April 6, 2016

BURNCO AGGREGATE PROJECT

Soil Deposition Model

Submitted to:
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REPORT

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Acronyms and Abbreviations

DL	Detection limit
e.g.	*exempli gratia* (for example)
i.e.	*id est* (that is)
The Proposed Project	BURNCO Aggregate Project
UCLM	Upper confidence limit of the mean

Units of Measure

%	Percent
$g/m^2/year$	Gram per square metre per year
kg/m^3	Kilogram per cubic metre
m	Metre
mg/g	Milligram per gram
mg/kg	Milligram per kilogram

1.0 INTRODUCTION

This appendix summarizes the data and methods used to predict Base Case and Application Case soil concentrations from air depositional inputs for the human health multimedia risk assessment being conducted as part of the overall Environmental Assessment Certificate/Environmental Impact Assessment (hereafter referred to as the EA) for the Proposed BURNCO Aggregate project (the Proposed Project). Baseline soil chemistry data (i.e., measured concentrations in soil) are provided in Appendix 9.1-A. Screening of the predicted Application Case soil concentrations is presented in Appendix 9.1-C.

2.0 METHOD FOR PREDICTING SOIL CONCENTRATIONS

Soil concentrations were estimated using methods provided in the Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities (US EPA 1999, 2005). The incremental change in soil concentration was calculated at the human health receptor locations selected for the Proposed Project using depositional rates for the Base Case and Application Case. The incremental change was added to the maximum measured baseline soil concentrations to predict Base Case and Application Case soil concentrations for the purposes of screening for chemicals of potential concern (COPCs)

US EPA (1999, 2005) provides the following general equation for estimating the incremental change in soil concentration that would be achieved over a specified deposition time:

$$ISC = \frac{(Dyd+Dyw)x\ (1-e^{(-Ks\ x\ tD)})}{Zs\ x\ BD\ x\ Ks}\ \text{x}\ 1000\ \text{mg/g} \qquad \text{Equation (1)}$$

Where:

ISC = incremental soil concentration (mg/kg dry weight)
Dyd = dry deposition rate (g/m^2/year)
Dyw = wet deposition rate (g/m^2/year)
tD = deposition time (year)
Zs = soil mixing depth (m)
BD = bulk density (kg/m^3)
Ks = soil loss constant (year^{-1})

Equation 1 represents a simple soil compartment model that assumes that deposition represents a mass input of substance per unit volume of soil. Equation 1 allows for loss (i.e., removal) of substances from the unit volume of soil through various processes including abiotic degradation, erosion, surface runoff, leaching and volatilization. These loss processes are chemical and site-specific, and are subject to a high degree of uncertainty. In the absence of site-specific information, US EPA (1999, 2005) assumes default values of zero (i.e., no loss) for abiotic degradation, erosion, surface runoff and leaching processes. Volatilization can be estimated for organic substances (i.e., based on chemical properties) but could also be subject to site-specific uncertainty (e.g., air temperature, soil mixing zone depth, density of soil particles, wind speed). Inorganic substances (e.g., metals) do not typically volatilize meaning that volatilization loss would be zero.

A conservative assumption of Ks = 0 was utilized for deposition modelling. Under this assumption, as Ks approaches zero, Equation 1 simplifies to the following:

$$ISC = \frac{(Dyd+Dyw)x\ tD}{Zs\ x\ BD}\ \text{x}\ 1000\ \text{mg/g} \quad \text{Equation (2)}$$

Where:

ISC = Incremental Soil Concentration (mg/kg dry weight)
Dyd = Dry Deposition Rate (g/m^2/year)
Dyw = Wet Deposition Rate (g/m^2/year)
tD = Deposition Time (25 years)
Zs = Soil Mixing Depth (0.2 m)
BD = Bulk Density (1500 kg/m^3)

The assumption of no losses from soil is conservative and likely results in an overestimate of the influence of deposition on soil concentrations. However, the model recommended by US EPA (2005) is straightforward and generally accepted by regulatory agencies in the absence of more detailed site-specific information. Therefore it was considered appropriate for predicting soil concentrations for this assessment.

The substances predicted to be deposited onto soil were assumed to mix within the top 0.2 m, as recommended for tilled soils, as the root depth is assumed to equal the tilling depth (US EPA 2005). To maintain a conservative approach, the deposition time was assumed to be the full length of the Proposed Project (i.e., 18 years for construction and operations) for each of the Proposed Project phases (Base Case and Application Case).

The total, dry, and wet deposition rates for metals in the Base Case and Application Case provided by the air quality discipline are provided in Tables 9.1-D-1, 9.1-D-2 and 9.1-D-3, respectively. Methods for the prediction of aerial deposition rates are provided in the Air Quality Section (Section 5.7).

Maximum measured baseline soil concentrations are presented in Table 9.1-D-4.

Table 9.1-D-4: Maximum Measured Baseline Soil Concentrations used to Predict Base Case and Application Case Soil Concentrations

Metal	Maximum Concentration Used to Predict Base Case and Application Case Soil Concentration (mg/kg dry weight)
Aluminum	44,000
Antimony	1.14
Arsenic	15.7
Barium	217
Beryllium	0.36
Bismuth	0.29
Cadmium	0.186
Calcium	4130
Chromium	35.8
Cobalt	11.1
Copper	40.2
Iron	28,000
Lead	58.0
Lithium	16.9
Magnesium	8110
Manganese	497
Mercury	0.38
Molybdenum	0.88
Nickel	23.1
Phosphorus	853
Potassium	2320
Selenium	0.53
Silver	0.14
Sodium	590
Strontium	40.8
Thallium	0.131
Tin	2.00[a]
Titanium	1750
Uranium	3.14
Vanadium	73.5
Zinc	63.1

3.0 PREDICTED INCREMENTAL AND APPLICATION CASE SOIL CONCENTRATIONS

Predicted incremental soil concentrations are presented in Table 9.1-D-5. The predicted incremental soil concentrations at each human health receptor location were added to the maximum measured soil concentration (Table 9.1-D-4) to calculate the predicted soil concentrations for the Base Case and Application Case. The predicted Base Case and Application Case soil concentrations are provided in Table 9.1-D-6.

4.0 CLOSURE

We trust this information is sufficient for your needs at this time. Should you have any questions or concerns, please do not hesitate to contact the undersigned at 604-296-4200.

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5.0 REFERENCES

US EPA. 1999. Appendix C: Media-to-Receptor Bioconcentration Factors (BCFs). In: Screening level ecological risk assessment protocol for hazardous waste combustion facilities. Peer Review Draft. Solid Waste and Emergency Response. EPA530-D-99-001A. August 1999.

US EPA. 2005. Chapter 5: Estimating media concentrations. In: Human health risk assessment protocol for hazardous waste combustion facilities. Office of Solid Waste and Emergency Response. EPA530-05-006.

Table 9.1-D-1: Annual Predicted Dry PM and Metals Deposition Rates at the Human Health Receptor Locations for the Base Case and Application Case (g/m^2/year)

Receptor Location	Base Case Deposition Rate (g/m^2/year)	Squamish	Porteau Cove	Bowen Island	Lions Bay	Langdale	Horseshoe Bay	New Brighton	Britannia Beach	Furry Creek	Gibsons	Ch'iyakmesh	Unknown First Nations	Unknown residence	Potlach Creek	KWUM KWUM	Tetrahedron Park	Anvil Island	Ekin's Point	Kaikalahun	McNab Creek Strata	Camp Artaban	Camp Latona	Residence on Gambier Island
Parameter		Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
TSP	2.87E-01	2.04E-01	2.89E-01	3.28E-01	3.58E-01	6.15E-01	3.86E-01	4.68E-01	2.70E-01	2.86E-01	7.20E-01	1.17E-01	2.64E-01	4.69E-02	2.84E-01	2.44E-01	1.36E-01	3.06E-01	2.81E-01	1.09E-01	1.08E-01	2.59E-01	3.08E-01	2.72E-01
Aluminum (Al)	5.58E-04	4.09E-04	6.01E-04	6.32E-04	6.91E-04	1.20E-03	7.42E-04	7.77E-04	5.47E-04	5.65E-04	1.39E-03	2.30E-04	5.39E-04	1.17E-04	5.71E-04	5.06E-04	3.05E-04	5.72E-04	5.37E-04	2.89E-04	5.39E-04	5.06E-04	5.39E-04	5.30E-04
Antimony (Sb)	7.31E-06	5.25E-06	7.57E-06	8.31E-06	9.08E-06	1.57E-05	9.77E-06	1.11E-05	6.98E-06	7.32E-06	1.83E-05	2.98E-06	6.86E-06	1.30E-06	7.29E-06	6.36E-06	3.68E-06	7.62E-06	6.78E-06	3.13E-06	2.10E-06	6.60E-06	7.19E-06	6.92E-06
Arsenic (As)	2.23E-04	1.60E-04	2.30E-04	2.54E-04	2.77E-04	4.78E-04	2.99E-04	3.45E-04	2.12E-04	2.23E-04	5.59E-04	9.08E-05	2.08E-04	3.90E-05	2.22E-04	1.93E-04	1.11E-04	2.34E-04	2.08E-04	9.30E-05	6.19E-05	2.02E-04	2.23E-04	2.11E-04
Barium (Ba)	1.75E-05	1.24E-05	1.75E-05	2.00E-05	2.19E-05	3.76E-05	2.36E-05	2.91E-05	1.64E-05	1.74E-05	4.40E-05	7.14E-06	1.61E-05	2.81E-06	1.73E-05	1.48E-05	8.16E-06	1.88E-05	1.74E-05	6.50E-06	7.26E-06	1.58E-05	1.93E-05	1.66E-05
Beryllium (Be)	3.67E-05	2.61E-05	3.71E-05	4.19E-05	4.57E-05	7.86E-05	4.93E-05	5.91E-05	3.46E-05	3.66E-05	9.21E-05	1.49E-05	3.39E-05	6.05E-06	3.63E-05	3.13E-05	1.76E-05	3.89E-05	3.47E-05	1.42E-05	9.30E-06	3.31E-05	3.79E-05	3.48E-05
Bismuth (Bi)	3.65E-05	2.63E-05	3.79E-05	4.15E-05	4.54E-05	7.83E-05	4.88E-05	5.53E-05	3.49E-05	3.66E-05	9.14E-05	1.49E-05	3.43E-05	6.57E-06	3.65E-05	3.19E-05	1.85E-05	3.80E-05	3.38E-05	1.58E-05	1.05E-05	3.30E-05	3.57E-05	3.46E-05
Cadmium (Cd)	3.65E-06	2.63E-06	3.79E-06	4.15E-06	4.54E-06	7.83E-06	4.88E-06	5.54E-06	3.49E-06	3.66E-06	9.14E-06	1.49E-06	3.43E-06	6.55E-07	3.65E-06	3.18E-06	1.85E-06	3.81E-06	3.38E-06	1.58E-06	1.05E-06	3.30E-06	3.58E-06	3.46E-06
Calcium (Ca)	3.68E-03	2.60E-03	3.65E-03	4.22E-03	4.61E-03	7.90E-03	4.97E-03	6.21E-03	3.44E-03	3.66E-03	9.27E-03	1.50E-03	3.36E-03	5.70E-04	3.62E-03	3.09E-03	1.69E-03	3.96E-03	3.58E-03	1.33E-03	1.01E-03	3.33E-03	3.98E-03	3.50E-03
Chromium (Cr)	3.69E-05	2.60E-05	3.61E-05	4.24E-05	4.63E-05	7.91E-05	5.00E-05	6.38E-05	3.42E-05	3.66E-05	9.30E-05	1.50E-05	3.34E-05	5.49E-06	3.62E-05	3.07E-05	1.65E-05	4.00E-05	3.61E-05	1.28E-05	9.47E-06	3.33E-05	4.06E-05	3.51E-05
Cobalt (Co)	7.35E-06	5.22E-06	7.39E-06	8.40E-06	9.17E-06	1.58E-05	9.88E-06	1.20E-05	6.91E-06	7.32E-06	1.84E-05	2.99E-06	6.77E-06	1.19E-06	7.26E-06	6.25E-06	3.48E-06	7.82E-06	7.04E-06	2.80E-06	2.09E-06	6.64E-06	7.73E-06	6.97E-06
Copper (Cu)	6.36E-05	4.53E-05	6.43E-05	7.26E-05	7.92E-05	1.36E-04	8.54E-05	1.02E-04	5.99E-05	6.34E-05	1.59E-04	2.59E-05	5.87E-05	1.05E-05	6.29E-05	5.42E-05	3.05E-05	6.74E-05	6.03E-05	2.47E-05	1.70E-05	5.74E-05	6.58E-05	6.03E-05
Iron (Fe)	2.24E-03	1.60E-03	2.25E-03	2.57E-03	2.80E-03	4.82E-03	3.02E-03	3.72E-03	2.11E-03	2.24E-03	5.64E-03	9.17E-04	2.07E-03	3.68E-04	2.23E-03	1.91E-03	1.05E-03	2.40E-03	2.30E-03	8.45E-04	1.30E-03	2.03E-03	2.56E-03	2.13E-03
Lead (Pb)	9.23E-06	6.70E-06	9.82E-06	1.04E-05	1.14E-05	1.98E-05	1.23E-05	1.31E-05	8.95E-06	9.29E-06	2.30E-05	3.77E-06	8.81E-06	1.81E-06	9.31E-06	8.23E-06	4.91E-06	9.47E-06	8.43E-06	4.51E-06	3.93E-06	8.35E-06	8.59E-06	8.73E-06
Lithium (Li)	3.68E-04	2.60E-04	3.66E-04	4.22E-04	4.60E-04	7.89E-04	4.97E-04	6.16E-04	3.44E-04	3.66E-04	9.26E-04	1.50E-04	3.36E-04	5.73E-05	3.62E-04	3.10E-04	1.70E-04	3.95E-04	3.53E-04	1.34E-04	8.56E-05	3.32E-04	3.91E-04	3.50E-04
Magnesium (Mg)	7.36E-03	5.22E-03	7.35E-03	8.42E-03	9.19E-03	1.58E-02	9.91E-03	1.22E-02	6.89E-03	7.32E-03	1.85E-02	2.99E-03	6.75E-03	1.17E-03	7.25E-03	6.22E-03	3.44E-03	7.86E-03	7.06E-03	2.74E-03	1.94E-03	6.64E-03	7.79E-03	6.98E-03
Manganese (Mn)	4.63E-05	3.29E-05	4.65E-05	5.29E-05	5.77E-05	9.93E-05	6.23E-05	7.59E-05	4.36E-05	4.62E-05	1.16E-04	1.89E-05	4.27E-05	7.60E-06	4.59E-05	3.94E-05	2.19E-05	4.94E-05	4.61E-05	1.76E-05	2.12E-05	4.18E-05	5.09E-05	4.40E-05
Mercury (Hg)	3.64E-06	2.64E-06	3.88E-06	4.11E-06	4.50E-06	7.78E-06	4.83E-06	5.11E-06	3.53E-06	3.66E-06	9.06E-06	1.48E-06	3.48E-06	7.17E-07	3.66E-06	3.25E-06	1.95E-06	3.72E-06	3.26E-06	1.81E-06	1.19E-06	3.29E-06	3.28E-06	3.44E-06
Molybdenum (Mo)	3.68E-06	2.60E-06	3.66E-06	4.21E-06	4.60E-06	7.89E-06	4.96E-06	6.14E-06	3.44E-06	3.66E-06	9.25E-06	1.50E-06	3.37E-06	5.77E-07	3.62E-06	3.10E-06	1.70E-06	3.94E-06	3.53E-06	1.35E-06	8.91E-07	3.32E-06	3.90E-06	3.49E-06
Nickel (Ni)	3.68E-05	2.61E-05	3.67E-05	4.21E-05	4.60E-05	7.88E-05	4.96E-05	6.10E-05	3.44E-05	3.66E-05	9.24E-05	1.50E-05	3.37E-05	5.82E-06	3.62E-05	3.11E-05	1.71E-05	3.93E-05	3.53E-05	1.36E-05	9.38E-06	3.32E-05	3.90E-05	3.49E-05
Phosphorus (P)	2.23E-02	1.60E-02	2.28E-02	2.55E-02	2.78E-02	4.79E-02	3.00E-02	3.52E-02	2.12E-02	2.23E-02	5.60E-02	9.09E-03	2.08E-02	3.79E-03	2.22E-02	1.92E-02	1.09E-02	2.35E-02	2.10E-02	8.99E-03	5.94E-03	2.02E-02	2.27E-02	2.12E-02
Potassium (K)	1.44E-01	1.01E-01	1.42E-01	1.65E-01	1.80E-01	3.08E-01	1.94E-01	2.44E-01	1.34E-01	1.43E-01	3.62E-01	5.85E-02	1.31E-01	2.20E-02	1.41E-01	1.20E-01	6.55E-02	1.55E-01	1.38E-01	5.13E-02	3.22E-02	1.30E-01	1.54E-01	1.37E-01
Selenium (Se)	7.33E-05	5.24E-05	7.49E-05	8.35E-05	9.12E-05	1.57E-04	9.82E-05	1.15E-04	6.95E-05	7.32E-05	1.84E-04	2.98E-05	6.81E-05	1.25E-05	7.27E-05	6.31E-05	3.59E-05	7.71E-05	6.88E-05	2.96E-05	1.95E-05	6.62E-05	7.42E-05	6.94E-05
Silver (Ag)	7.31E-07	5.26E-07	7.60E-07	8.30E-07	9.07E-07	1.56E-06	9.76E-07	1.10E-06	6.99E-07	7.32E-07	1.83E-06	2.98E-07	6.87E-07	1.32E-07	7.30E-07	6.38E-07	3.71E-07	7.60E-07	6.75E-07	3.19E-07	2.15E-07	6.60E-07	7.12E-07	6.91E-07
Sodium (Na)	1.44E-01	1.01E-01	1.40E-01	1.66E-01	1.81E-01	3.09E-01	1.95E-01	2.51E-01	1.33E-01	1.43E-01	3.63E-01	5.86E-02	1.30E-01	2.11E-02	1.41E-01	1.19E-01	6.37E-02	1.57E-01	1.40E-01	4.92E-02	2.98E-02	1.30E-01	1.57E-01	1.37E-01
Strontium (Sr)	1.79E-05	1.26E-05	1.77E-05	2.05E-05	2.24E-05	3.84E-05	2.42E-05	3.03E-05	1.67E-05	1.78E-05	4.50E-05	7.28E-06	1.63E-05	2.75E-06	1.76E-05	1.50E-05	8.16E-06	1.93E-05	1.75E-05	6.41E-06	5.24E-06	1.62E-05	1.95E-05	1.70E-05
Thallium (Tl)	7.36E-06	5.21E-06	7.31E-06	8.43E-06	9.20E-06	1.58E-05	9.93E-06	1.23E-05	6.88E-06	7.32E-06	1.85E-05	2.99E-06	6.73E-06	1.15E-06	7.24E-06	6.19E-06	3.40E-06	7.90E-06	7.05E-06	2.68E-06	1.71E-06	6.65E-06	7.82E-06	6.99E-06
Tin (Sn)	7.29E-06	5.27E-06	7.68E-06	8.26E-06	9.03E-06	1.56E-05	9.71E-06	1.06E-05	7.02E-06	7.32E-06	1.82E-05	2.97E-06	6.91E-06	1.37E-06	7.31E-06	6.43E-06	3.80E-06	7.52E-06	6.64E-06	3.38E-06	2.28E-06	6.59E-06	6.88E-06	6.89E-06
Titanium (Ti)	7.36E-04	5.21E-04	7.32E-04	8.43E-04	9.20E-04	1.58E-03	9.93E-04	1.23E-03	6.88E-04	7.33E-04	1.85E-03	3.00E-04	6.73E-04	1.15E-04	7.25E-04	6.20E-04	3.40E-04	7.90E-04	7.12E-04	2.69E-04	2.00E-04	6.65E-04	7.90E-04	6.99E-04
Uranium (U)	7.32E-07	5.25E-07	7.53E-07	8.33E-07	9.10E-07	1.57E-06	9.80E-07	1.13E-06	6.97E-07	7.32E-07	1.83E-06	2.98E-07	6.84E-07	1.28E-07	7.30E-07	6.34E-07	3.64E-07	7.68E-07	6.93E-07	3.05E-07	2.65E-07	6.61E-07	7.44E-07	6.94E-07
Vanadium (V)	7.35E-05	5.22E-05	7.37E-05	8.41E-05	9.18E-05	1.58E-04	9.90E-05	1.21E-04	6.90E-05	7.32E-05	1.85E-04	2.99E-05	6.76E-05	1.18E-05	7.26E-05	6.23E-05	3.46E-05	7.84E-05	7.04E-05	2.76E-05	1.99E-05	6.64E-05	7.76E-05	6.98E-05
Zinc (Zn)	5.73E-04	4.08E-04	5.77E-04	6.55E-04	7.15E-04	1.23E-03	7.71E-04	9.32E-04	5.39E-04	5.71E-04	1.44E-03	2.33E-04	5.28E-04	9.32E-05	5.66E-04	4.87E-04	2.72E-04	6.09E-04	5.44E-04	2.19E-04	1.43E-04	5.18E-04	5.96E-04	5.44E-04

Table 9.1-D-2: Annual Predicted Wet PM and Metals Deposition Rates at the Human Health Receptor Locations for the Base Case and Application Case (g/m^2/year)

Receptor Location	Base Case Deposition Rate (g/m^2/year)	Squamish	Porteau Cove	Bowen Island	Lions Bay	Langdale	Horseshoe Bay	New Brighton	Britannia Beach	Furry Creek	Gibsons	Ch'iyakmesh	Unknown First Nations	Unknown residence	Potlach Creek	KWUM KWUM	Tetrahedron Park	Anvil Island	Ekin's Point	Kaikalahun	McNab Creek Strata	Camp Artaban	Camp Latona	Residence on Gambier Island
Parameter		Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet	Wet
TSP	1.99E+00	2.08E+00	1.99E+00	1.95E+00	1.92E+00	1.66E+00	1.89E+00	1.81E+00	2.01E+00	1.99E+00	1.56E+00	2.17E+00	2.02E+00	2.26E+00	2.00E+00	2.04E+00	2.15E+00	1.97E+00	2.06E+00	2.18E+00	3.38E+00	2.02E+00	2.04E+00	2.01E+00
Aluminum (Al)	3.93E-03	4.11E-03	3.90E-03	3.86E-03	3.80E-03	3.30E-03	3.74E-03	3.72E-03	3.97E-03	3.94E-03	3.10E-03	4.29E-03	3.98E-03	4.56E-03	3.97E-03	4.02E-03	4.22E-03	3.93E-03	4.31E-03	4.25E-03	1.26E-02	3.99E-03	4.33E-03	3.97E-03
Antimony (Sb)	5.10E-05	5.31E-05	5.08E-05	5.01E-05	4.93E-05	4.27E-05	4.86E-05	4.72E-05	5.14E-05	5.10E-05	4.01E-05	5.54E-05	5.15E-05	5.71E-05	5.11E-05	5.20E-05	5.47E-05	5.07E-05	5.16E-05	5.52E-05	5.69E-05	5.18E-05	5.12E-05	5.14E-05
Arsenic (As)	1.56E-03	1.62E-03	1.55E-03	1.53E-03	1.50E-03	1.30E-03	1.48E-03	1.43E-03	1.57E-03	1.56E-03	1.22E-03	1.69E-03	1.57E-03	1.74E-03	1.56E-03	1.59E-03	1.67E-03	1.55E-03	1.57E-03	1.69E-03	1.73E-03	1.58E-03	1.56E-03	1.57E-03
Barium (Ba)	1.21E-04	1.27E-04	1.22E-04	1.19E-04	1.17E-04	1.01E-04	1.15E-04	1.10E-04	1.23E-04	1.22E-04	9.49E-05	1.32E-04	1.23E-04	1.39E-04	1.22E-04	1.25E-04	1.31E-04	1.20E-04	1.27E-04	1.33E-04	2.38E-04	1.23E-04	1.26E-04	1.22E-04
Beryllium (Be)	2.55E-04	2.66E-04	2.55E-04	2.50E-04	2.46E-04	2.13E-04	2.42E-04	2.33E-04	2.57E-04	2.55E-04	2.00E-04	2.77E-04	2.58E-04	2.86E-04	2.55E-04	2.60E-04	2.74E-04	2.53E-04	2.57E-04	2.78E-04	2.83E-04	2.59E-04	2.54E-04	2.57E-04
Bismuth (Bi)	2.55E-04	2.66E-04	2.54E-04	2.50E-04	2.46E-04	2.14E-04	2.43E-04	2.37E-04	2.57E-04	2.55E-04	2.00E-04	2.77E-04	2.57E-04	2.85E-04	2.55E-04	2.60E-04	2.73E-04	2.54E-04	2.58E-04	2.76E-04	2.82E-04	2.59E-04	2.56E-04	2.57E-04
Cadmium (Cd)	2.55E-05	2.66E-05	2.54E-05	2.50E-05	2.46E-05	2.14E-05	2.43E-05	2.36E-05	2.57E-05	2.55E-05	2.00E-05	2.77E-05	2.57E-05	2.85E-05	2.55E-05	2.60E-05	2.73E-05	2.54E-05	2.58E-05	2.76E-05	2.82E-05	2.59E-05	2.56E-05	2.57E-05
Calcium (Ca)	2.55E-02	2.66E-02	2.55E-02	2.50E-02	2.46E-02	2.13E-02	2.42E-02	2.30E-02	2.58E-02	2.55E-02	1.99E-02	2.77E-02	2.58E-02	2.88E-02	2.56E-02	2.61E-02	2.75E-02	2.52E-02	2.59E-02	2.79E-02	3.41E-02	2.59E-02	2.56E-02	2.57E-02
Chromium (Cr)	2.55E-04	2.66E-04	2.56E-04	2.49E-04	2.46E-04	2.13E-04	2.42E-04	2.28E-04	2.58E-04	2.55E-04	1.99E-04	2.77E-04	2.59E-04	2.88E-04	2.56E-04	2.61E-04	2.76E-04	2.52E-04	2.59E-04	2.80E-04	3.44E-04	2.59E-04	2.55E-04	2.57E-04
Cobalt (Co)	5.10E-05	5.32E-05	5.10E-05	5.00E-05	4.92E-05	4.26E-05	4.85E-05	4.64E-05	5.15E-05	5.11E-05	3.99E-05	5.54E-05	5.16E-05	5.74E-05	5.12E-05	5.22E-05	5.49E-05	5.06E-05	5.18E-05	5.56E-05	6.53E-05	5.17E-05	5.12E-05	5.14E-05
Copper (Cu)	4.42E-04	4.60E-04	4.41E-04	4.33E-04	4.26E-04	3.69E-04	4.20E-04	4.03E-04	4.45E-04	4.42E-04	3.46E-04	4.80E-04	4.47E-04	4.95E-04	4.43E-04	4.51E-04	4.75E-04	4.38E-04	4.46E-04	4.81E-04	5.16E-04	4.48E-04	4.41E-04	4.45E-04
Iron (Fe)	1.55E-02	1.63E-02	1.56E-02	1.52E-02	1.50E-02	1.30E-02	1.48E-02	1.41E-02	1.58E-02	1.56E-02	1.22E-02	1.70E-02	1.58E-02	1.80E-02	1.57E-02	1.60E-02	1.68E-02	1.54E-02	1.69E-02	1.72E-02	4.19E-02	1.58E-02	1.68E-02	1.57E-02
Lead (Pb)	6.48E-05	6.74E-05	6.42E-05	6.36E-05	6.26E-05	5.43E-05	6.17E-05	6.09E-05	6.52E-05	6.48E-05	5.10E-05	7.04E-05	6.53E-05	7.28E-05	6.49E-05	6.59E-05	6.92E-05	6.46E-05	6.67E-05	6.97E-05	9.49E-05	6.57E-05	6.66E-05	6.53E-05
Lithium (Li)	2.55E-03	2.66E-03	2.55E-03	2.50E-03	2.46E-03	2.13E-03	2.42E-03	2.30E-03	2.57E-03	2.55E-03	1.99E-03	2.77E-03	2.58E-03	2.86E-03	2.56E-03	2.61E-03	2.75E-03	2.52E-03	2.57E-03	2.78E-03	2.85E-03	2.59E-03	2.53E-03	2.57E-03
Magnesium (Mg)	5.10E-02	5.32E-02	5.10E-02	4.99E-02	4.92E-02	4.26E-02	4.85E-02	4.62E-02	5.15E-02	5.10E-02	3.99E-02	5.54E-02	5.16E-02	5.73E-02	5.11E-02	5.22E-02	5.49E-02	5.05E-02	5.16E-02	5.57E-02	6.27E-02	5.17E-02	5.09E-02	5.14E-02
Manganese (Mn)	3.21E-04	3.35E-04	3.21E-04	3.15E-04	3.10E-04	2.69E-04	3.05E-04	2.92E-04	3.25E-04	3.22E-04	2.51E-04	3.50E-04	3.26E-04	3.68E-04	3.23E-04	3.30E-04	3.47E-04	3.19E-04	3.38E-04	3.53E-04	6.69E-04	3.26E-04	3.36E-04	3.24E-04
Mercury (Hg)	2.55E-05	2.65E-05	2.53E-05	2.51E-05	2.47E-05	2.14E-05	2.43E-05	2.41E-05	2.57E-05	2.55E-05	2.01E-05	2.77E-05	2.57E-05	2.85E-05	2.55E-05	2.59E-05	2.72E-05	2.55E-05	2.59E-05	2.74E-05	2.82E-05	2.59E-05	2.59E-05	2.57E-05
Molybdenum (Mo)	2.55E-05	2.66E-05	2.55E-05	2.50E-05	2.46E-05	2.13E-05	2.42E-05	2.30E-05	2.57E-05	2.55E-05	1.99E-05	2.77E-05	2.58E-05	2.86E-05	2.56E-05	2.61E-05	2.75E-05	2.52E-05	2.57E-05	2.78E-05	2.94E-05	2.59E-05	2.53E-05	2.57E-05
Nickel (Ni)	2.55E-04	2.66E-04	2.55E-04	2.50E-04	2.46E-04	2.13E-04	2.42E-04	2.31E-04	2.57E-04	2.55E-04	1.99E-04	2.77E-04	2.58E-04	2.87E-04	2.56E-04	2.61E-04	2.75E-04	2.53E-04	2.58E-04	2.78E-04	3.05E-04	2.59E-04	2.54E-04	2.57E-04
Phosphorus (P)	1.56E-01	1.62E-01	1.55E-01	1.52E-01	1.50E-01	1.30E-01	1.48E-01	1.43E-01	1.57E-01	1.56E-01	1.22E-01	1.69E-01	1.57E-01	1.74E-01	1.56E-01	1.59E-01	1.67E-01	1.54E-01	1.57E-01	1.69E-01	1.73E-01	1.58E-01	1.55E-01	1.57E-01
Potassium (K)	9.95E-01	1.04E+00	9.97E-01	9.74E-01	9.59E-01	8.31E-01	9.44E-01	8.95E-01	1.00E+00	9.96E-01	7.77E-01	1.08E+00	1.01E+00	1.12E+00	9.98E-01	1.02E+00	1.07E+00	9.84E-01	1.00E+00	1.09E+00	1.11E+00	1.01E+00	9.85E-01	1.00E+00
Selenium (Se)	5.10E-04	5.31E-04	5.09E-04	5.00E-04	4.92E-04	4.27E-04	4.85E-04	4.68E-04	5.14E-04	5.10E-04	4.00E-04	5.54E-04	5.15E-04	5.71E-04	5.11E-04	5.21E-04	5.48E-04	5.06E-04	5.15E-04	5.54E-04	5.65E-04	5.17E-04	5.09E-04	5.14E-04
Silver (Ag)	5.11E-06	5.31E-06	5.08E-06	5.01E-06	4.93E-06	4.27E-06	4.86E-06	4.74E-06	5.14E-06	5.10E-06	4.01E-06	5.54E-06	5.15E-06	5.71E-06	5.11E-06	5.20E-06	5.46E-06	5.08E-06	5.17E-06	5.52E-06	5.72E-06	5.18E-06	5.13E-06	5.14E-06
Sodium (Na)	9.95E-01	1.04E+00	9.98E-01	9.73E-01	9.58E-01	8.30E-01	9.43E-01	8.87E-01	1.01E+00	9.96E-01	7.75E-01	1.08E+00	1.01E+00	1.12E+00	9.98E-01	1.02E+00	1.07E+00	9.82E-01	9.99E-01	1.09E+00	1.11E+00	1.01E+00	9.82E-01	1.00E+00
Strontium (Sr)	1.24E-04	1.29E-04	1.24E-04	1.21E-04	1.19E-04	1.03E-04	1.17E-04	1.11E-04	1.25E-04	1.24E-04	9.67E-05	1.35E-04	1.25E-04	1.40E-04	1.24E-04	1.27E-04	1.34E-04	1.22E-04	1.27E-04	1.36E-04	1.80E-04	1.26E-04	1.25E-04	1.25E-04
Thallium (Tl)	5.10E-05	5.32E-05	5.10E-05	4.99E-05	4.92E-05	4.26E-05	4.84E-05	4.60E-05	5.15E-05	5.10E-05	3.98E-05	5.54E-05	5.16E-05	5.72E-05	5.11E-05	5.22E-05	5.50E-05	5.05E-05	5.13E-05	5.57E-05	5.68E-05	5.17E-05	5.06E-05	5.14E-05
Tin (Sn)	5.11E-05	5.31E-05	5.07E-05	5.01E-05	4.93E-05	4.28E-05	4.86E-05	4.77E-05	5.13E-05	5.10E-05	4.02E-05	5.54E-05	5.15E-05	5.70E-05	5.11E-05	5.19E-05	5.46E-05	5.08E-05	5.18E-05	5.50E-05	5.73E-05	5.18E-05	5.15E-05	5.15E-05
Titanium (Ti)	5.10E-03	5.32E-03	5.11E-03	4.99E-03	4.92E-03	4.26E-03	4.84E-03	4.61E-03	5.15E-03	5.11E-03	3.99E-03	5.54E-03	5.17E-03	5.75E-03	5.12E-03	5.22E-03	5.50E-03	5.05E-03	5.18E-03	5.58E-03	6.67E-03	5.17E-03	5.11E-03	5.14E-03
Uranium (U)	5.10E-06	5.32E-06	5.09E-06	5.00E-06	4.93E-06	4.27E-06	4.86E-06	4.71E-06	5.14E-06	5.11E-06	4.00E-06	5.54E-06	5.16E-06	5.75E-06	5.12E-06	5.21E-06	5.48E-06	5.07E-06	5.23E-06	5.55E-06	7.42E-06	5.18E-06	5.19E-06	5.15E-06
Vanadium (V)	5.10E-04	5.32E-04	5.10E-04	5.00E-04	4.92E-04	4.26E-04	4.85E-04	4.63E-04	5.15E-04	5.11E-04	3.99E-04	5.54E-04	5.16E-04	5.73E-04	5.11E-04	5.22E-04	5.49E-04	5.05E-04	5.17E-04	5.57E-04	6.33E-04	5.17E-04	5.10E-04	5.14E-04
Zinc (Zn)	3.98E-03	4.15E-03	3.98E-03	3.90E-03	3.84E-03	3.33E-03	3.78E-03	3.62E-03	4.02E-03	3.98E-03	3.12E-03	4.32E-03	4.03E-03	4.46E-03	3.99E-03	4.07E-03	4.28E-03	3.95E-03	4.01E-03	4.34E-03	4.46E-03	4.04E-03	3.96E-03	4.01E-03

Table 9.1-D-3: Annual Predicted Total PM and Metals Deposition Rates at the Human Health Receptor Locations for the Base Case and Application Case (g/m ^{2}/year)

Receptor Location	Base Case Deposition Rate (g/m^2/year)	Squamish	Porteau Cove	Bowen Island	Lions Bay	Langdale	Horseshoe Bay	New Brighton	Britannia Beach	Furry Creek	Gibsons	Ch'iyakmesh	Unknown First Nations	Unknown residence	Potlach Creek	KWUM KWUM	Tetrahedron Park	Anvil Island	Ekin's Point	Kaikalahun	McNab Creek Strata	Camp Artaban	Camp Latona	Residence on Gambier Island
Parameter		Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total	Total
TSP	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.28E+00	2.31E+00	2.29E+00	2.28E+00	2.28E+00	2.28E+00	2.34E+00	2.29E+00	3.49E+00	2.28E+00	2.35E+00	2.28E+00
Aluminum (Al)	4.48E-03	4.51E-03	4.50E-03	4.49E-03	4.49E-03	4.50E-03	4.49E-03	4.50E-03	4.51E-03	4.51E-03	4.49E-03	4.52E-03	4.51E-03	4.68E-03	4.54E-03	4.53E-03	4.52E-03	4.50E-03	4.85E-03	4.54E-03	1.31E-02	4.50E-03	4.87E-03	4.50E-03
Antimony (Sb)	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.90E-05	5.84E-05	5.84E-05	5.84E-05
Arsenic (As)	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.78E-03	1.79E-03	1.78E-03	1.78E-03	1.78E-03
Barium (Ba)	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.41E-04	1.39E-04	1.39E-04	1.39E-04	1.39E-04	1.45E-04	1.40E-04	2.45E-04	1.39E-04	1.45E-04	1.39E-04
Beryllium (Be)	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04
Bismuth (Bi)	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04
Cadmium (Cd)	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.93E-05	2.92E-05	2.92E-05	2.92E-05
Calcium (Ca)	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.93E-02	2.92E-02	2.92E-02	2.92E-02	2.92E-02	2.95E-02	2.92E-02	3.51E-02	2.92E-02	2.95E-02	2.92E-02
Chromium (Cr)	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.93E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.95E-04	2.92E-04	3.54E-04	2.92E-04	2.96E-04	2.92E-04
Cobalt (Co)	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.86E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.88E-05	5.84E-05	6.74E-05	5.84E-05	5.89E-05	5.84E-05
Copper (Cu)	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.06E-04	5.05E-04	5.05E-04	5.05E-04	5.05E-04	5.07E-04	5.06E-04	5.33E-04	5.05E-04	5.07E-04	5.05E-04
Iron (Fe)	1.78E-02	1.79E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02	1.78E-02	1.79E-02	1.79E-02	1.78E-02	1.79E-02	1.79E-02	1.84E-02	1.80E-02	1.79E-02	1.79E-02	1.78E-02	1.92E-02	1.80E-02	4.32E-02	1.78E-02	1.93E-02	1.78E-02
Lead (Pb)	7.40E-05	7.41E-05	7.41E-05	7.40E-05	7.40E-05	7.41E-05	7.40E-05	7.41E-05	7.41E-05	7.41E-05	7.40E-05	7.41E-05	7.41E-05	7.46E-05	7.42E-05	7.41E-05	7.41E-05	7.41E-05	7.51E-05	7.42E-05	9.89E-05	7.41E-05	7.52E-05	7.41E-05
Lithium (Li)	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.92E-03	2.94E-03	2.92E-03	2.92E-03	2.92E-03
Magnesium (Mg)	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.85E-02	5.84E-02	5.84E-02	5.84E-02	5.84E-02	5.87E-02	5.84E-02	6.46E-02	5.84E-02	5.87E-02	5.84E-02
Manganese (Mn)	3.67E-04	3.68E-04	3.68E-04	3.67E-04	3.67E-04	3.68E-04	3.67E-04	3.68E-04	3.68E-04	3.68E-04	3.67E-04	3.68E-04	3.68E-04	3.75E-04	3.69E-04	3.69E-04	3.69E-04	3.68E-04	3.84E-04	3.70E-04	6.90E-04	3.68E-04	3.86E-04	3.68E-04
Mercury (Hg)	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.93E-05	2.92E-05	2.92E-05	2.92E-05
Molybdenum (Mo)	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	2.92E-05	3.03E-05	2.92E-05	2.92E-05	2.92E-05
Nickel (Ni)	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.92E-04	2.93E-04	2.92E-04	3.15E-04	2.92E-04	2.93E-04	2.92E-04
Phosphorus (P)	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.78E-01	1.79E-01	1.78E-01	1.78E-01	1.78E-01
Potassium (K)	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00
Selenium (Se)	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04
Silver (Ag)	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.94E-06	5.84E-06	5.84E-06	5.84E-06
Sodium (Na)	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00
Strontium (Sr)	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.43E-04	1.42E-04	1.42E-04	1.42E-04	1.42E-04	1.44E-04	1.42E-04	1.85E-04	1.42E-04	1.44E-04	1.42E-04
Thallium (Tl)	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.85E-05	5.84E-05	5.84E-05	5.84E-05
Tin (Sn)	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.84E-05	5.96E-05	5.84E-05	5.84E-05	5.84E-05
Titanium (Ti)	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.86E-03	5.84E-03	5.84E-03	5.84E-03	5.84E-03	5.89E-03	5.85E-03	6.87E-03	5.84E-03	5.90E-03	5.84E-03
Uranium (U)	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.84E-06	5.88E-06	5.85E-06	5.85E-06	5.84E-06	5.84E-06	5.93E-06	5.85E-06	7.68E-06	5.84E-06	5.94E-06	5.84E-06
Vanadium (V)	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.85E-04	5.84E-04	5.84E-04	5.84E-04	5.84E-04	5.87E-04	5.84E-04	6.53E-04	5.84E-04	5.88E-04	5.84E-04
Zinc (Zn)	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.55E-03	4.56E-03	4.56E-03	4.56E-03	4.56E-03	4.55E-03	4.56E-03	4.56E-03	4.60E-03	4.55E-03	4.56E-03	4.55E-03

Table 9.1-D-5: Incremental Soil Concentration Increase Under the Baseline and Application Case Case (mg/kg dry weight)
Public Health Assessment
Proposed Burnco Aggregate Project

Parameter	Base Case	Human Health Receptor Locations																					
		Squamish	Porteau Cove	Bowen Island	Lions Bay	Langdale	Horseshoe Bay	New Brighton	Britannia Beach	Furry Creek	Gibsons	Ch'iyakmesh	Unknown First Nations	Unknown residence	Potlach Creek	KWUM KWUM	Tetrahedron Park	Anvil Island	Ekin's Point	Kaikalahun	McNab Creek Strata	Camp Artaban	Camp Latona	Residence on Gambier Island
TSP	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.38E+02	1.37E+02	1.37E+02	1.37E+02	1.37E+02	1.41E+02	1.37E+02	2.09E+02	1.37E+02	1.41E+02	1.37E+02
Aluminum (Al)	2.69E-01	2.71E-01	2.70E-01	2.69E-01	2.69E-01	2.70E-01	2.69E-01	2.70E-01	2.71E-01	2.70E-01	2.69E-01	2.71E-01	2.71E-01	2.81E-01	2.73E-01	2.72E-01	2.71E-01	2.70E-01	2.91E-01	2.73E-01	7.86E-01	2.70E-01	2.92E-01	2.70E-01
Antimony (Sb)	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.54E-03	3.50E-03	3.50E-03	3.50E-03
Arsenic (As)	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01	1.07E-01
Barium (Ba)	8.33E-03	8.35E-03	8.34E-03	8.33E-03	8.33E-03	8.34E-03	8.33E-03	8.34E-03	8.35E-03	8.34E-03	8.33E-03	8.35E-03	8.35E-03	8.48E-03	8.37E-03	8.36E-03	8.35E-03	8.34E-03	8.67E-03	8.39E-03	1.47E-02	8.34E-03	8.71E-03	8.34E-03
Beryllium (Be)	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02
Bismuth (Bi)	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02
Cadmium (Cd)	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.76E-03	1.75E-03	1.75E-03	1.75E-03
Calcium (Ca)	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.76E+00	1.75E+00	1.75E+00	1.75E+00	1.75E+00	1.77E+00	1.75E+00	2.11E+00	1.75E+00	1.77E+00	1.75E+00
Chromium (Cr)	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.76E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.77E-02	1.75E-02	2.12E-02	1.75E-02	1.77E-02	1.75E-02
Cobalt (Co)	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.51E-03	3.51E-03	3.50E-03	3.50E-03	3.50E-03	3.53E-03	3.51E-03	4.04E-03	3.50E-03	3.53E-03	3.50E-03
Copper (Cu)	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.04E-02	3.03E-02	3.03E-02	3.03E-02	3.03E-02	3.04E-02	3.03E-02	3.20E-02	3.03E-02	3.04E-02	3.03E-02
Iron (Fe)	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.07E+00	1.11E+00	1.08E+00	1.08E+00	1.07E+00	1.07E+00	1.15E+00	1.08E+00	2.59E+00	1.07E+00	1.16E+00	1.07E+00
Lead (Pb)	4.44E-03	4.45E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.44E-03	4.45E-03	4.44E-03	4.44E-03	4.45E-03	4.45E-03	4.47E-03	4.45E-03	4.45E-03	4.45E-03	4.44E-03	4.51E-03	4.45E-03	5.93E-03	4.44E-03	4.51E-03	4.44E-03
Lithium (Li)	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.75E-01	1.76E-01	1.75E-01	1.75E-01	1.75E-01
Magnesium (Mg)	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.51E+00	3.50E+00	3.50E+00	3.50E+00	3.50E+00	3.52E+00	3.51E+00	3.88E+00	3.50E+00	3.52E+00	3.50E+00
Manganese (Mn)	2.20E-02	2.21E-02	2.21E-02	2.20E-02	2.20E-02	2.21E-02	2.20E-02	2.21E-02	2.21E-02	2.21E-02	2.20E-02	2.21E-02	2.21E-02	2.25E-02	2.22E-02	2.21E-02	2.21E-02	2.21E-02	2.31E-02	2.22E-02	4.14E-02	2.21E-02	2.32E-02	2.21E-02
Mercury (Hg)	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.76E-03	1.75E-03	1.75E-03	1.75E-03
Molybdenum (Mo)	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.75E-03	1.82E-03	1.75E-03	1.75E-03	1.75E-03
Nickel (Ni)	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.75E-02	1.76E-02	1.75E-02	1.89E-02	1.75E-02	1.76E-02	1.75E-02
Phosphorus (P)	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01
Potassium (K)	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.85E+01	6.83E+01	6.83E+01	6.83E+01
Selenium (Se)	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02
Silver (Ag)	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.56E-04	3.50E-04	3.50E-04	3.50E-04
Sodium (Na)	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.83E+01	6.84E+01	6.83E+01	6.83E+01	6.83E+01
Strontium (Sr)	8.50E-03	8.51E-03	8.50E-03	8.50E-03	8.50E-03	8.50E-03	8.50E-03	8.50E-03	8.51E-03	8.50E-03	8.50E-03	8.51E-03	8.51E-03	8.56E-03	8.52E-03	8.51E-03	8.51E-03	8.50E-03	8.64E-03	8.52E-03	1.11E-02	8.50E-03	8.66E-03	8.50E-03
Thallium (Tl)	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.51E-03	3.50E-03	3.50E-03	3.50E-03
Tin (Sn)	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.50E-03	3.58E-03	3.50E-03	3.51E-03	3.50E-03
Titanium (Ti)	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.52E-01	3.51E-01	3.50E-01	3.50E-01	3.50E-01	3.50E-01	3.54E-01	3.51E-01	4.12E-01	3.50E-01	3.54E-01	3.50E-01
Uranium (U)	3.50E-04	3.51E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04	3.51E-04	3.50E-04	3.50E-04	3.51E-04	3.51E-04	3.53E-04	3.51E-04	3.51E-04	3.51E-04	3.50E-04	3.56E-04	3.51E-04	4.61E-04	3.50E-04	3.56E-04	3.50E-04
Vanadium (V)	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.51E-02	3.50E-02	3.50E-02	3.50E-02	3.50E-02	3.52E-02	3.51E-02	3.92E-02	3.50E-02	3.53E-02	3.50E-02
Zinc (Zn)	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.73E-01	2.76E-01	2.73E-01	2.73E-01	2.73E-01

Table 9.1-D-6: Predicted Baseline Case and Application Case Soil Concentration for Metals (mg/kg dry weight)
Public Health Assessment
Proposed Burnco Aggregate Project

Parameter	Base Case	Human Health Receptor Locations																				
		Squamish	Porteau Cove	Bowen Island	Lions Bay	Langdale	Horseshoe Bay	New Brighton	Britannia Beach	Furry Creek	Gibsons	Ch'iyakmesh	Unknown First Nations	Unknown residence	Potlach Creek	KWUM KWUM	Tetrahedron Park	Anvil Island	Ekin's Point	Kaikalahun	McNab Creek Strata	Camp Artaban	Camp Latona	Residence on Gambier Island
Aluminum (Al)	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04	4.40E+04
Antimony (Sb)	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00	1.14E+00
Arsenic (As)	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01	1.58E+01
Barium (Ba)	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02	2.17E+02
Beryllium (Be)	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01	3.78E-01
Bismuth (Bi)	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01	3.08E-01
Cadmium (Cd)	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01	1.88E-01
Calcium (Ca)	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03	4.13E+03
Chromium (Cr)	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01	3.58E+01
Cobalt (Co)	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01	1.11E+01
Copper (Cu)	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01	4.02E+01
Iron (Fe)	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04	2.80E+04
Lead (Pb)	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01	5.80E+01
Lithium (Li)	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01	1.71E+01
Magnesium (Mg)	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03	8.11E+03
Manganese (Mn)	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02	4.97E+02
Mercury (Hg)	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01	3.82E-01
Molybdenum (Mo)	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01	8.82E-01
Nickel (Ni)	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01	2.31E+01
Phosphorus (P)	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02	8.64E+02
Potassium (K)	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03	2.39E+03
Selenium (Se)	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01	5.65E-01
Silver (Ag)	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01	1.40E-01
Sodium (Na)	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02	6.58E+02
Strontium (Sr)	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01	4.08E+01
Thallium (Tl)	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01	1.35E-01
Tin (Sn)	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00	2.00E+00
Titanium (Ti)	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03	1.75E+03
Uranium (U)	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00	3.14E+00
Vanadium (V)	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01	7.35E+01
Zinc (Zn)	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01	6.34E+01

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