	18.7
Beryllium	0.2 - 0.5	0.100	3.42E-04	0.100	0.640	3.43E-04	0.640	0.100	3.42E-04	0.100	0.100	3.35E-04	0.100	0.100	3.35E-04	0.100
Bismuth	0.2 - 20	0.100	1.04E-04	0.100	0.210	1.04E-04	0.210	0.100	1.04E-04	0.100	0.100	1.02E-04	0.100	0.100	1.02E-04	0.100
Cadmium	0.05 - 0.5	0.0250	1.04E-04	0.0251	0.0600	1.04E-04	0.0601	0.0250	1.04E-04	0.0251	0.0250	1.02E-04	0.0251	0.0620	1.02E-04	0.0621
Calcium	50.0	2660	3.32E+01	2693	6160	3.32E+01	6193	2040	3.32E+01	2073	1510	3.25E+01	1542	1970	3.25E+01	2002
Chromium	0.5 - 2	17.1	1.56E-01	17.3	54.4	1.56E-01	54.6	11.1	1.56E-01	11.3	9.93	1.52E-01	10.08	17.2	1.52E-01	17.4
Cobalt	0.1 - 2	4.35	3.63E-02	4.39	11.9	3.63E-02	11.9	4.10	3.63E-02	4.14	4.28	3.55E-02	4.32	5.85	3.55E-02	5.89
Copper	0.5 - 1	4.33	1.14E-01	4.44	25.2	1.14E-01	25.3	9.86	1.14E-01	9.97	9.95	1.12E-01	10.06	10.0	1.12E-01	10.1
Iron	50.0	12900	5.08E+01	12951	28500	5.09E+01	28551	10500	5.08E+01	10551	8460	4.97E+01	8510	15600	4.97E+01	15650
Lead	0.5 - 30	3.02	6.22E-04	3.02	7.93	6.23E-04	7.93	1.66	6.22E-04	1.66	1.50	6.09E-04	1.50	2.96	6.09E-04	2.96
Magnesium	20 - 50	4220	2.39E+01	4244	12600	2.39E+01	12624	3400	2.38E+01	3424	3260	2.34E+01	3283	4810	2.34E+01	4833
Manganese	1.00	126	9.65E-01	127	348	9.66E-01	349	101	9.64E-01	102	96.3	9.44E-01	97.2	157	9.44E-01	158
Mercury	0.005 - 0.005	0.00660	1.04E-05	0.00661	0.00250	1.04E-05	0.00251	0.00600	1.04E-05	0.00601	0.00250	1.02E-05	0.00251	0.0287	1.02E-05	0.0287
Molybdenum	0.5 - 4	0.730	5.19E-04	0.731	0.550	5.19E-04	0.551	0.250	5.18E-04	0.251	0.250	5.08E-04	0.251	0.250	5.08E-04	0.251
Nickel	0.5 - 5	8.56	7.47E-02	8.63	29.9	7.48E-02	30.0	7.67	7.46E-02	7.74	8.11	7.31E-02	8.18	13.5	7.31E-02	13.6
Phosphorus	50.0	254	2.28E-01	254	714	2.28E-01	714	299	2.28E-01	299	249	2.23E-01	249	282	2.23E-01	282
Potassium	100 - 200	900	1.04E-01	900	5830	1.04E-01	5830	510	1.04E-01	510	590	1.02E-01	590	650	1.02E-01	650
Selenium	0.2 - 0.5	0.100	5.19E-04	0.101	0.100	5.19E-04	0.101	0.100	5.18E-04	0.101	0.100	5.08E-04	0.101	0.100	5.08E-04	0.101
Silver	0.1 - 2	0.0500	1.04E-04	0.0501	0.0500	1.04E-04	0.0501	0.0500	1.04E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501
Sodium	100 - 200	300	2.59E-01	300	1450	2.60E-01	1450	150	2.59E-01	150	50.0	2.54E-01	50.3	110	2.54E-01	110
Strontium	0.50	14.6	1.45E-02	14.6	39.7	1.45E-02	39.7	9.37	1.45E-02	9.38	7.65	1.42E-02	7.66	11.7	1.42E-02	11.7
Thallium	0.05 - 1	0.0590	1.04E-04	0.0591	0.258	1.04E-04	0.258	0.0250	1.04E-04	0.0251	0.0250	1.02E-04	0.0251	0.0250	1.02E-04	0.0251
Tin	2 - 5	1.00	2.07E-03	1.00	1.00	2.08E-03	1.00	1.00	2.07E-03	1.00	1.00	2.03E-03	1.00	1.00	2.03E-03	1.00
Titanium	1.00	727	2.28E+00	729	1490	2.28E+00	1492	481	2.28E+00	483	348	2.23E+00	350	746	2.23E+00	748
Uranium	0.05	0.495	1.04E-04	0.495	1.69	1.04E-04	1.69	0.329	1.04E-04	0.329	0.326	1.02E-04	0.326	0.417	1.02E-04	0.417
Vanadium	0.2 - 2	32.5	1.04E-01	32.6	62.3	1.04E-01	62.4	24.1	1.04E-01	24.2	17.5	1.02E-01	17.6	31.3	1.02E-01	31.4
Zinc	1.00	17.6	6.12E-02	17.7	58.7	6.13E-02	58.8	15.6	6.12E-02	15.7	15.3	5.99E-02	15.4	28.5	5.99E-02	28.6

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² /kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	REFB-03			REFC-01			REFC-02			REFC-03			LSA-01		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	6780	2.94E+01	6809	17000	2.96E+01	17030	4620	2.96E+01	4650	5650	2.96E+01	5680	9480	3.51E+01	9515
Antimony	0.1 - 10	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.21E-04	0.0501
Arsenic	0.05 - 5	1.08	5.08E-04	1.08	2.93	5.10E-04	2.93	0.870	5.10E-04	0.871	0.917	5.10E-04	0.918	2.97	6.05E-04	2.97
Barium	0.5 - 1	18.7	3.05E-03	18.7	77.0	3.06E-03	77.0	16.8	3.06E-03	16.8	15.4	3.06E-03	15.4	35.3	3.63E-03	35.3
Beryllium	0.2 - 0.5	0.100	3.35E-04	0.100	0.440	3.36E-04	0.440	0.100	3.36E-04	0.100	0.100	3.37E-04	0.100	0.100	3.99E-04	0.100
Bismuth	0.2 - 20	0.100	1.02E-04	0.100	0.100	1.02E-04	0.100	0.100	1.02E-04	0.100	0.100	1.02E-04	0.100	0.100	1.21E-04	0.100
Cadmium	0.05 - 0.5	0.0250	1.02E-04	0.0251	0.0250	1.02E-04	0.0251	0.0250	1.02E-04	0.0251	0.0250	1.02E-04	0.0251	0.0250	1.21E-04	0.0251
Calcium	50.0	2620	3.25E+01	2652	5090	3.26E+01	5123	2050	3.26E+01	2083	1860	3.26E+01	1893	3470	3.87E+01	3509
Chromium	0.5 - 2	21.8	1.52E-01	22.0	43.6	1.53E-01	43.8	13.6	1.53E-01	13.8	17.3	1.53E-01	17.5	40.9	1.81E-01	41.1
Cobalt	0.1 - 2	7.47	3.55E-02	7.51	10.5	3.57E-02	10.5	4.46	3.57E-02	4.50	4.99	3.57E-02	5.03	9.92	4.23E-02	9.96
Copper	0.5 - 1	11.6	1.12E-01	11.7	16.8	1.12E-01	16.9	4.84	1.12E-01	4.95	11.4	1.12E-01	11.5	23.5	1.33E-01	23.6
Iron	50.0	13200	4.97E+01	13250	25100	5.00E+01	25150	9910	5.00E+01	9960	10700	5.00E+01	10750	19100	5.92E+01	19159
Lead	0.5 - 30	2.07	6.09E-04	2.07	6.16	6.12E-04	6.16	1.65	6.12E-04	1.65	1.64	6.12E-04	1.64	2.43	7.25E-04	2.43
Magnesium	20 - 50	4480	2.34E+01	4503	7530	2.34E+01	7553	2700	2.35E+01	2723	3730	2.35E+01	3753	6660	2.78E+01	6688
Manganese	1.00	237	9.44E-01	238	253	9.48E-01	254	105	9.48E-01	106	125	9.49E-01	126	283	1.12E+00	284
Mercury	0.005 - 0.005	0.00250	1.02E-05	0.00251	0.0101	1.02E-05	0.0101	0.00250	1.02E-05	0.00251	0.00250	1.02E-05	0.00251	0.00840	1.21E-05	0.00841
Molybdenum	0.5 - 4	0.250	5.08E-04	0.251	0.250	5.10E-04	0.251	0.250	5.10E-04	0.251	0.250	5.10E-04	0.251	0.250	6.05E-04	0.251
Nickel	0.5 - 5	11.7	7.31E-02	11.8	21.9	7.34E-02	22.0	6.63	7.34E-02	6.70	10.2	7.34E-02	10.3	27.2	8.71E-02	27.3
Phosphorus	50.0	398	2.23E-01	398	414	2.24E-01	414	350	2.24E-01	350	282	2.24E-01	282	242	2.66E-01	242
Potassium	100 - 200	520	1.02E-01	520	2730	1.02E-01	2730	590	1.02E-01	590	580	1.02E-01	580	1050	1.21E-01	1050
Selenium	0.2 - 0.5	0.100	5.08E-04	0.101	0.100	5.10E-04	0.101	0.100	5.10E-04	0.101	0.100	5.10E-04	0.101	0.100	6.05E-04	0.101
Silver	0.1 - 2	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.21E-04	0.0501
Sodium	100 - 200	200	2.54E-01	200	460	2.55E-01	460	140	2.55E-01	140	120	2.55E-01	120	240	3.02E-01	240
Strontium	0.50	13.7	1.42E-02	13.7	34.8	1.43E-02	34.8	11.6	1.43E-02	11.6	9.21	1.43E-02	9.22	14.9	1.69E-02	14.9
Thallium	0.05 - 1	0.0250	1.02E-04	0.0251	0.168	1.02E-04	0.168	0.0250	1.02E-04	0.0251	0.0250	1.02E-04	0.0251	0.0560	1.21E-04	0.0561
Tin	2 - 5	1.00	2.03E-03	1.00	1.00	2.04E-03	1.00	1.00	2.04E-03	1.00	1.00	2.04E-03	1.00	1.00	2.42E-03	1.00
Titanium	1.00	695	2.23E+00	697	1210	2.24E+00	1212	478	2.24E+00	480	462	2.24E+00	464	594	2.66E+00	597
Uranium	0.05	0.909	1.02E-04	0.909	1.44	1.02E-04	1.44	0.415	1.02E-04	0.415	0.336	1.02E-04	0.336	0.476	1.21E-04	0.476
Vanadium	0.2 - 2	28.6	1.02E-01	28.7	53.3	1.02E-01	53.4	23.0	1.02E-01	23.1	23.1	1.02E-01	23.2	38.6	1.21E-01	38.7
Zinc	1.00	21.9	5.99E-02	22.0	41.1	6.02E-02	41.2	13.3	6.02E-02	13.4	16.8	6.02E-02	16.9	34.3	7.13E-02	34.4

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg-m² / kg-cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	LSA-02			LSA-03			LSA-04			LSA-05			LSA-06		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	27200	3.19E+01	27232	5590	3.53E+01	5625	12300	3.95E+01	12340	5550	2.94E+01	5579	4800	3.53E+01	4835
Antimony	0.1 - 10	0.0500	1.10E-04	0.0501	0.0500	1.22E-04	0.0501	0.0500	1.36E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.22E-04	0.0501
Arsenic	0.05 - 5	3.77	5.50E-04	3.77	0.726	6.09E-04	0.727	2.35	6.82E-04	2.35	3.92	5.07E-04	3.92	0.855	6.08E-04	0.856
Barium	0.5 - 1	164	3.30E-03	164	21.8	3.66E-03	21.8	54.2	4.09E-03	54.2	6.85	3.04E-03	6.85	11.9	3.65E-03	11.9
Beryllium	0.2 - 0.5	0.790	3.63E-04	0.790	0.100	4.02E-04	0.100	0.230	4.50E-04	0.230	0.100	3.35E-04	0.100	0.100	4.01E-04	0.100
Bismuth	0.2 - 20	0.230	1.10E-04	0.230	0.100	1.22E-04	0.100	0.100	1.36E-04	0.100	0.100	1.01E-04	0.100	0.100	1.22E-04	0.100
Cadmium	0.05 - 0.5	0.0250	1.10E-04	0.0251	0.0250	1.22E-04	0.0251	0.0250	1.36E-04	0.0251	0.0250	1.01E-04	0.0251	0.0250	1.22E-04	0.0251
Calcium	50.0	6790	3.52E+01	6825	1860	3.90E+01	1899	4720	4.36E+01	4764	1740	3.25E+01	1772	1530	3.89E+01	1569
Chromium	0.5 - 2	77.8	1.65E-01	78.0	14.3	1.83E-01	14.5	39.7	2.04E-01	39.9	15.0	1.52E-01	15.2	13.0	1.82E-01	13.2
Cobalt	0.1 - 2	15.9	3.85E-02	15.9	4.71	4.26E-02	4.75	11.1	4.77E-02	11.1	5.72	3.55E-02	5.76	5.11	4.26E-02	5.15
Copper	0.5 - 1	41.2	1.21E-01	41.3	6.47	1.34E-01	6.60	23.8	1.50E-01	23.9	27.1	1.12E-01	27.2	12.2	1.34E-01	12.3
Iron	50.0	39800	5.39E+01	39854	10100	5.97E+01	10160	20900	6.68E+01	20967	12200	4.97E+01	12250	11400	5.96E+01	11460
Lead	0.5 - 30	9.46	6.60E-04	9.46	1.78	7.31E-04	1.78	3.32	8.18E-04	3.32	1.75	6.09E-04	1.75	1.42	7.30E-04	1.42
Magnesium	20 - 50	17900	2.53E+01	17925	3640	2.80E+01	3668	7490	3.14E+01	7521	3080	2.33E+01	3103	2870	2.80E+01	2898
Manganese	1.00	413	1.02E+00	414	123	1.13E+00	124	327	1.27E+00	328	145	9.44E-01	146	132	1.13E+00	133
Mercury	0.005 - 0.005	0.00730	1.10E-05	0.00731	0.00740	1.22E-05	0.00741	0.00880	1.36E-05	0.00881	0.00250	1.01E-05	0.00251	0.00250	1.22E-05	0.00251
Molybdenum	0.5 - 4	0.250	5.50E-04	0.251	0.250	6.09E-04	0.251	0.250	6.82E-04	0.251	0.250	5.07E-04	0.251	0.250	6.08E-04	0.251
Nickel	0.5 - 5	39.9	7.92E-02	40.0	8.25	8.77E-02	8.34	24.0	9.81E-02	24.1	9.86	7.31E-02	9.9	8.66	8.75E-02	8.75
Phosphorus	50.0	363	2.42E-01	363	227	2.68E-01	227	170	3.00E-01	170	113	2.23E-01	113	161	2.68E-01	161
Potassium	100 - 200	7790	1.10E-01	7790	860	1.22E-01	860	2160	1.36E-01	2160	160	1.01E-01	160	260	1.22E-01	260
Selenium	0.2 - 0.5	0.100	5.50E-04	0.101	0.100	6.09E-04	0.101	0.100	6.82E-04	0.101	0.100	5.07E-04	0.101	0.100	6.08E-04	0.101
Silver	0.1 - 2	0.0500	1.10E-04	0.0501	0.0500	1.22E-04	0.0501	0.0500	1.36E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.22E-04	0.0501
Sodium	100 - 200	1070	2.75E-01	1070	180	3.05E-01	180	460	3.41E-01	460	50.0	2.54E-01	50.3	120	3.04E-01	120
Strontium	0.50	32.3	1.54E-02	32.3	9.66	1.71E-02	9.68	21.5	1.91E-02	21.5	7.52	1.42E-02	7.53	7.71	1.70E-02	7.73
Thallium	0.05 - 1	0.356	1.10E-04	0.356	0.0250	1.22E-04	0.0251	0.114	1.36E-04	0.114	0.0250	1.01E-04	0.0251	0.0250	1.22E-04	0.0251
Tin	2 - 5	1.00	2.20E-03	1.00	1.00	2.44E-03	1.00	1.00	2.73E-03	1.00	1.00	2.03E-03	1.00	1.00	2.43E-03	1.00
Titanium	1.00	1760	2.42E+00	1762	480	2.68E+00	483	950	3.00E+00	953	479	2.23E+00	481	414	2.68E+00	417
Uranium	0.05	0.863	1.10E-04	0.863	0.392	1.22E-04	0.392	0.369	1.36E-04	0.369	0.405	1.01E-04	0.405	0.31	1.22E-04	0.310
Vanadium	0.2 - 2	82.0	1.10E-01	82.1	23.1	1.22E-01	23.2	46.9	1.36E-01	47.0	27.9	1.01E-01	28.0	24.7	1.22E-01	24.8
Zinc	1.00	80.5	6.49E-02	80.6	16.4	7.19E-02	16.5	34.2	8.04E-02	34.3	13.4	5.99E-02	13.5	14.3	7.17E-02	14.4

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

		LSA-07A			LSA-07B			LSA-08			LSA-09A			LSA-09B		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals	Detection Limit (mg/kg)															
Aluminum	50.0	6960	4.57E+01	7006	5920	4.57E+01	5966	7070	2.94E+01	7099	3480	2.94E+01	3509	3920	2.94E+01	3949
Antimony	0.1 - 10	0.0500	1.57E-04	0.0502	0.0500	1.57E-04	0.0502	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501
Arsenic	0.05 - 5	3.03	7.87E-04	3.03	2.37	7.87E-04	2.37	1.31	5.07E-04	1.31	0.999	5.07E-04	1.000	1.01	5.07E-04	1.01
Barium	0.5 - 1	25.0	4.72E-03	25.0	20.6	4.72E-03	20.6	18.6	3.04E-03	18.6	14.6	3.04E-03	14.6	18.2	3.04E-03	18.2
Beryllium	0.2 - 0.5	0.100	5.20E-04	0.101	0.100	5.20E-04	0.101	0.100	3.35E-04	0.100	0.100	3.35E-04	0.100	0.100	3.35E-04	0.100
Bismuth	0.2 - 20	0.100	1.57E-04	0.100	0.100	1.57E-04	0.100	0.100	1.01E-04	0.100	0.100	1.01E-04	0.100	0.100	1.01E-04	0.100
Cadmium	0.05 - 0.5	0.0250	1.57E-04	0.0252	0.0250	1.57E-04	0.0252	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251
Calcium	50.0	2310	5.04E+01	2360	2060	5.04E+01	2110	2260	3.25E+01	2292	2560	3.25E+01	2592	2540	3.25E+01	2572
Chromium	0.5 - 2	18.2	2.36E-01	18.4	20.7	2.36E-01	20.9	16.4	1.52E-01	16.6	12.2	1.52E-01	12.4	13.1	1.52E-01	13.3
Cobalt	0.1 - 2	7.28	5.51E-02	7.34	5.87	5.51E-02	5.93	6.87	3.55E-02	6.91	2.84	3.55E-02	2.88	3.10	3.55E-02	3.14
Copper	0.5 - 1	16.5	1.73E-01	16.7	12.9	1.73E-01	13.1	33.4	1.12E-01	33.5	4.06	1.12E-01	4.17	4.86	1.12E-01	4.97
Iron	50.0	14000	7.72E+01	14077	12000	7.72E+01	12077	13600	4.97E+01	13650	8150	4.97E+01	8200	8650	4.97E+01	8700
Lead	0.5 - 30	3.08	9.45E-04	3.08	2.37	9.45E-04	2.37	2.55	6.09E-04	2.55	2.17	6.09E-04	2.17	2.19	6.09E-04	2.19
Magnesium	20 - 50	4610	3.62E+01	4646	3910	3.62E+01	3946	3400	2.33E+01	3423	1940	2.33E+01	1963	2160	2.33E+01	2183
Manganese	1.00	175	1.46E+00	176	127	1.46E+00	128	112	9.44E-01	113	91.6	9.44E-01	92.5	92.2	9.44E-01	93.1
Mercury	0.005 - 0.005	0.0148	1.57E-05	0.0148	0.0103	1.57E-05	0.0103	0.00790	1.01E-05	0.00791	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251
Molybdenum	0.5 - 4	0.250	7.87E-04	0.251	0.250	7.87E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Nickel	0.5 - 5	13.9	1.13E-01	14.0	13.0	1.13E-01	13.1	13.2	7.31E-02	13.3	5.43	7.31E-02	5.50	5.86	7.31E-02	5.93
Phosphorus	50.0	351	3.46E-01	351	277	3.46E-01	277	131	2.23E-01	131	429	2.23E-01	429	364	2.23E-01	364
Potassium	100 - 200	640	1.57E-01	640	640	1.57E-01	640	370	1.01E-01	370	610	1.01E-01	610	790	1.01E-01	790
Selenium	0.2 - 0.5	0.100	7.87E-04	0.101	0.100	7.87E-04	0.101	0.100	5.07E-04	0.101	0.100	5.07E-04	0.101	0.100	5.07E-04	0.101
Silver	0.1 - 2	0.0500	1.57E-04	0.0502	0.0500	1.57E-04	0.0502	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501
Sodium	100 - 200	50.0	3.94E-01	50.4	100	3.94E-01	100	230	2.54E-01	230	220	2.54E-01	220	230	2.54E-01	230
Strontium	0.50	10.1	2.20E-02	10.1	8.33	2.20E-02	8.35	12.6	1.42E-02	12.6	12.4	1.42E-02	12.4	13.3	1.42E-02	13.3
Thallium	0.05 - 1	0.0250	1.57E-04	0.0252	0.0250	1.57E-04	0.0252	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251
Tin	2 - 5	1.00	3.15E-03	1.00	1.00	3.15E-03	1.00	1.00	2.03E-03	1.00	1.00	2.03E-03	1.00	1.00	2.03E-03	1.00
Titanium	1.00	417	3.46E+00	420	432	3.46E+00	435	539	2.23E+00	541	458	2.23E+00	460	477	2.23E+00	479
Uranium	0.05	0.541	1.57E-04	0.541	1.07	1.57E-04	1.07	0.408	1.01E-04	0.408	0.678	1.01E-04	0.678	0.641	1.01E-04	0.641
Vanadium	0.2 - 2	24.5	1.57E-01	24.7	23.7	1.57E-01	23.9	30.0	1.01E-01	30.1	19.0	1.01E-01	19.1	20.0	1.01E-01	20.1
Zinc	1.00	21.7	9.29E-02	21.8	19.4	9.29E-02	19.5	16.5	5.99E-02	16.6	8.90	5.99E-02	8.96	10.3	5.99E-02	10.4

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² /kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	LSA-10			LSA-11			LSA-12			LSA-13A			LSA-13B		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	6590	1.05E+02	6695	18600	3.09E+01	18631	11200	2.94E+01	11229	20100	4.56E+01	20146	17300	4.56E+01	17346
Antimony	0.1 - 10	0.0500	3.61E-04	0.0504	0.0500	1.07E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.57E-04	0.0502	0.0500	1.57E-04	0.0502
Arsenic	0.05 - 5	1.11	1.81E-03	1.11	3.92	5.33E-04	3.92	1.74	5.08E-04	1.74	3.04	7.87E-04	3.04	2.96	7.87E-04	2.96
Barium	0.5 - 1	17.2	1.08E-02	17.2	102	3.20E-03	102	71.2	3.05E-03	71.2	108	4.72E-03	108	89.0	4.72E-03	89.0
Beryllium	0.2 - 0.5	0.100	1.19E-03	0.101	0.680	3.52E-04	0.680	0.330	3.35E-04	0.330	0.560	5.19E-04	0.561	0.520	5.19E-04	0.521
Bismuth	0.2 - 20	0.100	3.61E-04	0.100	0.100	1.07E-04	0.100	0.100	1.02E-04	0.100	0.100	1.57E-04	0.100	0.100	1.57E-04	0.100
Cadmium	0.05 - 0.5	0.0250	3.61E-04	0.0254	0.0250	1.07E-04	0.0251	0.0250	1.02E-04	0.0251	0.0250	1.57E-04	0.0252	0.0250	1.57E-04	0.0252
Calcium	50.0	1730	1.16E+02	1846	5230	3.41E+01	5264	4210	3.25E+01	4242	4160	5.03E+01	4210	3900	5.03E+01	3950
Chromium	0.5 - 2	24.6	5.42E-01	25.1	49.2	1.60E-01	49.4	30.8	1.52E-01	31.0	63.4	2.36E-01	63.6	54.4	2.36E-01	54.6
Cobalt	0.1 - 2	6.40	1.26E-01	6.53	9.20	3.73E-02	9.24	7.65	3.55E-02	7.69	12	5.51E-02	12.1	10.3	5.51E-02	10.4
Copper	0.5 - 1	11.4	3.97E-01	11.8	21.3	1.17E-01	21.4	19.0	1.12E-01	19.1	26.5	1.73E-01	26.7	23.8	1.73E-01	24.0
Iron	50.0	13700	1.77E+02	13877	23700	5.22E+01	23752	16700	4.97E+01	16750	29200	7.71E+01	29277	26000	7.71E+01	26077
Lead	0.5 - 30	2.15	2.17E-03	2.15	7.50	6.40E-04	7.50	4.79	6.09E-04	4.79	7.88	9.44E-04	7.88	7.25	9.44E-04	7.25
Magnesium	20 - 50	4150	8.31E+01	4233	9020	2.45E+01	9045	5500	2.34E+01	5523	10700	3.62E+01	10736	9550	3.62E+01	9586
Manganese	1.00	149	3.36E+00	152	199	9.91E-01	200	210	9.44E-01	211	250	1.46E+00	251	218	1.46E+00	219
Mercury	0.005 - 0.005	0.00680	3.61E-05	0.00684	0.0173	1.07E-05	0.0173	0.00540	1.02E-05	0.00541	0.0116	1.57E-05	0.0116	0.0103	1.57E-05	0.0103
Molybdenum	0.5 - 4	0.250	1.81E-03	0.252	0.250	5.33E-04	0.251	0.250	5.08E-04	0.251	0.250	7.87E-04	0.251	0.250	7.87E-04	0.251
Nickel	0.5 - 5	13.5	2.60E-01	13.8	26.7	7.68E-02	26.8	15.9	7.31E-02	16.0	32.9	1.13E-01	33.0	27.9	1.13E-01	28.0
Phosphorus	50.0	160	7.95E-01	161	391	2.35E-01	391	289	2.23E-01	289	392	3.46E-01	392	390	3.46E-01	390
Potassium	100 - 200	310	3.61E-01	310	3840	1.07E-01	3840	1990	1.02E-01	1990	3950	1.57E-01	3950	3190	1.57E-01	3190
Selenium	0.2 - 0.5	0.100	1.81E-03	0.102	0.100	5.33E-04	0.101	0.100	5.08E-04	0.101	0.100	7.87E-04	0.101	0.100	7.87E-04	0.101
Silver	0.1 - 2	0.0500	3.61E-04	0.0504	0.0500	1.07E-04	0.0501	0.0500	1.02E-04	0.0501	0.0500	1.57E-04	0.0502	0.0500	1.57E-04	0.0502
Sodium	100 - 200	140	9.03E-01	141	580	2.67E-01	580	410	2.54E-01	410	550	3.93E-01	550	430	3.93E-01	430
Strontium	0.50	9.07	5.06E-02	9.12	51.7	1.49E-02	51.7	21.6	1.42E-02	21.6	24.1	2.20E-02	24.1	22.0	2.20E-02	22.0
Thallium	0.05 - 1	0.0250	3.61E-04	0.0254	0.181	1.07E-04	0.181	0.127	1.02E-04	0.127	0.208	1.57E-04	0.208	0.214	1.57E-04	0.214
Tin	2 - 5	1.00	7.22E-03	1.01	1.00	2.13E-03	1.00	1.00	2.03E-03	1.00	1.00	3.15E-03	1.00	1.00	3.15E-03	1.00
Titanium	1.00	563	7.95E+00	571	986	2.35E+00	988	996	2.23E+00	998	1390	3.46E+00	1393	1190	3.46E+00	1193
Uranium	0.05	0.349	3.61E-04	0.349	1.06	1.07E-04	1.06	0.782	1.02E-04	0.782	1.75	1.57E-04	1.75	1.60	1.57E-04	1.60
Vanadium	0.2 - 2	28.7	3.61E-01	29.1	48.6	1.07E-01	48.7	37.2	1.02E-01	37.3	65.2	1.57E-01	65.4	57.7	1.57E-01	57.9
Zinc	1.00	15.5	2.13E-01	15.7	40.0	6.29E-02	40.1	28.7	5.99E-02	28.8	56.4	9.28E-02	56.5	50.3	9.28E-02	50.4

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): $Cs = 100 * ((DEPOSITION / (Zs * BD))) * tD$

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² / kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

	Detection Limit (mg/kg)	LSA-14			LSA-15			LSA-16			LSA-17			LSA-18		
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)
Metals																
Aluminum	50.0	8100	1.69E+01	8117	13900	3.53E+01	13935	13300	4.04E+01	13340	3220	2.94E+01	3249	2570	2.94E+01	2599
Antimony	0.1 - 10	0.0500	1.20E-04	0.0501	0.0500	1.22E-04	0.0501	0.0500	1.39E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501
Arsenic	0.05 - 5	1.87	7.23E-03	1.88	2.78	6.08E-04	2.78	7.17	6.97E-04	7.17	0.756	5.07E-04	0.757	0.645	5.07E-04	0.646
Barium	0.5 - 1	19.8	1.69E-02	19.8	71.0	3.65E-03	71.0	47.9	4.18E-03	47.9	19.1	3.04E-03	19.1	14.1	3.04E-03	14.1
Beryllium	0.2 - 0.5	0.100	3.98E-04	0.100	0.410	4.01E-04	0.410	0.240	4.60E-04	0.240	0.100	3.35E-04	0.100	0.100	3.35E-04	0.100
Bismuth	0.2 - 20	0.100	1.20E-04	0.100	0.100	1.22E-04	0.100	0.100	1.39E-04	0.100	0.100	1.01E-04	0.100	0.100	1.01E-04	0.100
Cadmium	0.05 - 0.5	0.0250	1.20E-04	0.0251	0.0250	1.22E-04	0.0251	0.0250	1.39E-04	0.0251	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251
Calcium	50.0	2370	4.46E+01	2415	3550	3.89E+01	3589	4110	4.46E+01	4155	1850	3.25E+01	1882	1900	3.25E+01	1932
Chromium	0.5 - 2	36.9	1.57E-01	37.1	44.1	1.82E-01	44.3	44.9	2.09E-01	45.1	10.9	1.52E-01	11.1	9.09	1.52E-01	9.24
Cobalt	0.1 - 2	8.56	3.85E-02	8.60	8.86	4.26E-02	8.90	14.9	4.88E-02	14.9	2.87	3.55E-02	2.91	2.25	3.55E-02	2.29
Copper	0.5 - 1	20.1	9.88E-02	20.2	16.8	1.34E-01	16.9	40.6	1.53E-01	40.8	6.13	1.12E-01	6.24	8.15	1.12E-01	8.26
Iron	50.0	15000	5.54E+01	15055	20600	5.96E+01	20660	25900	6.83E+01	25968	7520	4.97E+01	7570	7010	4.97E+01	7060
Lead	0.5 - 30	2.02	1.33E-03	2.02	5.51	7.30E-04	5.51	2.97	8.37E-04	2.97	1.91	6.09E-04	1.91	1.59	6.09E-04	1.59
Magnesium	20 - 50	5520	2.89E+01	5549	7180	2.80E+01	7208	9120	3.21E+01	9152	1700	2.33E+01	1723	1260	2.33E+01	1283
Manganese	1.00	213	1.10E+00	214	207	1.13E+00	208	394	1.30E+00	395	67.0	9.44E-01	67.9	49.6	9.44E-01	50.5
Mercury	0.005 - 0.005	0.00250	1.20E-05	0.00251	0.0120	1.22E-05	0.0120	0.00600	1.39E-05	0.00601	0.00250	1.01E-05	0.00251	0.00250	1.01E-05	0.00251
Molybdenum	0.5 - 4	0.250	3.61E-04	0.250	0.250	6.08E-04	0.251	0.250	6.97E-04	0.251	0.250	5.07E-04	0.251	0.250	5.07E-04	0.251
Nickel	0.5 - 5	24.1	9.03E-02	24.2	24.7	8.75E-02	24.8	33.6	1.00E-01	33.7	4.94	7.30E-02	5.01	3.81	7.31E-02	3.88
Phosphorus	50.0	137	2.53E-01	137	182	2.68E-01	182	357	3.07E-01	357	289	2.23E-01	289	325	2.23E-01	325
Potassium	100 - 200	380	7.23E-01	381	2180	1.22E-01	2180	1400	1.39E-01	1400	600	1.01E-01	600	280	1.01E-01	280
Selenium	0.2 - 0.5	0.100	6.02E-04	0.101	0.100	6.08E-04	0.101	0.100	6.97E-04	0.101	0.100	5.07E-04	0.101	0.100	5.07E-04	0.101
Silver	0.1 - 2	0.0500	1.20E-04	0.0501	0.0500	1.22E-04	0.0501	0.0500	1.39E-04	0.0501	0.0500	1.01E-04	0.0501	0.0500	1.01E-04	0.0501
Sodium	100 - 200	300	7.95E-01	301	450	3.04E-01	450	320	3.49E-01	320	150	2.54E-01	150	140	2.54E-01	140
Strontium	0.50	10.1	7.23E-02	10.2	19.7	1.70E-02	19.7	13.5	1.95E-02	13.5	8.99	1.42E-02	9.00	7.88	1.42E-02	7.89
Thallium	0.05 - 1	0.0250	1.20E-04	0.0251	0.147	1.22E-04	0.147	0.0930	1.39E-04	0.0931	0.0250	1.01E-04	0.0251	0.0250	1.01E-04	0.0251
Tin	2 - 5	1.00	2.41E-03	1.00	1.00	2.43E-03	1.00	1.00	2.79E-03	1.00	1.00	2.03E-03	1.00	1.00	2.03E-03	1.00
Titanium	1.00	635	1.20E-02	635	962	2.68E+00	965	826	3.07E+00	829	396	2.23E+00	398	320	2.23E+00	322
Uranium	0.05	0.302	1.20E-04	0.302	1.06	1.22E-04	1.06	0.485	1.39E-04	0.485	0.517	1.01E-04	0.517	0.456	1.01E-04	0.456
Vanadium	0.2 - 2	35.3	5.78E-02	35.4	46.2	1.22E-01	46.3	56.0	1.39E-01	56.1	17.1	1.01E-01	17.2	17.2	1.01E-01	17.3
Zinc	1.00	22.5	6.50E-02	22.6	32.9	7.17E-02	33.0	41.4	8.23E-02	41.5	9.10	5.99E-02	9.16	6.40	5.99E-02	6.46

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg·m² /kg·cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.

Appendix V6-5H. Predicted Metal Concentrations in Soil from Dust Deposition during the Construction Phase

		LSA-19			LSA-20			LSA-21			Summary Statistics							
		Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Baseline Soil Concentration ¹ (mg/kg)	Predicted Incremental Soil Concentration ² (mg/kg)	Predicted Total Soil Concentration ³ (mg/kg)	Mean of Baseline Concentrations (mg/kg)	Median of Baseline Concentrations (mg/kg)	95th Percentile of Baseline Concentrations (mg/kg)	Maximum of Baseline Concentrations (mg/kg)	Mean of Predicted Total Concentrations (mg/kg)	Median of Predicted Total Concentrations (mg/kg)	95th Percentile Predicted Total Concentrations (mg/kg)	Maximum of Predicted Total Concentrations (mg/kg)
Metals	Detection Limit (mg/kg)																	
Aluminum	50.0	6590	4.87E+00	6595	12100	1.05E+02	12205	4760	5.82E+01	4818	10096	8630	21280	27200	10131	8665	21297	27232
Antimony	0.1 - 10	0.0500	7.10E-04	0.0507	0.0500	3.61E-04	0.0504	0.050	2.01E-04	0.0502	3.41	5.00	5.00	5.00	3.41	5.00	5.00	5.00
Arsenic	0.05 - 5	1.83	3.95E-01	2.23	1.37	1.81E-03	1.37	0.963	1.00E-03	0.964	2.40	2.50	3.70	7.17	2.44	2.50	3.70	7.17
Barium	0.5 - 1	19.4	1.22E-02	19.4	61.8	1.08E-02	61.8	16.0	6.02E-03	16.0	53.9	35.3	131	164	53.9	35.3	131	164
Beryllium	0.2 - 0.5	0.100	3.35E-04	0.100	0.300	1.19E-03	0.301	0.100	6.62E-04	0.101	0.296	0.250	0.639	0.790	0.297	0.250	0.639	0.790
Bismuth	0.2 - 20	0.100	1.01E-04	0.100	0.100	3.61E-04	0.100	0.100	2.01E-04	0.100	6.83	10.0	10.0	10.0	6.83	10.0	10.0	10.0
Cadmium	0.05 - 0.5	0.0250	1.01E-04	0.0251	0.0250	3.61E-04	0.0254	0.0250	2.01E-04	0.0252	0.179	0.250	0.250	0.250	0.179	0.250	0.250	0.250
Calcium	50.0	1830	6.90E+01	1899	5730	1.16E+02	5846	2220	6.42E+01	2284	3629	2660	9018	14000	3674	2693	9052	14039
Chromium	0.5 - 2	19.6	1.32E-01	19.7	31.8	5.42E-01	32.3	27.3	3.01E-01	27.6	30.9	24.9	65.6	81.8	31.1	25.1	65.8	82.3
Cobalt	0.1 - 2	9.83	4.56E-02	9.88	7.99	1.26E-01	8.12	5.83	7.02E-02	5.90	7.16	6.60	14.3	17.1	7.21	6.64	14.4	17.2
Copper	0.5 - 1	41.7	8.62E-02	41.8	13.2	3.97E-01	13.6	6.40	2.21E-01	6.62	16.9	16.2	37.9	67.7	17.0	16.3	38.3	68.1
Iron	50.0	12700	6.59E+01	12766	18200	1.77E+02	18377	10800	9.83E+01	10898	16717	15100	30870	39800	16782	15160	30932	39854
Lead	0.5 - 30	2.40	2.23E-03	2.40	3.77	2.17E-03	3.77	1.53	1.20E-03	1.53	11.3	15.0	15.0	15.0	11.3	15.0	15.0	15.0
Magnesium	20 - 50	3810	3.24E+01	3842	7010	8.31E+01	7093	3280	4.62E+01	3326	5879	4810	12960	17900	5910	4833	12988	17925
Manganese	1.00	190	1.42E+00	191	224	3.36E+00	227	149	1.87E+00	151	189	157	369	790	190	158	371	793
Mercury	0.005 - 0.005	0.00610	1.01E-05	0.00611	0.00910	3.61E-05	0.00914	0.00880	2.01E-05	0.00882	0.0129	0.00780	0.0498	0.158	0.0129	0.00781	0.0498	0.158
Molybdenum	0.5 - 4	0.250	1.32E-03	0.251	0.250	1.81E-03	0.252	0.250	1.00E-03	0.251	1.45	2.00	2.00	2.00	1.45	2.00	2.00	2.00
Nickel	0.5 - 5	12.8	2.03E-01	13.0	17.6	2.60E-01	17.9	13.0	1.44E-01	13.1	16.7	15.1	34.7	53.5	16.8	15.2	34.8	53.8
Phosphorus	50.0	128	1.42E-01	128	279	7.95E-01	280	192	4.41E-01	192	386	364	667	943	386	364	668	943
Potassium	100 - 200	350	4.06E-01	350	2090	3.61E-01	2090	310	2.01E-01	310	1836	900	4833	7790	1836	900	4833	7790
Selenium	0.2 - 0.5	0.100	8.11E-04	0.101	0.100	1.81E-03	0.102	0.100	1.00E-03	0.101	0.202	0.250	0.250	0.250	0.203	0.251	0.251	0.252
Silver	0.1 - 2	0.0500	6.08E-04	0.0506	0.0500	3.61E-04	0.0504	0.0500	2.01E-04	0.0502	0.696	1.00	1.00	1.00	0.696	1.00	1.00	1.00
Sodium	100 - 200	180	4.06E-01	180	390	9.03E-01	391	110	5.02E-01	111	307	240	707	1450	308	240	707	1450
Strontium	0.50	8.40	5.98E-02	8.46	30.5	5.06E-02	30.6	7.86	2.81E-02	7.89	19.4	14.9	39.4	79.9	19.5	14.9	39.4	79.9
Thallium	0.05 - 1	0.0250	1.01E-04	0.0251	0.120	3.61E-04	0.120	0.0250	2.01E-04	0.0252	0.365	0.500	0.500	0.500	0.365	0.500	0.500	0.500
Tin	2 - 5	1.00	2.03E-03	1.00	1.00	7.22E-03	1.01	1.00	4.01E-03	1.00	2.02	2.50	2.50	2.50	2.02	2.50	2.50	2.51
Titanium	1.00	505	1.01E-02	505	851	7.95E+00	859	366	4.41E+00	370	712	584	1470	1760	714	586	1472	1762
Uranium	0.05	0.399	1.01E-04	0.399	0.449	3.61E-04	0.449	0.314	2.01E-04	0.314	0.803	0.547	1.75	2.23	0.803	0.547	1.75	2.23
Vanadium	0.2 - 2	27.8	2.74E-02	27.8	39.6	3.61E-01	40.0	26.4	2.01E-01	26.6	36.0	32.0	69.6	82.0	36.2	32.1	69.6	82.1
Zinc	1.00	17.5	6.08E-02	17.6	37.6	2.13E-01	37.8	15.8	1.18E-01	15.9	29.6	26.5	59.1	80.5	29.6	26.6	59.2	80.6

Notes:

¹ Soil baseline concentrations are from samples collected in 2010 and 2014.

² Equation used to calculate incremental soil concentration is from the US EPA (2005): Cs =100*((DEPOSITION/(Zs*BD)))*tD

³ Total soil concentration is the sum of the baseline concentration and the incremental concentration.

Samples where the concentration was below the detection limit were replaced with values of half the detection limit for calculation purposes.

Cs = Average soil concentration over exposure duration (mg COPC/kg soil)

100 = Units conversion factor (mg-m² /kg-cm²)

DEPOSITION = Yearly deposition rate of COPC from model (g/m² year)

tD = Time period over which deposition occurs (4 years of the Construction phase)

Zs = Soil mixing zone depth (2 cm)

BD = Soil bulk density (1.5 g soil/cm³ soil)

(-) = no value

All soil concentrations are dry weights.