

APPENDIX K

GEOCHEMISTRY TECHNICAL SUPPORT DOCUMENTS

- K-1.1 Static Testing Baseline Report 2021
- K-1.2 Tailings ML/ARD Assessment – Static Testing Results
- K-1.3 Kinetic Geochemistry Report 2023
- K-1.4 Overburden Fish Habitat Area Geochem Memo**
- K-1.5 Static Geochemical Characterization of Springpole Lake Sediment Samples
- K-1.6 Preliminary Geochemical Assessment of CDF Quarry
- K-2 Mine Site Water Quality Monitoring

Memo

To: Steve Lines, Fiona Christiansen (FMG) **Date:** March 14, 2022
From: Anna Klein, Kristen Gault (Wood)
CC: Steve Sibbick, Sheila Daniel, Mark Ruthven, Derrick Moggy (Wood)
Ref: ONS2104
Re: Springpole Gold Project, Static Geochemical Characterization of Overburden and the Fish Habitat Development Area

1.0 INTRODUCTION AND BACKGROUND

Wood Environment & Infrastructure Americas, a Division of Wood Canada Limited (Wood) was retained by First Mining Gold Corp. (FMG) to conduct baseline geochemistry studies for the Springpole Gold Project (Project; Wood 2021a) to support the Project Environmental Impact Statement / Environmental Assessment (EIS/EA). This included static testing of overburden and quarried materials, specifically:

- Overburden samples from areas expected to be stripped as part of mine development; and
- Rock samples (drill core) from the Fish Habitat Development Area; the excavated rock from this area will be re-used for construction.

This memorandum provides a summary of the static testing results for the samples collected of these materials. In addition, this memorandum includes elemental content test results for samples of lake sediment analyzed as part of the *2019 Aquatics Resources Assessment* (Wood 2021b). Lakebed sediment will be exposed during development of the open pit. The currently available lake sediment data is considered supplemental to this metal leaching and acid rock drainage (ML/ARD) assessment and is included for completeness. Additional samples of lake sediment are planned to be collected during upcoming programs and they will be tested for their ML/ARD potential as part of ongoing environmental studies. It is noted that the ML/ARD testing of the Fish Habitat Development Area rock, also currently planned for use in construction, represents an initial assessment of this rock. Additional geochemical testing is planned to confirm the suitability of this material for use in construction.

The approach and methodology for the program and data interpretation used in this memorandum were based on the requirements described under the Ontario *Mining Act*; namely guidance found within the documents *DRAFT Guidelines and Recommendations for the Prediction of Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (Price 1997), and *Policy for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia* (MEM 1998). Additional guidance was provided by the reference document *Prediction for Drainage Chemistry for Sulphidic Geologic Materials* (MEND 2009), which

represents best practice and industry-standard approaches and methodologies for ML/ARD sampling and characterization in Canada.

2.0 SAMPLE COLLECTION AND SELECTION

A summary of the static testing samples is provided in Table 1. Sampling locations are shown in Figure 1 for the overburden and drill core samples. The approach for sample collection and selection is provided below. Additional information on the location and sample collection procedures for the lake sediment samples is provided in Wood (2021b).

Table 1: Summary of Collected Samples

Sample Type	Number of Samples
Overburden from areas to be stripped	36
Drill core from Fish Habitat Development Area	40
Lake sediment samples ⁽¹⁾	17

Note:

1 Samples collected and analyzed as part of the 2019 Aquatics Resources Assessment sampling campaign (Wood 2021b).

2.1. Overburden

The approach for overburden sampling included collecting samples proximal to areas to be stripped as part of mine development (Figure 1). The samples were obtained from test pitting conducted by Ausenco in 2021, as well as archived overburden materials collected as part of drilling and test pitting programs conducted in 2020.

The overburden samples collected are representative of the natural baseline conditions at the Project. A total of 36 overburden samples were collected for testing. The samples were from a range of depths, from surface to 4 metre (m) depth, and included a range of the observed overburden types at the Project. Detailed sample descriptions are provided in Table A-1 of Appendix A.

- 27 samples of overburden were selected for ML/ARD testing from archived material collected in 2020. The archived samples originated from test pitting and drilling activities conducted by others (Fracflow 2020). Sample selection was based on sample descriptions and location information provided by FMG.
- Nine samples of overburden were collected for ML/ARD testing from test pits advanced by Ausenco in 2021. Samples were collected with a track-mounted excavator in the vicinity of future infrastructure development at site.

2.2. Fish Habitat Development Area

Drill core samples from the Fish Habitat Development Area were collected from recent drilling in this area for ML/ARD testing. This included the collection of 40 drill core samples from 6 drillholes advanced within the currently planned extent of the Fish Habitat Development Area as shown in Figure 1.

- Sample intervals were selected by Wood based on available information including assay data and lithological, mineralogical, and alteration information. The selected drill core samples were collected by FMG personnel.

- Samples were selected to represent the rock mass of the Fish Habitat Development Area. Specifically, the samples were selected from downhole depths that aligned with elevations of approximately 375 to 400 metres above mean sea level (m amsl) based on the planned configuration of the Fish Habitat Development Area. Samples were selected approximately every 5 m from within this interval.
- The samples were selected to include the range of rock types, sulphide content, and mineralogical descriptions among the rock encountered within the specified sampling zone.

2.3. Lakebed Sediment

Lakebed sediment samples were not available at the time ML/ARD testing was undertaken. However, 17 samples of lake sediment were collected and analysed for a selected suite of elements as part of another baseline study (Wood 2021b). The results of these tests were used for assessment purposes and included in this memorandum for completeness. Information on the sampling locations and sample collection procedures for these samples is presented in Wood (2021b). Additional samples of lakebed sediment are planned to be collected during upcoming programs and they will be tested for their ML/ARD potential as part of ongoing environmental studies.

3.0 STATIC TESTING METHODS AND SCREENING APPROACH

Static testing was conducted at Global ARD Testing Services, Burnaby, British Columbia. Prior to testing, overburden samples were sieved to 0.25 inches to remove organic detritus and any coarse gravel or cobbles. A summary of the static tests conducted on the samples is provided in Table 2. Static testing methods and the approach used to screen the results for the ML/ARD potential of the samples is described below.

Acid Base Accounting (ABA) testing was conducted on all samples to assess the potential for a sample to generate acidity, determined by the balance of acid generating minerals and neutralizing minerals in a sample. ABA testing included determination of:

- Paste pH.
- Sulphur speciation analyses including total sulphur by Leco analyzer, sulphate sulphur by HCl leach, and sulphide sulphur by difference.
- Total carbon by Leco analyzer, carbonate carbon by HCl/Leco analyzer, and standard Sobek neutralization potential (NP). Carbonate neutralization potential (CarbNP) was calculated from carbonate carbon data.
- Acid potential was calculated based on the results of sulphur speciation testing, including the calculation of acid potential (AP) based on sulphide sulphur, and maximum potential acidity (MPA) based on total sulphur to be conservative.
- Test results were used to calculate the sample's neutralization potential ratio (NPR, NP/AP) to classify the ARD potential of a sample (Table 3). For Project planning purposes, ABA results with an NPR value of <2 were assumed to be potentially acid generating (PAG). Samples with NPR values >2 were considered to be non-acid potentially generating (NAG; MEND 2009). NPR values were calculated as both NP/AP and Carb NP / MPA for assessment purposes.
- All samples were tested by the above methods with the exception of one sample (TP-TMF-15 SS1) for which only a limited amount (50 grams) of material was available. Partial ABA testing (including NP determination) was conducted on this sample.

Elemental content analyses were conducted on all overburden samples by aqua regia digestion and inductively coupled plasma-mass spectrometry (ICP-MS) scan. The purpose of this test is to assess the presence of environmentally significant elements and screen samples against qualitative threshold values. Results were screened against ten times average crustal abundance values (Price 1997) for selected elements of key relevance to ML/ARD. Samples with elemental concentrations greater than these screening values were considered enriched in those elements. The comparison to ten times crustal abundance values was conducted for screening purposes only and holds no regulatory significance.

Shake Flask Extraction (SFE) testing was conducted on a subset of the samples (Table 2). The purpose of this test is to assess the potential release of soluble metals during the initial (i.e., short-term) stages of weathering but it is not a direct indicator of drainage quality. Leachates were analyzed for pH, conductivity, sulphate, and dissolved metals. Leachate chemistry was compared to screening values to identify parameters of potential interest for metal leaching. The screening analysis included comparison of the SFE leachate chemistry to Ontario Provincial Water Quality Objectives (PWQO) for the protection of aquatic life, both PWQO and interim PWQO values. The SFE test and screening approach is not a direct assessment of mine water quality and comparisons to screening criteria holds no regulatory significance.

Lake sediment samples were tested by aqua regia digestion and atomic absorption spectroscopy for selected metals (Wood 2021b). Results were screened against ten times the average crustal abundance values (Price 1997) following the same approach described for the overburden samples.

Table 2: Analytical Program Summary

Analysis	Overburden Samples	Drillcore Samples	Lakebed Sediment Samples
	Number of Samples		
Acid Base Accounting	36 ⁽¹⁾	40	0
Elemental Content	35 ⁽¹⁾	40	17
Shake Flask Extraction	15	20	0

Note:

1 One sample was analyzed by partial ABA only (see text).

Table 3: ARD Classification Criteria

ARD Classification ⁽¹⁾	Screening Criteria	Notes
PAG	NPR < 1	Materials are potentially acid generating
Uncertain	1 < NPR < 2	Materials have an uncertain acid generation potential
NAG	NPR > 2	Materials have a low probability of becoming acid generating

Note:

1 Classification based on MEND (2009).

4.0 RESULTS

Results of static testing are presented in Figures 2 through 5 and Appendix B (Tables B-1 to B-12). Key findings are summarized below.

4.1. Overburden

Acid Base Accounting

- Paste pH of the overburden samples was slightly acidic to alkaline, ranging from 5.7 to 8.4 with a median paste pH of 7.6 (Table B-2, Appendix B).
- The total sulphur content of the overburden samples was low, generally at or near the analytical detection limit (<0.01%). The median sulphur content of all samples was at the detection limit (e.g., 0.01%), with sulphur contents ranging from 0.01% to 0.32% (Table B-2, Appendix B).
- In the samples where sulphur was at or greater than the detection limit, sulphide sulphur represented the dominant form of sulphur. The median sulphide sulphur concentration for all samples was 0.01% and ranged from 0.01% to 0.28% (Figure 2).
- AP values ranged from 0.31 to 8.8 kg CaCO₃/t (median 0.31 kg CaCO₃/t) and were typically based on sulphur values at or near the analytical detection limit (Table B-2, Appendix B). MPA values ranged from 0.31 to 10 kg CaCO₃/t (median 0.31 kg CaCO₃/t, Table B-2, Appendix B).
- NP values were variable and ranged from 5.2 to 231 kg CaCO₃/t (median 13 kg CaCO₃/t; Figure 3, Table B-2, Appendix B). A comparison of NP and Carb NP indicated that Carb NP values were similar to NP values for samples with a higher NP content suggesting that most NP was present as carbonate minerals in these samples (Figure 3). Carb NP values were typically lower than NP values for samples with a low NP content (e.g., <20 kg CaCO₃/t), suggesting that non-carbonate minerals comprise a higher proportion of NP in these samples (Figure 3).
- All of the overburden samples were classified as NAG (NPR>2, Carb NPR>2) as shown in Figures 4 and 5.

Elemental Content and Shake Flask Extraction Testing

Results of elemental content and SFE testing were compared to the qualitative screening values presented in Section 3.0. Key results are discussed below.

- In general, elemental content testing indicated that few metals were greater than qualitative screening values (Table B-3, Appendix B).
 - A single sample had arsenic concentrations marginally greater than the screening value for arsenic (18 mg/kg).
 - A single sample had tungsten concentrations slightly greater than the screening value for tungsten (12.5 mg/kg).
- SFE leachates for the 15 tested overburden samples generally had low concentrations of sulphate and metals (Table B-5, Appendix B). The following additional observations are provided with respect to qualitative screening criteria.
 - Chromium and phosphorus concentrations were marginally higher than applicable screening values for five of the 15 tested samples. An additional five samples had copper concentrations that were greater than screening values for copper (0.005 mg/L). Overall, copper

concentrations were however, low in the SFE leachates, with most samples having copper concentrations on the order of 0.003 mg/L (Table B-5, Appendix B).

- Iron concentrations were slightly higher than screening values for iron for three of the 15 tested samples (Table B-5, Appendix B). Cobalt and vanadium concentrations were slightly higher than screening values for a single sample each (Table B-5, Appendix B).
- SFE leachate pH was slightly lower than screening values for three samples (Table B-5, Appendix B). These three samples all had non-detectable levels of Carb NP, although low Carb NP was not always associated with lower SFE leachate pH. All three samples had total sulphur concentrations below analytical detection limits (Table B-1, Appendix B). All other samples were within the screening values for pH (pH 6.5 to 8.5).
- Aluminium concentrations in SFE leachate were higher than the screening value in most (i.e., 12 of the 15 tested samples); however, this is likely an artefact of the testing procedure due to the presence of colloidal aluminium and is unlikely to be observed under field conditions at neutral pH.

4.2. Drill Core from the Fish Habitat Development Area

Acid Base Accounting

- Drill core samples from the Fish Habitat Development Area had alkaline paste pH, with paste pH values ranging from 8.6 to 9.4 (median paste pH of 9.0; Table B-7, Appendix B).
- The sulphur content of the samples ranged from 0.01% to 1.1% with a median sulphur content of 0.2% (Table B-7, Appendix B).
- Sulphide sulphur represented the dominant form of sulphur in the samples, with a median sulphide concentration of 0.18%. Sulphide contents ranged from 0.01% to 1.1% (Figure 2).
- AP values ranged from 0.31 to 33 kg CaCO₃/t (median 5.9 kg CaCO₃/t; Table B-7, Appendix B). MPA values ranged from 0.31 to 34 kg CaCO₃/t (median 6.1 kg CaCO₃/t; Table B-7, Appendix B).
- The samples had a median NP of 157 kg CaCO₃/t and NP values ranged from 101 to 210 kg CaCO₃/t (Table B-7, Appendix B). A comparison of NP and Carb NP indicated that Carb NP values were typically similar to NP values, suggesting that most of the NP was present as carbonate minerals in these samples (Figure 3).
- All of the drill core samples were classified as NAG (NPR>2, CarbNPR>2) as shown in Figures 4 and 5.

Elemental Content and Shake Flask Extraction Testing

Results of elemental content and SFE testing were compared to the qualitative screening values presented in Section 3.0. Key results are discussed below.

- Elemental content testing indicated that eight of the 40 samples had arsenic concentrations that were at or slightly greater than the screening value for arsenic (18 mg/kg). Arsenic concentrations were otherwise low among the tested samples, with arsenic concentrations of approximately 5 mg/kg for most samples (Table B-8, Appendix B).
- Four of the 40 tested samples had antimony concentrations that were higher than the screening value for antimony (2 mg/kg). The antimony concentration in these samples was approximately two- to three-fold greater than the screening value. Antimony concentrations were otherwise low among the tested samples and were on the order of 0.3 mg/kg for most samples (Table B-8, Appendix B).

- SFE leachates for the 20 tested drill core samples generally had low concentrations of sulphate and metals (Table B-10, Appendix B). The following additional observations are provided with respect to qualitative screening criteria.
 - Three of the 20 tested samples had cadmium concentrations that were marginally greater than the screening values. Most of the samples had cadmium concentrations that were at or near analytical detection limits (Table B-10, Appendix B).
 - Two of the 20 samples had lead concentrations that were marginally greater than the interim PWQO screening value for lead (0.001 mg/L). All other samples had lead concentrations that were at or near analytical detection limits (Table B-10, Appendix B).
 - Aluminium concentrations were higher than the interim PWQO screening value (0.075 mg/L) in all samples tested. This is likely an artefact of the testing procedure due to the presence of colloidal aluminium and is unlikely to be observed under field conditions at neutral pH.
 - The pH of all SFE leachates was neutral to weakly alkaline, ranging from pH 7.3 to 8.9 (median pH 7.7). Six of the 20 samples were slightly higher than the maximum PWQO screening value for pH (pH 8.5). This may be related to the SFE test conditions rather than representative of the drainage quality under field conditions.

4.3. Lakebed Sediment

Lakebed sediment data included in this report included test results from another Project baseline study, and the elemental content of the samples was assessed for a selected suite of metals as part of that study (Wood 2021b). Results were compared to screening values for the tested parameters (Table B-11, Appendix B) and key findings of this assessment are provided below.

- Four of the 17 samples of lake sediment had arsenic concentrations marginally greater than the respective screening value of 18 mg/kg.
- Fifteen of the 17 samples had selenium concentrations greater than the respective screening value (0.5 mg/kg). Although selenium concentrations were in general low, some samples had concentrations up to 2 mg/kg.
- The above data represent elemental content and does not indicate the potential for metal leaching from lake sediment. The metal leaching potential of lakebed sediment samples will be evaluated as part of ongoing ML/ARD assessment for the Project.

5.0 SUMMARY

Static testing results indicated that the overburden samples tested were NAG. Metal content analyses indicated that the samples generally contained low concentrations of metals, and metal leaching test results based on SFE testing indicated a generally low potential for metal leaching in the baseline condition.

Static testing results indicated that all of the drill core samples tested from the Fish Habitat Development Area (also currently planned as a source of construction rock for the Project) were NAG. Metal content analyses indicated that the samples generally contained low concentrations of metals, and metal leaching test results based on SFE testing indicated a generally low potential for metal leaching.

The currently available lakebed sediment test results indicated that some samples had concentrations of selenium (n=15 of the 17 samples) and arsenic (n=4 of the 17 samples) that were greater than screening

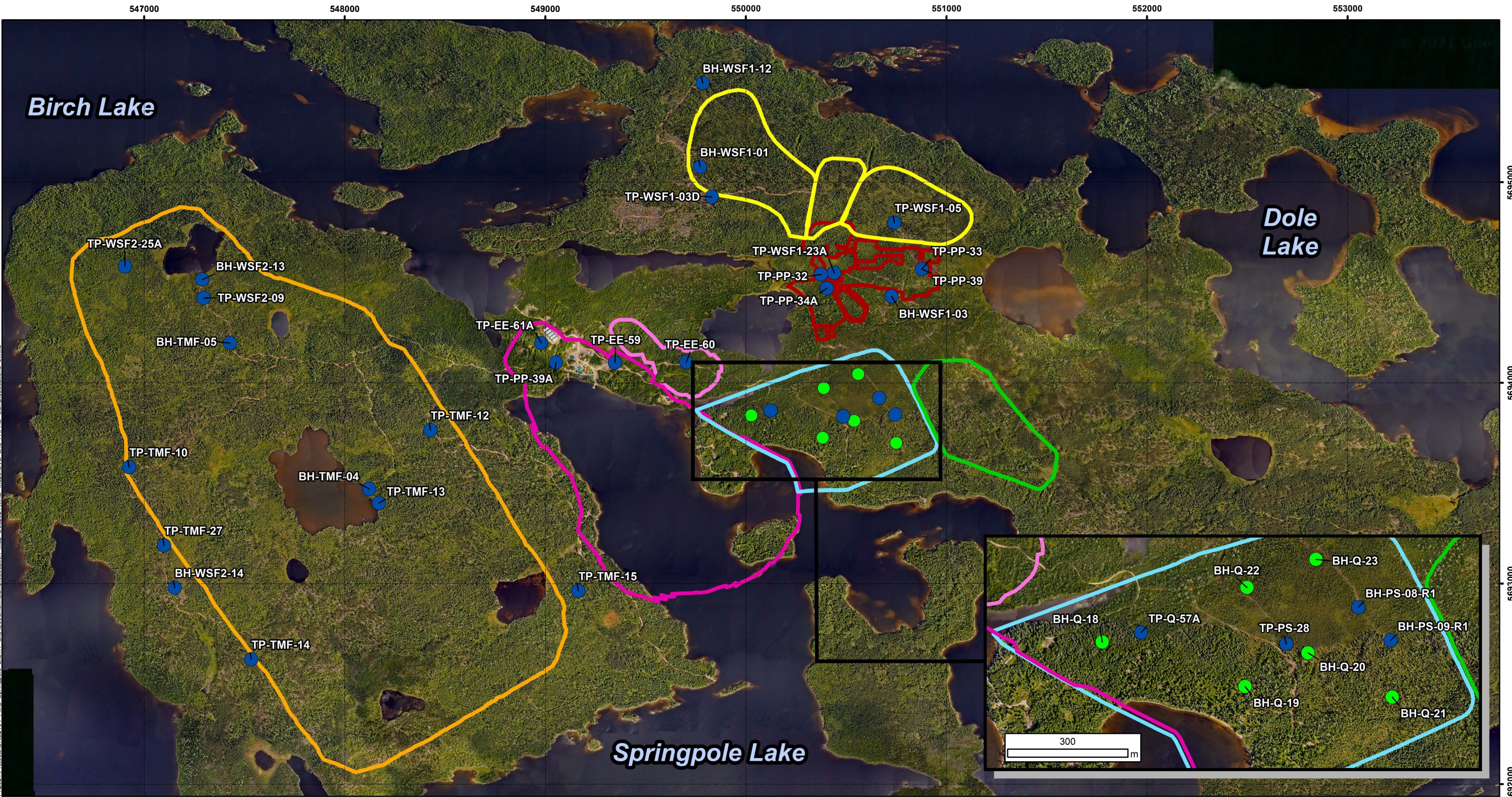
values. This represents the solid phase elemental content of the samples and may not directly reflect their potential for metal leaching. Additional samples of lake sediment are planned to be collected during upcoming programs and they will be tested for their ML/ARD potential as part of ongoing environmental studies.

6.0 REFERENCES

- AGP Mining Consultants (AGP). 2021. NI 43-101 Technical Report and Pre-Feasibility Study on the Springpole Gold Project, Ontario, Canada. Report Date: February 26, 2021.
- First Mining Gold Corp. (FMG). 2017. Assessment Report on the 2016-2017 Diamond Drilling Program and Metallurgical Study. First Mining Finance Corp. December 22, 2017.
- Fracflow Consultants Inc. (Fracflow). 2020. Final Factual Report – Geotechnical Program – Winter-Summer 2020. File 3134. November 26, 2020.
- Mine Environment Neutral Drainage (MEND). 2009. Prediction Manual for Drainage Chemistry from Sulphidic Geologic Materials. Natural Resources Canada. MEND Report 1.20.1.
- Ministry of Energy and Mines (MEM). 1998. Policy for Metal Leaching and Acid Rock Drainage at Minesites in British Columbia. Ministry of Energy and Mines. August 1998.
- Price, W.A. 1997. Draft Guidelines and Recommended Methods for the Prediction of Metal Leaching and Acid Rock Drainage at Mine Sites in British Columbia. April 1997.
- SRK Consulting (SRK). 2012. Mineral Resource Update for the Springpole Gold Project, NW Ontario, Canada. Prepared for Gold Canyon Resources Inc by SRK Consulting (Canada) Incorporated. Reference number 2CG026.000. November 30, 2012.
- Wood Environment & Infrastructure Americas a Division of Wood Canada Limited (Wood). 2021a. Static Geochemical Testing Baseline Report – Springpole Gold Project. ONS2104. December 17, 2021.
- Wood Environment & Infrastructure Americas a Division of Wood Canada Limited (Wood). 2021b. 2019-2020 Aquatic Resources Assessment – Springpole Gold Project. ONS2104. March 25, 2021.

Figures





LEGEND

● Overburden Samples

● FAFHD Samples

Selected Mine Site Features

○ Open Pit Outline

○ East Extension Outline

○ Fish Habitat Development Area Outline

○ Co-Disposal Facility Outline

⊕ Processing Plant Area Outline

⊕ Ore Stockpile Outline

⊕ Surficial Soil Stockpile Outline

NOTES:

- Topographic information extracted from LIO, MNRF.
- Aerial imagery provided by First Mining Gold, 2020.

Datum: NAD83
Projection: UTM Zone 15N

0 1 2 4 Kilometres

FIRST MINING GOLD

wood.

SPRINGPOLE GOLD PROJECT

Overburden and Fish Habitat Development Area - Sample Locations

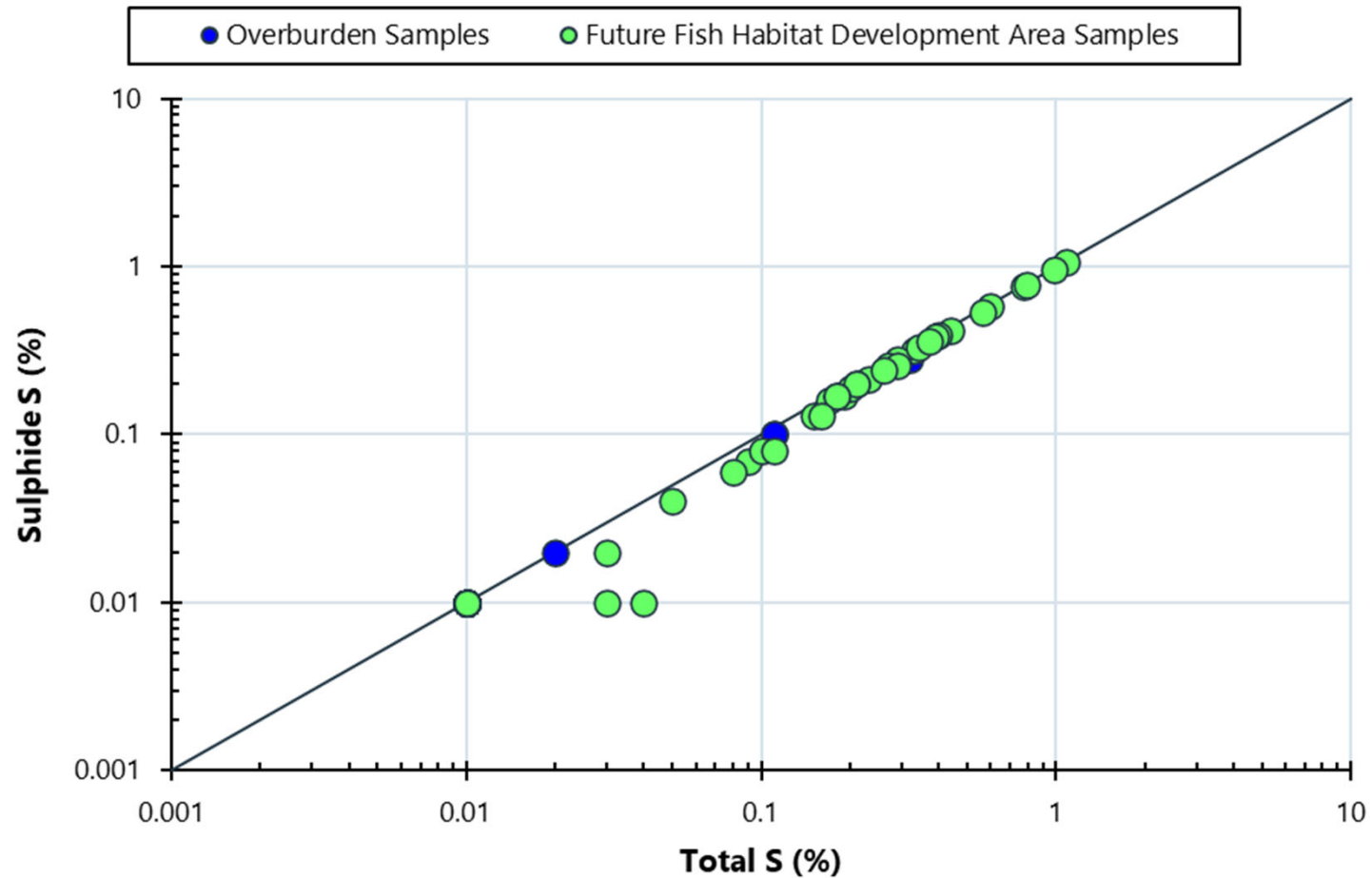
PROJECT N°: ONS2104

SCALE: 1:18,000

FIGURE: 1

DATE: March 2021

Sulphide S vs. Total S



Static Geochemical Characterization of Overburden and the Fish Habitat Development Area

Springpole Gold Project
Sioux Lookout, ON

wood.

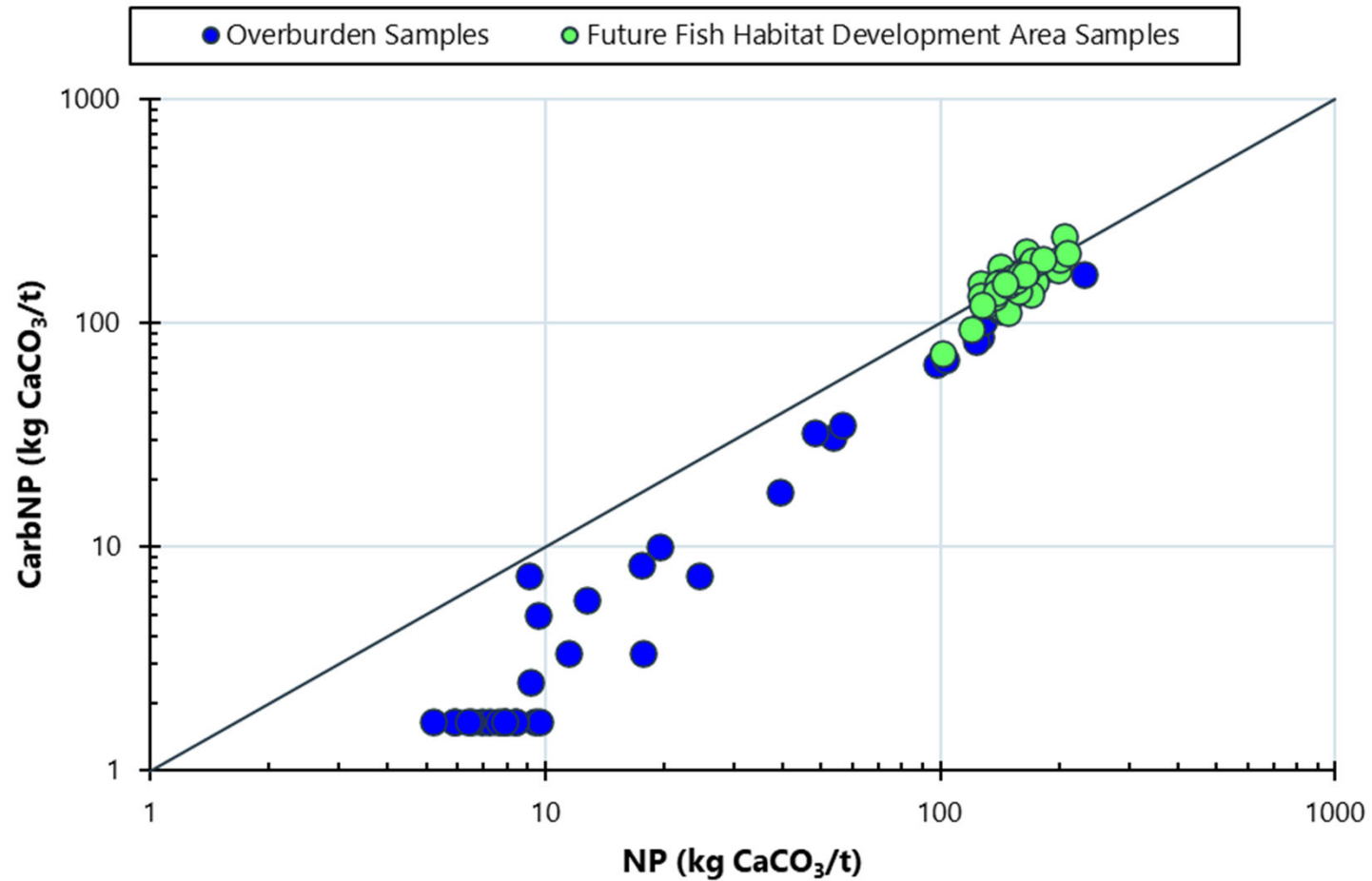
Date: Mar. 2022

Project: ONS2104

By: AK, KG

Figure 2

CarbNP vs. NP



Static Geochemical Characterization of Overburden and the Fish Habitat Development Area

Springpole Gold Project
Sioux Lookout, ON

wood.

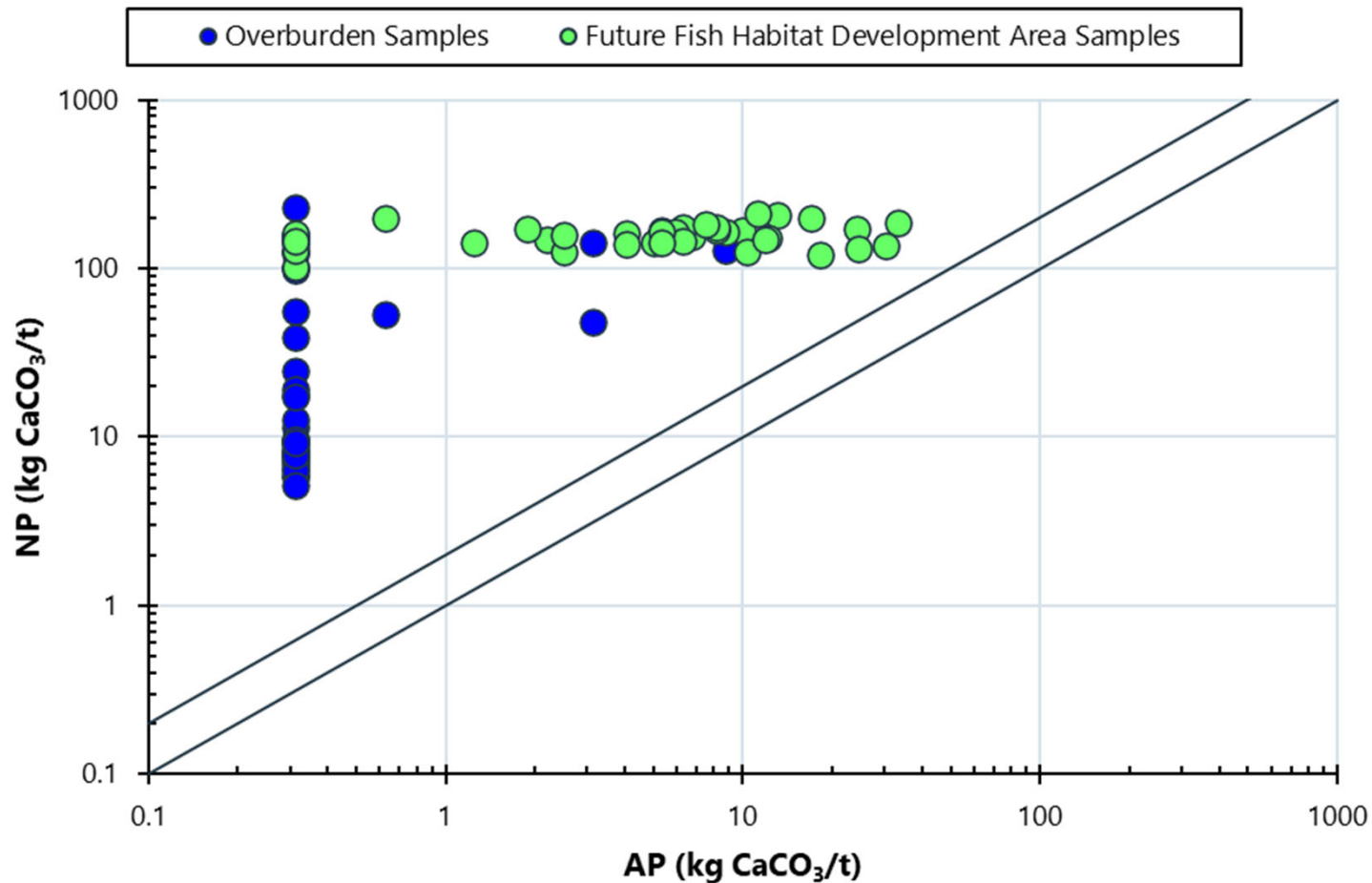
Date: Mar. 2022

Project: ONS2104

By: AK, KG

Figure 3

NP vs. AP



**Static Geochemical Characterization of
Overburden and the Fish Habitat
Development Area**
Springpole Gold Project
Sioux Lookout, ON

wood.

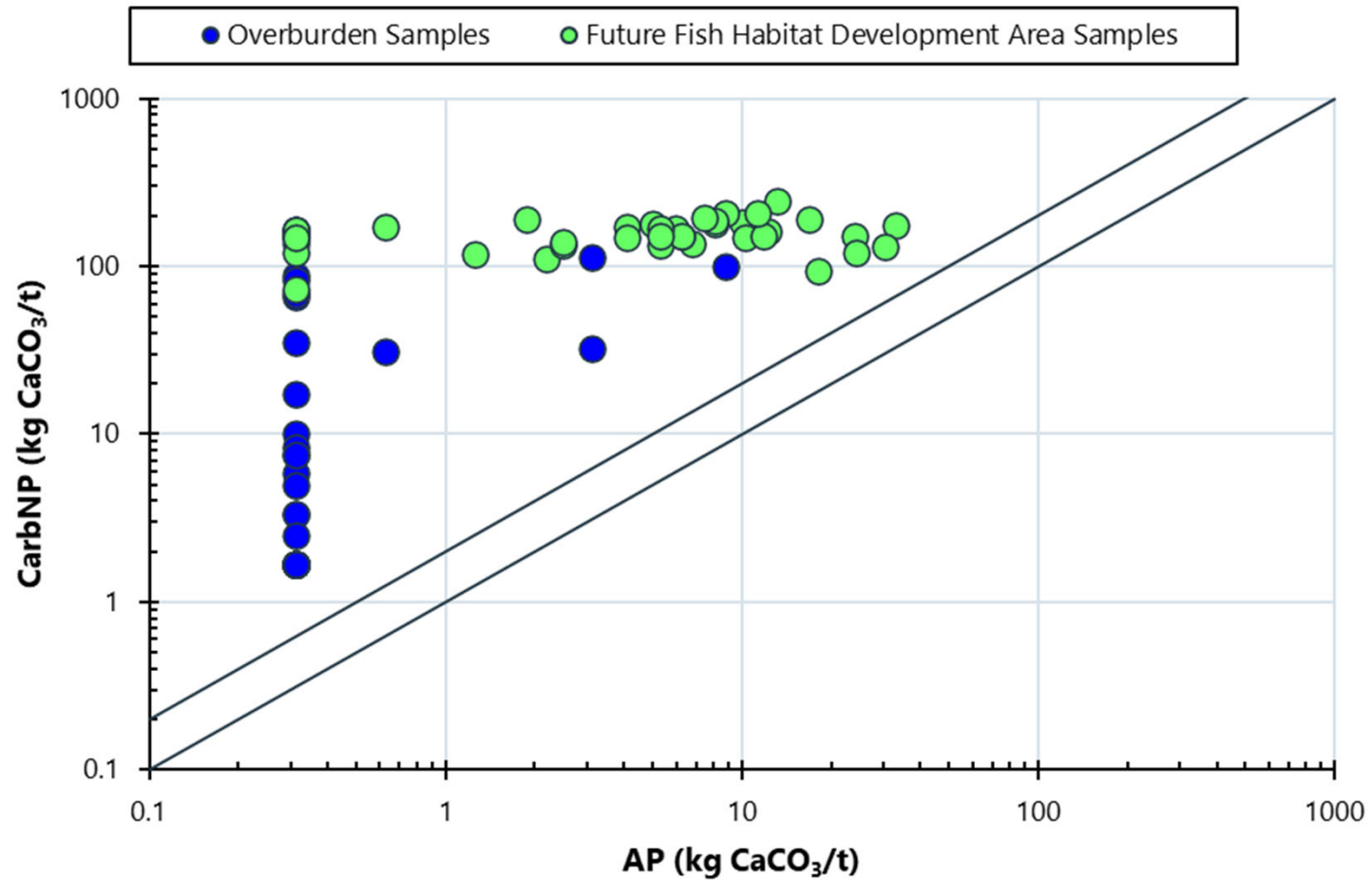
Date: Mar. 2022

Project: ONS2104

By: AK, KG

Figure 4

CarbNP vs. AP



Static Geochemical Characterization of Overburden and the Fish Habitat Development Area

Springpole Gold Project
Sioux Lookout, ON

wood.

Date: Mar. 2022

Project: ONS2104

By: AK, KG

Figure 5

Appendix A
Overburden Sample Description



Table A-1. Overburden Sample Descriptions

Sample ID	Sample Description
TP-TMF-12 SS1	silty sand, some gravel, trace clay
TP-WSF1-05 SS2	sandy silt, some clay, trace gravel
TP-WSF2-25A SS7	clay
BH-PS-08-R1 SS4	Clay and sand
BH-PS-09-R1 SS3	Fine sand with peat to flakey bedrock
BH-PS-09-R1 SS4	Wasted gravel, coarse sand, fractured bedrock
BH-TMF-04 SS1	Silt or fine sand
BH-TMF-05 SS2 (0.6-0.63)	Cobbles and gravel
BH-TMF-05 SS2 (0.63-0.73)	Fine sandy silt
BH-WSF1-01 SS3	Clay with some gravel
BH-WSF1-03 SS2	Wasted Gravel
BH-WSF1-12 SS4	Grey silt/clay and sand
BH-WSF2-13 SS1	Clay to Silty clay with fine sand
BH-WSF2-13 SS2	Coarse sand, rock chip in shoe
BH-WSF2-14 SS2	Gravel with sand and fines
TP-PS-28 SS7	Greenish gray silt/clay
TP-TMF-10 SS2	Top: well graded sand and silt, bottom is gavelley silt
TP-TMF-13 SS5	Greenish gray silt/clay
TP-TMF-14 SS11	Brown/gray sandy soil (50%), Greenish gray clay (50%)
TP-TMF-14 SS14	Greenish gray clay. Rocks and gravels
TP-TMF-15 SS1	Well-graded sand, race silt/clay with gravel, cobbles and boulders
TP-TMF-27 SS2	Clay/silt with sand to silt/sand
TP-TMF-27 SS4	Silt/sand and gravel and coarse sand
TP-WSF1-03D SS1	Wet, olive gray silt/clay
TP-WSF1-03D SS2	Moist, light gray silt/clay
TP-WSF1-23A SS4	Brown and gray sand and silt
TP-WSF2-09 SS3	Fine sand
TP-EE-59-01	Lean CLAY
TP-EE-59-02	Poorly graded SAND
TP-EE-60-01	Lean CLAY, silt content increases with depth
TP-EE-61A-01	Well graded SAND with cobbles, brecciated bedrock throughout
TP-PP-33-01	Silty SAND with pebbles and cobbles
TP-PP-39-01	Silty SAND with pebbles
TP-PP-39-02	Well graded SAND with pebbles and cobbles
TP-PP-39A-02	Lean CLAY, pyrite mineralization
TP-Q-57A-01	Poorly Graded SAND, brecciated bedrock throughout
TP-PP-34A-01	Clay and silt, High plasticity, fat clay, cohesive, soft (easily moldable)
TP-PP-34A-02	Sand and silt, Cobbles, brecciated bedrock, water pooling at this depth
TP-PP-34A-03	No description provided.
TP-PP-32-01	Clay, Medium to high plasticity, wet, cohesive, mediums stiff
TP-PP-32-02	Sand and Silt, Small lens, oxidation at bedrock contact, water, mineralization (dark colour, square shape)
TP-PP-39A-01	Silt and clay, Moist, trace gravel, dilatancy present

Appendix B
Static Testing Results



Table B-1. Overburden Acid Base Accounting Results

Sample ID	Lithology	Zone	Drillhole	Year	From	To	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek Np ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNp ^(I)	NPR ^(J)	CarbNP/MPA ^(K)
					m	m	pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	%	%	N/A	kg CaCO ₃ /t	NP/AP	CarbNP/AP
TP-EE-59-01	Ovb	Camp	TP-EE-59	2021	0.37	0.83	6.4	0.010	0.010	0.010	0.31	0.31	9.1	0.33	0.090	None	7.5	29	24
TP-EE-59-02	Ovb	Camp	TP-EE-59	2021	0.83	1.02	7.2	0.010	0.010	0.010	0.31	0.31	8.4	0.090	<0.020	None	1.7	27	5.3
TP-EE-60-01	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	6.3	0.010	0.010	0.010	0.31	0.31	9.6	0.34	0.060	None	5.0	31	16
TP-EE-61A-01	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	6.5	0.010	0.010	0.010	0.31	0.31	6.5	0.49	0.020	None	1.7	21	5.3
TP-TMF-12 SS1	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	7.6	<0.010	0.010	0.010	0.31	0.31	6.9	0.040	<0.020	None	1.7	22	5.3
BH-TMF-04 SS1	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	7.2	<0.010	0.010	0.010	0.31	0.31	9.4	0.36	<0.020	None	1.7	30	5.3
BH-TMF-05 SS2 (0.6-0.63)	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	7.4	<0.010	0.010	0.010	0.31	0.31	7.9	0.15	<0.020	None	1.7	25	5.3
BH-TMF-05 SS2 (0.63-0.73)	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	7.3	<0.010	0.010	0.010	0.31	0.31	7.9	0.20	<0.020	None	1.7	25	5.3
TP-TMF-10 SS2	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	8.0	<0.010	0.010	0.010	0.31	0.31	18	0.25	<0.040	Slight	3.3	56	11
TP-TMF-13 SS5	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	7.8	<0.010	0.010	0.010	0.31	0.31	5.9	0.020	<0.020	None	1.7	19	5.3
TP-TMF-14 SS11	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	7.4	0.32	0.040	0.28	10	8.8	129	6.0	<1.2	Moderate	101	15	12
TP-TMF-14 SS14	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	7.9	<0.11	<0.010	0.10	3.4	3.1	142	2.1	<1.4	Moderate	114	45	37
TP-TMF-15 SS1	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	6.8	--	--	--	--	--	10	--	--	None	--	--	--
TP-TMF-27 SS2	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	7.6	<0.010	0.010	0.010	0.31	0.31	19	0.40	<0.12	None	10	62	32
TP-TMF-27 SS4	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	8.4	<0.010	0.010	0.010	0.31	0.31	56	0.56	<0.42	Moderate	35	180	112
TP-WSF1-05 SS2	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	6.2	0.010	0.010	0.010	0.31	0.31	5.9	0.44	<0.020	None	1.7	19	5.3
BH-WSF1-01 SS2	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	8.1	0.010	0.010	0.010	0.31	0.31	25	0.20	0.090	Slight	7.5	79	24
BH-WSF1-03 SS2	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	7.8	0.010	0.010	0.010	0.31	0.31	123	1.5	1.0	Moderate	83	395	267
BH-WSF1-12 SS4	Ovb	Stockpile	BH-WSF1	2020	1.9	2	7.8	0.11	0.010	0.10	3.4	3.1	48	1.6	0.39	Slight	33	15	10
BH-WSF2-13 SS1	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	6.7	0.010	0.010	0.010	0.31	0.31	9.7	1.7	0.020	None	1.7	31	5.3
BH-WSF2-13 SS2	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	7.6	0.010	0.010	0.010	0.31	0.31	13	0.17	0.070	None	5.8	41	19
BH-WSF2-14 SS2	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	8.1	0.010	0.010	0.010	0.31	0.31	39	0.32	0.21	Moderate	18	126	56
TP-WSF2-25A SS7	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	8.0	0.010	0.010	0.010	0.31	0.31	97	1.2	0.79	Moderate	66	312	211
TP-WSF1-03D SS1	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	6.6	0.010	0.010	0.010	0.31	0.31	7.2	0.98	<0.020	None	1.7	23	5.3
TP-WSF1-03D SS2	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	8.0	0.010	0.010	0.010	0.31	0.31	231	2.9	2.0	Strong	164	739	525
TP-WSF1-23A SS4	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	7.8	0.010	0.010	0.010	0.31	0.31	18	0.37	0.10	None	8.3	56	27
TP-WSF2-09 SS3	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	7.6	0.010	0.010	0.010	0.31	0.31	8.4	0.090	<0.020	None	1.7	27	5.3
BH-PS-08-R1 SS4	Ovb	Fish Habitat Development Area	BH-PS-08-R1	2020	3.1	3.7	7.9	0.010	0.010	0.010	0.31	0.31	127	1.6	1.1	Moderate	88	406	280
BH-PS-09-R1 SS3	Ovb	Fish Habitat Development Area	BH-PS-09-R1	2020	1.6	1.9	8.1	0.010	0.01	<0.010	0.31	0.31	11	0.23	0.040	None	3.3	36	11
BH-PS-09-R1 SS4	Ovb	Fish Habitat Development Area	BH-PS-09-R1	2020	1.9	2.2	7.9	0.020	<0.010	0.020	0.63	0.63	53	1.1	0.37	Moderate	31	85	49
TP-PS-28 SS7	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	7.9	0.010	0.010	0.010	0.31	0.31	103	1.4	0.83	Moderate	69	329	221
TP-PP-33-01	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	6.1	0.010	0.010	0.010	0.31	0.31	7.6	0.45	0.020	None	1.7	24	5.3
TP-PP-39-01	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	6.6	0.010	0.010	0.010	0.31	0.31	6.4	0.21	0.020	None	1.7	20	5.3
TP-PP-39-02	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	7.0	0.010	0.010	0.010	0.31	0.31	7.9	0.060	0.020	None	1.7	25	5.3
TP-PP-39A-02	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	7.3	0.010	0.010	0.010	0.31	0.31	92	0.15	0.030	None	2.5	29	8.0
TP-Q-57A-01	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	5.7	0.010	0.010	0.010	0.31	0.31	5.2	0.59	<0.020	None	1.7	17	5.3

(A) Total sulphur measured by Leco analyzer

(B) Sulphate sulphur measured by HCl leach.

(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.

(D) MPA calculated as Total S * 31.25

(E) AP calculated as Sulphide S * 31.25

(F) Neutralization potential measured by the standard Sobek method

(G) Total carbon measured by Leco analyzer

(H) Total inorganic carbon measured using HCl leach and CO₂ coulometry

(I) Carbonate neutralization potential based on TIC

(J) Neutralization potential ratio, NP/AP

(K) Carbonate neutralization potential ratio, CarbNP/AP

Table B-2. Overburden Acid Base Accounting Statistical Summary

Group	Statistical Parameter	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNP ^(I)	NPR ^(J)	CarbNP/MPA ^(K)	Class (NPR)	Class (CarbNP/MPA)
		pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	NP/AP	CarbNP/AP	MEND (2009)	
All Overburden	Count	36	35	35	35	35	35	36	35	35	35	35	35	35	PAG (NPR < 1)	
	Minimum	5.7	0.010	0.010	0.010	0.31	0.31	5.2	0.020	0.020	1.7	4.9	14	5.3	0%	0%
	10th Percentile	6.3	0.010	0.010	0.010	0.31	0.31	6.5	0.090	0.020	1.7	6.1	19	5.3	Uncertain (1 < NPR < 2)	
	Median	7.6	0.010	0.010	0.010	0.31	0.31	10	0.37	0.040	3.3	9.4	32	11	0%	0%
	Average	7.3	0.025	0.011	0.023	0.78	0.74	39	0.82	0.30	25	39	53	34	NPAG (NPR > 2)	
	Standard Deviation	0.68	0.056	0.0050	0.049	1.7	1.6	53	1.1	0.48	40	53	154	110		
	90th Percentile	8.0	0.016	0.010	0.016	0.50	0.50	125	1.6	1.0	86	122	322	217		
	Maximum	8.4	0.32	0.040	0.28	10	8.8	231	6.0	2.0	164	231	739	525	100%	100%

(A) Total sulphur measured by Leco analyzer

(B) Sulphate sulphur measured by HCl leach.

(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.

(D) MPA calculated as Total S * 31.25

(E) AP calculated as Sulphide S * 31.25

(F) Neutralization potential measured by the standard Sobek method

(G) Total carbon measured by Leco analyzer

(H) Total inorganic carbon measured using HCl leach and CO₂ coulometry

(I) Carbonate neutralization potential based on TIC

(J) Neutralization potential ratio, NP/AP

(K) Carbonate neutralization potential ratio, CarbNP/AP



Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Ag ppm	Al ppm	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm
10x Crustal Abundance Screening Value										0.75	--	18	0.04	100	4250	30	0.085	--
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	0.060	22100	4.9	0.0019	<10	114	0.84	0.16	6100
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	0.030	10300	5.0	0.0027	<10	44	0.27	0.080	3400
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	0.070	20500	6.7	0.0022	<10	134	0.79	0.16	5400
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	0.090	11300	22	0.012	<10	37	0.24	0.080	3400
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	0.070	9200	10	0.016	<10	57	0.19	0.080	3900
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	0.16	14500	3.7	0.0069	<10	35	0.21	0.070	5100
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	0.050	13600	5.6	0.0025	<10	66	0.32	0.090	4300
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	0.050	16800	5.4	0.0029	<10	51	0.24	0.080	2700
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	0.060	27200	3.9	0.00090	<10	30	0.24	0.050	6100
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	0.57	45600	1.7	0.0088	<10	41	0.16	0.020	1800
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	0.070	7500	3.9	0.0037	<10	45	0.27	0.090	38700
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	0.080	11400	4.0	0.0025	<10	67	0.39	0.13	40100
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	--	--	--	--	--	--	--	--	--
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	0.060	12700	5.2	0.0034	<10	64	0.38	0.10	7700
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	0.060	17000	8.1	0.0049	<10	64	0.17	0.050	18800
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	0.020	14100	3.4	0.0026	<10	61	0.31	0.090	4000
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	0.060	18100	6.0	0.0012	<10	48	0.21	0.11	10200
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	0.060	15000	6.3	0.0017	<10	81	0.44	0.13	37700
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	0.050	9300	7.6	0.0017	<10	35	0.20	0.10	13800
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	0.080	26700	4.1	0.0023	<10	103	0.46	0.13	6100
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	0.060	52300	3.0	0.0050	<10	54	0.39	0.050	3600
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	0.030	47100	0.90	0.0032	<10	<10	0.090	0.010	7600
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	0.040	8800	3.3	0.0015	<10	<43	0.27	0.080	32800
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	0.10	18200	3.1	0.0014	<10	<138	0.56	0.15	6000
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	0.070	11400	3.1	0.0024	<10	<70	0.41	0.12	69000
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	0.060	15500	3.6	0.00090	<10	<71	0.23	0.13	8600
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	0.050	14100	5.5	0.0018	<10	<58	0.32	0.10	4700
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	0.040	14800	7.7	0.0013	<10	82	0.37	0.12	40000
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	0.030	9400	5.7	0.016	<10	24	0.28	0.060	3800
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	0.050	14500	6.9	0.0020	<10	23	0.38	0.060	13600
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	0.040	10200	2.4	0.0014	<10	57	0.35	0.10	25900
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	0.040	9200	4.3	0.00060	<10	40	0.20	0.070	2800
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	0.030	13000	2.8	0.0014	<10	44	0.23	0.080	2600
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	0.020	10600	3.8	0.00080	<10	37	0.19	0.080	2900
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	0.060	11000	3.8	0.0027	<10	56	0.32	0.090	4400
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	0.050	14600	7.5	0.0032	<10	35	0.28	0.10	2500

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Cd	Ce	Co	Cr	Cs	Cu
10x Crustal Abundance Screening Value										ppm	ppm	ppm	ppm	ppm	ppm
										1.5	--	250	1020	--	600
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	0.010	101	12	66	1.9	23
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	0.010	52	8.2	126	0.97	13
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	0.020	84	11	63	1.8	23
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	0.030	24	13	123	1.0	22
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	0.070	35	9.5	136	2.4	23
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	0.040	31	13	130	1.1	26
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	0.040	43	12	125	1.2	52
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	0.020	23	17	140	1.2	27
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	0.12	42	32	129	0.62	70
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	0.040	15	63	164	2.2	177
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	0.12	40	6.8	81	0.84	20
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	0.12	51	9.4	96	1.2	24
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	--	--	--	--	--	--
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	0.060	53	8.9	109	1.3	23
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	0.050	27	18	133	3.7	38
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	0.030	55	8.5	117	1.2	30
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	0.050	38	12	173	1.0	32
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	0.040	60	9.1	75	1.3	24
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	0.060	35	8.9	132	0.68	23
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	0.11	47	21	85	3.3	41
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	0.13	30	51	73	3.8	70
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	0.030	5.4	51	187	0.43	61
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	0.050	45	5.6	106	0.89	14
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	0.040	64	12	56	1.4	11
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	0.060	58	7.0	38	1.1	16
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	0.040	44	11	133	1.1	35
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	0.030	45	11	127	1.4	32
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	0.090	57	10	101	1.6	22
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	0.030	34	14	142	1.7	23
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	0.030	30	21	120	1.3	60
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	0.060	49	6.9	93	1.0	14
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	0.030	25	7.2	119	1.0	8.7
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	0.030	20	11	144	0.93	16
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	0.020	37	9.9	151	0.77	20
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	0.040	50	7.8	116	1.2	15
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	0.020	18	11	124	1.4	15

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Fe	Ga	Ge	Hf	Hg	In	K	La	Li
10x Crustal Abundance Screening Value										ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	27000	7.5	0.060	0.58	0.035	0.026	1700	39	24
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	19700	3.8	<0.050	0.24	<0.0050	0.010	1100	16	15
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	26400	7.2	0.060	0.54	0.038	0.024	1600	38	22
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	26100	3.7	0.050	0.17	0.012	0.010	900	8.5	13
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	20000	3.9	0.050	0.33	0.0080	0.0090	1900	17	13
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	24900	5.0	0.050	0.27	0.0050	0.011	1200	8.9	19
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	22400	4.4	0.050	0.36	0.018	0.013	1000	19	13
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	31500	5.7	0.050	0.21	0.0080	0.012	700	8.7	15
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	64000	10	0.080	0.19	0.0070	0.048	400	16	25
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	89400	13	0.060	0.070	<0.0050	0.023	3600	5.9	33
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	14300	3.0	<0.050	0.36	0.014	0.011	1400	18	11
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	24300	4.4	<0.050	0.55	0.0050	0.017	2400	23	19
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	--	--	--	--	--	--	--	--	--
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	21100	4.7	0.050	0.34	0.015	0.015	1300	24	16
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	34800	5.3	0.050	0.31	0.0060	0.010	1800	13	19
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	21300	5.8	0.050	0.17	0.020	0.015	1100	22	14
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	24500	5.1	0.050	0.37	0.0060	0.012	1400	18	17
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	24300	5.4	0.050	0.40	0.0080	0.016	1800	27	20
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	18200	3.3	0.050	0.37	<0.0050	0.010	1000	16	13
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	41200	7.8	0.050	0.18	0.017	0.024	1300	13	23
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	97800	14	0.050	0.13	0.0080	0.042	2300	7.5	37
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	89100	14	0.11	0.040	0.0090	0.0080	200	2.3	29
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	16700	4.0	0.050	0.41	0.0080	0.012	1400	21	10
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	22700	6.3	0.050	0.21	0.018	0.022	1200	23	25
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	17100	4.3	0.050	0.41	0.017	0.016	1400	27	16
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	24100	6.0	0.050	0.27	0.0080	0.017	1900	20	24
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	27000	4.9	0.050	0.39	0.0070	0.015	1000	23	16
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	26400	6.4	0.050	0.67	0.011	0.018	3100	28	21
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	22600	3.7	0.050	0.29	<0.0050	0.0060	1300	17	17
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	46600	4.6	0.050	0.41	0.025	0.0080	1300	14	29
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	16000	3.9	<0.050	0.43	0.0090	0.013	1700	21	14
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	16800	3.3	<0.050	0.14	0.0050	0.010	800	9.6	14
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	31000	4.3	<0.050	0.29	<0.0050	0.012	1000	7.8	19
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	21300	3.6	<0.050	0.26	<0.0050	0.010	1100	13	13
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	19100	4.1	<0.050	0.24	0.010	0.013	1400	24	14
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	27500	5.0	0.050	0.22	0.015	0.011	800	7.5	22

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Mg ppm	Mn ppm	Mo ppm	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm
10x Crustal Abundance Screening Value										--	9500	12	--	--	840	10500	140	--
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	7600	422	0.49	300	1.1	29	612	9.1	21
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	5000	268	0.68	400	0.63	20	461	4.7	8.7
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	7400	450	0.69	300	1.1	29	549	10	20
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	4500	385	1.5	400	1.3	30	474	4.6	8.6
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	5000	321	2.3	500	0.87	25	455	7.2	22
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	7800	334	0.81	400	1.5	32	407	4.8	17
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	5100	296	2.3	400	0.94	30	460	4.9	11
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	7200	345	2.1	400	0.89	38	215	5.4	7.6
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	16700	1274	0.81	300	0.26	42	534	3.7	3.5
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	26100	560	1.6	<100	<0.050	115	420	8.6	25
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	10800	245	1.5	300	2.6	18	701	4.7	13
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	14300	472	0.95	400	1.6	26	666	6.9	21
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	--	--	--	--	--	--	--	--	--
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	6700	223	0.63	400	1.7	23	628	6.9	17
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	12900	586	1.3	400	0.20	44	485	3.9	12
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	5500	277	0.62	400	2.6	21	474	5.5	17
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	8100	464	1.0	1000	0.28	39	468	4.0	11
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	12300	400	0.46	400	0.90	26	651	6.9	21
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	8200	233	0.78	400	1.8	27	596	4.2	8.6
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	11200	1309	0.71	300	2.1	30	298	7.0	19
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	37200	1408	0.71	<100	0.10	39	431	4.4	9.7
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	39900	712	0.52	100	0.29	100	429	1.3	1.0
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	8000	378	0.50	400	1.4	15	651	4.2	14
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	5600	970	0.31	300	2.6	19	201	8.7	30
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	18300	325	0.18	400	0.91	17	661	5.7	15
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	9200	489	0.60	700	0.93	30	566	3.9	15
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	6400	436	0.55	400	0.55	30	569	4.9	11
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	14900	466	0.62	400	1.1	28	604	6.6	31
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	6500	247	1.1	300	0.79	26	364	8.2	10
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	11400	721	1.2	300	0.73	45	405	3.9	7.2
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	13000	174	0.42	400	1.4	18	653	5.1	17
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	4100	301	0.89	400	1.5	16	364	4.2	9.7
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	5800	490	0.74	400	1.2	27	393	4.1	10
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	5500	318	0.65	500	0.57	26	470	3.3	8.8
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	5000	411	0.55	400	1.1	20	514	5.1	24
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	5700	308	1.0	400	1.5	24	463	5.2	7.6

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Re ppm	S ppm	Sb ppm	Sc ppm	Se ppm	Sn ppm	Sr ppm	Ta ppm	Te ppm
10x Crustal Abundance Screening Value										--	3500	2	220	0.5	23	3700	--	--
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	0.0010	100	0.080	6.3	<0.20	0.90	30	0.010	0.030
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	0.0010	100	0.090	2.6	<0.20	0.50	17	0.010	0.010
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	0.0010	100	0.15	6.1	<0.20	0.90	36	0.010	0.020
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	0.0010	200	0.78	2.4	<0.20	0.50	14	0.010	0.030
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	0.0010	100	0.24	3.0	<0.20	0.50	20	0.010	0.020
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	0.0010	100	0.12	3.3	<0.20	0.60	14	0.010	0.030
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	0.0010	100	0.14	4.3	<0.20	0.60	16	0.010	0.020
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	0.0010	100	0.14	3.5	<0.20	0.50	14	0.010	0.020
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	0.0010	400	0.32	19	<0.20	0.50	15	0.010	0.010
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	0.0010	<100	0.090	9.7	<0.20	<0.20	3.6	0.010	0.050
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	0.0020	3900	0.12	2.7	<0.50	0.60	38	0.010	0.030
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	<0.0010	1700	0.14	3.6	<0.20	0.60	44	0.010	0.040
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	--	--	--	--	--	--	--	--	--
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	0.0010	<100	0.13	3.8	<0.20	0.60	21	0.010	0.020
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	0.0010	200	0.14	4.0	<0.20	0.60	30	0.010	0.020
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	0.0010	100	0.15	4.4	<0.20	1.1	29	0.010	0.010
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	0.0010	100	0.14	3.2	<0.20	0.50	24	0.010	0.020
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	0.0010	100	0.20	4.1	<0.20	0.70	43	0.010	0.020
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	0.0010	1500	0.22	2.4	<0.20	0.50	27	0.010	0.020
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	0.0010	100	1.7	6.9	<0.20	0.70	17	0.010	0.020
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	0.0010	<100	0.27	18	<0.20	0.30	5.0	0.010	0.020
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	0.0010	100	0.11	4.4	<0.20	0.20	5.9	0.010	<0.010
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	0.0010	100	0.13	3.3	<0.20	0.60	34	0.010	<0.010
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	0.0010	100	0.080	4.6	<0.20	0.90	23	0.010	<0.010
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	0.0010	100	0.15	3.8	<0.20	0.70	59	0.020	<0.020
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	0.0010	100	0.10	4.7	<0.20	0.60	34	0.010	<0.020
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	0.0010	100	0.18	3.8	<0.20	0.50	20	0.010	<0.020
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	0.0010	200	0.16	4.9	<0.20	0.70	50	0.010	0.020
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	0.0010	200	0.20	2.1	<0.20	0.40	15	0.010	0.020
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	0.0010	400	0.24	2.2	<0.20	0.90	24	0.020	0.010
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	0.0010	<100	0.080	3.2	<0.20	0.60	29	0.010	0.010
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	0.0010	<100	0.070	2.1	<0.20	0.50	16	0.010	<0.010
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	0.0010	<100	0.080	3.7	<0.20	0.50	16	0.010	0.010
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	0.0010	<100	0.080	2.8	<0.20	0.50	16	0.010	0.010
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	0.0010	<100	0.10	3.4	<0.20	0.60	22	0.010	0.010
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	0.0010	<100	0.10	2.4	<0.20	0.60	13	0.010	0.020

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-3. Overburden Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Th	Ti	Ti	U	V	W	Y	Zn	Zr
10x Crustal Abundance Screening Value										ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
										96	---	8.5	27	1200	12.5	330	700	1650
TP-EE-59-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.37	0.83	12	1190	0.23	1.2	49	0.15	13	44	25
TP-EE-59-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-59	2021	0.83	1.02	4.7	790	0.090	0.69	30	0.18	5.3	30	9.9
TP-EE-60-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	10	1150	0.21	0.98	49	0.16	13	45	23
TP-EE-61A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	2.6	810	0.13	0.60	35	0.80	4.0	32	7.8
TP-TMF-12 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	3.8	920	0.33	0.74	29	0.45	5.1	34	12
BH-TMF-04 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	6.4	1160	0.12	1.4	55	0.57	5.2	38	9.5
BH-TMF-05 SS2 (0.6-0.63)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.6	0.63	5.2	910	0.13	0.49	37	0.38	7.9	31	13
BH-TMF-05 SS2 (0.63-0.73)	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-TMF-05	2020	0.63	0.73	2.7	900	0.10	0.36	61	0.45	3.9	49	8.1
TP-TMF-10 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-10	2020	0.7	1.1	3.8	470	0.080	0.50	163	0.70	8.9	77	8.3
TP-TMF-13 SS5	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-13	2020	1.25	2.1	0.70	900	0.26	0.17	161	0.080	18	108	2.9
TP-TMF-14 SS11	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	4.5	870	0.11	1.4	28	0.23	7.2	31	13
TP-TMF-14 SS14	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-14	2020	4.06	4.43	6.5	980	0.17	1.0	37	0.16	8.4	41	19
TP-TMF-15 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-15	2020	0.1	1.3	---	---	---	---	---	---	---	---	---
TP-TMF-27 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	0.7	1.3	5.5	1030	0.16	0.78	36	0.27	8.9	35	16
TP-TMF-27 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	3.4	1150	0.12	0.48	63	2.2	5.5	48	12
TP-WSF1-05 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.26	0.4	6.1	1120	0.16	1.0	36	0.14	6.7	41	8.3
BH-WSF1-01 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.3	1.7	4.4	720	0.11	0.77	33	0.14	6.1	37	13
BH-WSF1-03 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	BH-WSF1	2020	0.8	1.2	7.3	1070	0.17	0.75	39	0.22	9.4	39	19
BH-WSF1-12 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	BH-WSF1	2020	1.9	2	3.7	710	0.080	0.90	26	0.26	6.1	32	13
BH-WSF2-13 SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0	0.6	4.3	1080	0.17	0.54	73	0.19	5.3	56	7.7
BH-WSF2-13 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	1.1	1.3	1.3	900	0.17	0.15	180	0.28	8.0	254	5.7
BH-WSF2-14 SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	BH-WSF2	2020	0.7	0.9	0.40	900	0.020	0.070	177	0.58	4.2	121	1.5
TP-WSF2-25A SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	1.75	2.01	5.7	970	0.11	0.69	30	0.17	7.2	24	15
TP-WSF1-03D SS1	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.3	0.5	6.4	1100	0.16	0.73	44	0.17	7.8	38	8.2
TP-WSF1-03D SS2	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	0.5	1.13	7.2	1100	0.15	0.70	35	0.15	9.4	29	17
TP-WSF1-23A SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Stockpile	TP-WSF1	2020	1.2	1.32	4.7	1600	0.14	0.65	45	0.21	6.8	49	11
TP-WSF2-09 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Co-disposal Facility	TP-WSF2	2020	0.85	1.1	5.4	910	0.16	0.61	41	0.16	8.1	37	15
BH-PS-08-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	9.2	1220	0.19	0.86	42	0.17	8.4	45	23
BH-PS-09-R1 SS3	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.6	1.9	4.8	380	0.12	0.87	24	0.21	4.6	34	11
BH-PS-09-R1 SS4	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	FAFHD	BH-PS-09-R1	2020	1.9	2.2	2.8	480	0.10	0.48	50	39	4.7	69	13
TP-PS-28 SS7	Ausenco (2020)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	6.0	930	0.12	0.64	31	0.14	7.7	29	15
TP-PP-33-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	3.3	790	0.070	0.72	26	0.17	4.1	29	6.1
TP-PP-39-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.08	0.7	3.6	980	0.070	0.72	42	0.15	4.1	38	10
TP-PP-39-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	4.0	800	0.090	0.65	33	0.16	4.6	30	9.6
TP-PP-39A-02	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Processing Plant	TP-PP-39A	2021	0.48	1.54	6.3	920	0.16	0.63	32	0.15	8.1	29	10
TP-Q-57A-01	Ausenco (2021)	3:1 Aqua Regia	Waste	Ovb	Fish Habitat Development Area	TP-Q-57A	2021	0.14	0.56	3.0	810	0.070	0.48	40	0.23	3.3	43	8.8

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-4. Overburden Elemental Content Statistical Summary

Group	Statistical Parameter	Ag	Al	As	B	Be	Cd	Co	Cr	Cu	Fe	Hg
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance		0.75	--	18	100	30	1.5	250	1020	600	--	0.85
All Overburden	Count	35	35	35	35	35	35	35	35	35	35	35
	Count Greater than 10x Crustal Abundance	0	0	1	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	0.020	7500	0.90	10	0.090	0.010	5.6	38	8.7	14300	0.0050
	10th Percentile	0.030	9240	2.9	10	0.19	0.020	7.1	69	14	16920	0.0050
	Median	0.060	14100	4.3	10	0.28	0.040	11	123	23	24300	0.0080
	Average	0.072	17074	5.3	10	0.32	0.051	15	115	33	31349	0.011
	Standard Deviation	0.089	10638	3.4	0	0.16	0.033	13	33	29	20826	0.0080
	90th Percentile	0.086	27000	7.7	10	0.45	0.12	27	148	61	57040	0.019
Maximum	0.57	52300	22	10	0.84	0.13	63	187	177	97800	0.038	

Table B-4. Overburden Elemental Content Statistical Summary

Group	Statistical Parameter	Mo	Ni	P	Pb	Sb	Se	Tl	U	V	W	Zn
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance		12	840	10500	140	2	0.5	8.5	27	1200	12.5	700
All Overburden	Count	35	35	35	35	35	35	35	35	35	35	35
	Count Greater than 10x Crustal Abundance	0	0	0	0	0	0	0	0	0	1	0
	Percent > 10x Crustal Abundance	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	0%
	Minimum	0.18	15	201	1.3	0.070	0.20	0.020	0.070	24	0.080	24
	10th Percentile	0.47	18	364	3.9	0.080	0.20	0.074	0.41	28	0.14	29
	Median	0.71	27	474	4.9	0.14	0.20	0.13	0.69	39	0.19	38
	Average	0.91	32	494	5.5	0.21	0.21	0.14	0.70	55	1.4	50
	Standard Deviation	0.52	20	123	1.9	0.29	0.050	0.059	0.29	43	6.5	41
	90th Percentile	1.6	43	652	8.4	0.26	0.20	0.20	1.0	126	0.65	74
Maximum	2.3	115	701	10	1.7	0.50	0.33	1.4	180	39	254	

Table B-5. Overburden Shake Flask Extraction Results

Parameter	Lithology	Zone	Drillhole	Year	From	To	Dry Sample Weight	DI Water Volume	pH	EC	Acidity	Alkalinity	Sulphate	P (CVAF)	Al	Sb	As	Be	B
							g	mL	pH units	mV	mg CaCO ₃ /L	mg CaCO ₃ /L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>PWQO Screening Value</i>							-	-	6.5-8.5	-	-	-	-	-	-	-	0.1	0.011	-
<i>Interim PWQO Screening Value</i>							-	-	-	-	-	-	-	0.02	0.075	0.02	0.005	-	0.2
TP-WSF2-25A SS7	Ovb	Co-disposal Facility	TP-WSF2-25A	2020	1.75	2.01	250	750	7.1	74	12	39	4.7	0.011	0.051	<0.0001	0.00071	<0.000010	<0.0050
BH-PS-08-R1 SS4	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	250	750	7.3	77	12	45	0.50	0.016	0.11	0.00017	0.0047	<0.000010	<0.0050
BH-WSF1-01 SS3	Ovb	Stockpile	BH-WSF1-01	2020	1.3	1.7	250	750	7.2	58	12	32	0.50	0.014	0.089	0.000090	0.00079	<0.000010	<0.0050
TP-EE-59-01	Ovb	Camp	TP-EE-59	2021	0.37	0.83	250	750	7.0	13	8.6	7.7	0.50	0.023	0.41	0.000055	0.00091	<0.000095	<0.0050
TP-EE-60-01	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	250	750	6.7	30	11	9.2	5.7	0.023	0.22	0.00012	0.00080	<0.000041	<0.0050
TP-PS-28 SS7	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	250	750	7.3	73	12	44	0.50	0.027	0.22	0.00028	0.00029	<0.000023	<0.0050
BH-TMF-04 SS1	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	250	750	7.1	27	12	13	<0.50	0.014	0.22	0.000059	0.0018	0.000023	<0.0050
TP-TMF-12 SS1	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	250	750	6.3	9.5	7.1	4.6	<0.50	0.011	0.11	<0.000050	0.00047	0.000011	<0.0050
TP-TMF-27 SS4	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	250	750	7.3	66	11	27	<0.50	0.014	0.058	<0.000075	0.0012	0.000010	<0.0050
TP-PP-33-01	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	250	750	6.3	17	13	4.7	<10	0.032	0.56	<0.000059	0.0021	0.000050	<0.0050
TP-TMF-14 SS11	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	250	750	7.3	195	12	49	<48	0.012	0.048	<0.000060	0.0034	<0.000010	<0.014
TP-WSF1-05 SS2	Ovb	Stockpile	TP-WSF1-05	2020	0.26	0.4	250	750	6.8	22	9.9	9.6	<0.50	0.021	0.090	<0.000052	0.00062	0.000021	<0.0050
TP-EE-61A-01	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	250	750	6.8	13	8.5	4.6	0.50	0.0074	0.14	0.000077	0.00048	<0.000010	<0.0050
TP-PP-39-02	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	250	750	6.6	7.1	6.1	3.4	0.50	0.0063	0.083	<0.000050	0.00020	<0.000010	<0.0050
TP-Q-57A-01	Ovb	FAFHD	TP-Q-57A	2021	0.14	0.56	250	750	5.6	15	13	1.6	7.9	0.027	0.75	<0.000050	0.00060	0.000039	<0.0050

Red highlight indicates value is greater than the PWQO screening value.

Bold italic text indicates value is greater than the interim PWQO screening value.

Comparison with screening values holds no regulatory significance

Table B-5. Overburden Shake Flask Extraction Results

Parameter	Lithology	Zone	Drillhole	Year	From	To	Cd	Cr	Co	Cu	Fe	Pb	Hg	Mo	Ni	Se	Ag	Tl	W	U	V	Zn
							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO Screening Value							0.0002	0.001	0.0009	0.005	0.3	0.005	0.0002	-	0.025	0.1	0.0001	-	-	-	-	0.03
Interim PWQO Screening Value							0.0001	-	-	0.005	-	0.001	-	0.04	-	-	-	0.0003	0.03	0.005	0.006	0.02
TP-WSF2-25A SS7	Ovb	Co-disposal Facility	TP-WSF2-25A	2020	1.75	2.01	0.0000037	0.00014	0.000020	0.00075	0.018	<0.000050	<0.000010	0.00036	0.00018	0.00020	<0.000010	<0.0000040	<0.000020	0.000051	0.0018	<0.0010
BH-PS-08-R1 SS4	Ovb	FAFHD	BH-PS-08-R1	2020	3.1	3.7	0.0000039	0.00029	0.000064	0.0036	0.099	0.00011	<0.000010	0.00029	0.00052	0.00021	<0.000010	0.0000041	0.00066	0.00014	0.0040	0.0033
BH-WSF1-01 SS3	Ovb	Stockpile	BH-WSF1-01	2020	1.3	1.7	<0.0000020	0.00030	0.000045	0.0023	0.070	<0.000050	<0.000010	0.0012	0.00037	<0.000010	<0.000010	<0.0000040	0.00026	0.000069	0.00083	0.0019
TP-EE-59-01	Ovb	Camp	TP-EE-59	2021	0.37	0.83	<0.0000020	0.0016	0.00013	0.0047	0.41	0.00025	<0.000010	0.00024	0.0020	<0.00020	<0.000017	<0.0000063	<0.000020	0.00052	0.0017	0.0022
TP-EE-60-01	Ovb	East Extension	TP-EE-60	2021	0.25	1.2	<0.0000022	0.00083	0.00011	0.0038	0.21	0.00016	<0.000010	0.00034	0.0019	<0.00029	<0.000015	<0.0000040	<0.000020	0.00013	0.0013	0.0016
TP-PS-28 SS7	Ovb	Processing Plant	TP-PS-28	2020	1.95	2.25	<0.0000093	0.0018	0.00012	0.012	0.20	0.00024	<0.000010	0.0055	0.00071	<0.00028	<0.000010	<0.0000080	<0.000024	0.00025	0.011	0.0012
BH-TMF-04 SS1	Ovb	Co-disposal Facility	BH-TMF-04	2020	0	0.3	0.000018	0.0018	0.00068	0.0094	0.25	0.000092	<0.000010	0.0011	0.0015	0.00041	0.000012	0.0000098	0.0011	0.00012	0.0045	0.0016
TP-TMF-12 SS1	Ovb	Co-disposal Facility	TP-TMF-12	2020	0.08	2	0.0000069	0.00030	0.00019	0.0094	0.10	0.00020	<0.000010	0.00022	0.00072	<0.00010	0.000014	0.000021	<0.000020	0.00015	0.00033	0.0020
TP-TMF-27 SS4	Ovb	Co-disposal Facility	TP-TMF-27	2020	2	2.3	0.0000076	0.00021	0.00012	0.0033	0.095	0.000086	<0.000010	0.013	0.00044	<0.00010	<0.000010	<0.0000040	<0.000031	0.00047	0.0022	
TP-PP-33-01	Ovb	Processing Plant	TP-PP-33	2021	0.39	0.79	0.0000028	0.0018	0.0012	0.0059	0.55	0.00015	<0.000010	0.00055	0.0012	<0.00047	<0.000031	<0.000014	<0.000020	0.00059	0.0016	0.0015
TP-TMF-14 SS11	Ovb	Co-disposal Facility	TP-TMF-14	2020	3.07	3.36	0.0000086	0.00018	0.000062	0.0037	0.024	0.000050	<0.000010	0.034	0.00080	<0.00072	<0.000010	<0.000015	<0.000020	0.00031	0.0048	<0.0010
TP-WSF1-05 SS2	Ovb	Stockpile	TP-WSF1-05	2020	0.26	0.4	0.0000066	0.00091	0.00026	0.015	0.094	0.000078	<0.000010	0.00016	0.00093	<0.00019	<0.000013	<0.0000042	<0.000020	0.00026	0.00089	0.0032
TP-EE-61A-01	Ovb	Camp	TP-EE-61A	2021	0.19	0.41	0.0000060	0.00033	0.00016	0.0020	0.038	<0.000050	<0.000010	0.00011	0.00056	0.00019	0.000017	0.000012	<0.000020	0.000048	0.00033	0.0011
TP-PP-39-02	Ovb	Processing Plant	TP-PP-39	2021	0.7	1.81	<0.0000020	0.00041	0.00013	0.00097	0.043	<0.000050	<0.000010	0.00014	0.00029	<0.00010	0.000011	0.0000057	<0.000020	0.000075	0.00038	<0.0010
TP-Q-57A-01	Ovb	FAFHD	TP-Q-57A	2021	0.14	0.56	0.000021	0.0014	0.00090	0.0030	0.32	0.00016	<0.000010	0.000029	0.00092	0.00024	0.000020	0.000010	<0.000020	0.00019	0.00051	0.0020

Red highlight indicates value is greater than the PWQO screening value.

Bold italic text indicates value is greater than the interim PWQO screening value.

Comparison with screening values holds no regulatory significance

Table B-6. Fish Habitat Development Area Acid Base Accounting Results

Sample ID	Lithology	Drillhole	Year	From	To	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNP ^(I)	NPR ^(J)	CarbNP/MPA ^(K)
				m	m	pH Units	%	%	%	kg CaCO ₃ /t	kg CaCO ₃ /t	kg CaCO ₃ /t	%	%	N/A	kg CaCO ₃ /t	NP/AP	CarbNP/AP
A00356301	Andesite, Tuff, and Metasediments	BH-Q-18	2021	4	5	9.2	0.23	0.014	0.22	7.2	6.8	157	2.3	1.6	Moderate	137	23	20
A00356302	Andesite, Tuff, and Metasediments	BH-Q-18	2021	9	10	9.2	0.60	0.020	0.58	19	18	120	1.5	1.1	Moderate	93	6.6	5.1
A00356303	Volcanic Breccia	BH-Q-18	2021	14	15	9.2	0.030	0.020	0.010	0.94	0.31	101	1.1	0.88	Strong	73	324	235
A00356304	Porphyry	BH-Q-18	2021	20	21	9.0	1.1	0.020	1.1	34	33	187	2.5	2.1	Strong	176	5.6	5.3
A00356305	Porphyry	BH-Q-18	2021	24	25	9.3	0.78	<0.010	0.77	24	24	173	2.8	1.8	Strong	153	7.2	6.3
A00356306	Andesite, Tuff, and Metasediments	BH-Q-19	2021	4	5	8.7	0.030	<0.010	0.020	0.94	0.63	199	2.5	2.1	Strong	173	318	276
A00356307	Andesite, Tuff, and Metasediments	BH-Q-19	2021	9	10	8.6	0.21	<0.010	0.20	6.6	6.3	174	2.5	1.8	Moderate	153	28	25
A00356308	Andesite, Tuff, and Metasediments	BH-Q-19	2021	14	15	8.6	0.19	0.020	0.17	5.9	5.3	170	2.2	1.6	Strong	135	32	25
A00356309	Andesite, Tuff, and Metasediments	BH-Q-19	2021	20	21	8.7	0.050	<0.010	0.040	1.6	1.3	142	1.6	1.4	Strong	118	113	94
A00356310	Andesite, Tuff, and Metasediments	BH-Q-20	2021	6	7	9.1	0.20	<0.010	0.19	6.3	5.9	164	2.1	2.0	Moderate	170	28	29
A00356311	Andesite, Tuff, and Metasediments	BH-Q-20	2021	10	11	9.1	0.79	0.010	0.78	25	24	131	1.7	1.5	Moderate	121	5.4	5.0
A00356312	Andesite, Tuff, and Metasediments	BH-Q-20	2021	14	15	8.9	0.33	<0.010	0.32	10	10	168	2.4	2.2	Moderate	183	17	18
A00356313	Andesite, Tuff, and Metasediments	BH-Q-20	2021	19	20	9.2	0.15	0.020	0.13	4.7	4.1	162	2.2	2.1	Moderate	173	40	43
A00356314	Andesite, Tuff, and Metasediments	BH-Q-20	2021	24	25	9.2	0.29	0.010	0.28	9.1	8.8	165	2.7	2.5	Moderate	209	19	24
A00356315	Andesite, Tuff, and Metasediments	BH-Q-21	2021	4	5	8.9	0.17	<0.010	0.16	5.3	5.0	142	2.2	2.1	Moderate	178	28	36
A00356316	Andesite, Tuff, and Metasediments	BH-Q-21	2021	9	10	8.9	0.27	<0.010	0.26	8.4	8.1	168	2.3	2.2	Moderate	181	21	22
A00356317	Andesite, Tuff, and Metasediments	BH-Q-21	2021	14	15	8.9	0.090	0.020	0.070	2.8	2.2	148	1.4	1.3	Moderate	112	68	51
A00356318	Andesite, Tuff, and Metasediments	BH-Q-21	2021	19	20	8.9	0.98	<0.010	0.97	31	30	137	1.8	1.6	Moderate	130	4.5	4.3
A00356319	Andesite, Tuff, and Metasediments	BH-Q-21	2021	24	25	9.1	0.21	<0.010	0.20	6.6	6.3	147	2.0	1.8	Moderate	153	23	24
A00356320	Volcanic Breccia	BH-Q-18	2021	7	8	9.4	0.34	0.010	0.33	11	10	127	1.9	1.8	moderate	150	12	15
A00356321	Andesite, Tuff, and Metasediments	BH-Q-18	2021	11	12	9.4	0.10	0.020	0.080	3.1	2.5	127	1.7	1.6	moderate	133	51	53
A00356322	Andesite, Tuff, and Metasediments	BH-Q-19	2021	12	13	8.6	0.44	0.020	0.42	14	13	206	3.1	2.9	Strong	245	16	19
A00356323	Andesite, Tuff, and Metasediments	BH-Q-19	2021	23	24	8.7	0.56	0.020	0.54	18	17	200	2.4	2.3	Strong	193	12	11
A00356324	Andesite, Tuff, and Metasediments	BH-Q-20	2021	5	6	9.1	0.40	0.010	0.39	13	12	152	2.1	1.9	moderate	161	13	13
A00356325	Andesite, Tuff, and Metasediments	BH-Q-20	2021	16	17	8.7	0.18	<0.010	0.17	5.6	5.3	165	2.1	2.0	moderate	168	31	32
A00356326	Andesite, Tuff, and Metasediments	BH-Q-21	2021	12	13	8.7	0.39	<0.010	0.38	12	12	148	1.9	1.8	moderate	153	12	13
A00356327	Andesite, Tuff, and Metasediments	BH-Q-21	2021	21	22	8.9	0.18	0.010	0.17	5.6	5.3	142	1.9	1.8	moderate	153	27	29
A00356328	Andesite, Tuff, and Metasediments	BH-Q-22	2021	8	9	9.0	0.29	0.030	0.26	9.1	8.1	176	2.4	2.2	Strong	187	22	23
A00356329	Andesite, Tuff, and Metasediments	BH-Q-22	2021	10	11	9.2	0.16	0.030	0.13	5.0	4.1	139	1.9	1.8	Strong	149	34	37
A00356330	Andesite, Tuff, and Metasediments	BH-Q-22	2021	12	13	8.9	0.37	<0.010	0.36	12	11	210	2.7	2.5	Strong	207	19	18
A00356331	Andesite, Tuff, and Metasediments	BH-Q-22	2021	14	15	9.1	0.11	0.030	0.080	3.4	2.5	157	1.8	1.7	Strong	139	63	56
A00356332	Andesite, Tuff, and Metasediments	BH-Q-22	2021	18	19	8.9	0.080	0.020	0.060	2.5	1.9	170	2.4	2.3	moderate	189	91	101
A00356333	Andesite, Tuff, and Metasediments	BH-Q-22	2021	23	24	9.2	0.26	0.020	0.24	8.1	7.5	182	2.5	2.3	moderate	193	24	26
A00356334	Andesite, Tuff, and Metasediments	BH-Q-23	2021	8	9	9.0	<0.010	<0.010	<0.010	0.31	0.31	138	1.7	1.6	moderate	136	443	435
A00356335	Andesite, Tuff, and Metasediments	BH-Q-23	2021	10	11	9.0	<0.010	<0.010	<0.010	0.31	0.31	149	1.8	1.8	moderate	148	475	472
A00356336	Andesite, Tuff, and Metasediments	BH-Q-23	2021	13	14	8.9	<0.010	<0.010	<0.010	0.31	0.31	155	1.9	1.9	moderate	156	497	499
A00356337	Andesite, Tuff, and Metasediments	BH-Q-23	2021	15	16	8.9	0.010	0.010	<0.010	0.31	0.31	160	2.0	2.0	moderate	165	511	528
A00356338	Andesite, Tuff, and Metasediments	BH-Q-23	2021	18	19	8.8	<0.010	<0.010	<0.010	0.31	0.31	163	2.0	2.0	moderate	164	521	525
A00356339	Andesite, Tuff, and Metasediments	BH-Q-23	2021	20	21	8.8	0.040	0.030	0.010	1.3	0.31	128	1.5	1.5	moderate	121	408	387
A00356340	Andesite, Tuff, and Metasediments	BH-Q-23	2021	25	26	9.1	<0.010	<0.010	<0.010	0.31	0.31	146	1.8	1.8	moderate	150	467	480

(A) Total sulphur measured by Leco analyzer

(B) Sulphate sulphur measured by HCl leach.

(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur

(D) MPA calculated as Total S * 31.25

(E) AP calculated as Sulphide S * 31.25

(F) Neutralization potential measured by the standard Sobek method

(G) Total carbon measured by Leco analyzer

(H) Total inorganic carbon measured using HCl leach and CO₂ coulometry

(I) Carbonate neutralization potential based on TIC

(J) Neutralization potential ratio, NP/AP

(K) Carbonate neutralization potential ratio, CarbNP/AP

Table B-7. Fish Habitat Development Area Acid Base Accounting Statistics

Group	Statistical Parameter	Paste pH	Total Sulphur ^(A)	Sulphate Sulphur ^(B)	Sulphide Sulphur ^(C)	MPA ^(D)	AP ^(E)	Sobek NP ^(F)	Total Carbon ^(G)	Total Inorganic Carbon ^(H)	Fizz Rating	CarbNP ^(I)	NPR ^(J)	CarbNP/MPA ^(K)	Class (NPR)	Class (CarbNP/MPA)
		pH Units	%	%	%	kg CaCO3/t	kg CaCO3/t	kg CaCO3/t	%	%	kg CaCO3/t	kg CaCO3/t	NP/AP	CarbNP/AP	MEND (2009)	
All Samples FAFHD	Count	40	40	40	40	40	40	40	40	40	40	40	40	40	PAG (NPR < 1)	
	Minimum	8.6	0.010	0.010	0.010	0.31	0.31	101	1.1	0.88	73	101	4.5	4.2	0%	0%
	10th Percentile	8.7	0.010	0.010	0.010	0.31	0.31	127	1.6	1.4	121	115	7.0	6.2		
	Median	9.0	0.20	0.010	0.18	6.1	5.9	157	2.0	1.8	153	152	26	26	Uncertain (1 < NPR < 2)	
	Average	9.0	0.27	0.015	0.25	8.3	8.0	157	2.1	1.9	157	149	20	20	0%	0%
	Standard Deviation	0.21	0.26	0.0067	0.26	8.2	8.2	24	0.41	0.38	32	24	175	173	NPAG (NPR > 2)	
	90th Percentile	9.2	0.62	0.021	0.60	19	19	188	2.5	2.3	193	175	468	473	100%	100%
	Maximum	9.4	1.1	0.030	1.1	34	33	210	3.1	2.9	245	199	521	528		

(A) Total sulphur measured by Leco analyzer

(B) Sulphate sulphur measured by HCl leach.

(C) Sulphide sulphur calculated as the difference between total sulphur and sulphate sulphur.

(D) MPA calculated as Total S * 31.25

(E) AP calculated as Sulphide S * 31.25

(F) Neutralization potential measured by the standard Sobek method

(G) Total carbon measured by Leco analyzer

(H) Total inorganic carbon measured using HCl leach and CO₂ coulometry

(I) Carbonate neutralization potential based on TIC

(J) Neutralization potential ratio, NP/AP

(K) Carbonate neutralization potential ratio, CarbNP/AP

Table B-8. Fish Habitat Development Area Elemental Content Results

Sample ID	Lithology	Drillhole	Year	From	To	Ag	Al	As	B	Be	Cd	Co	Cr	Cu	Fe	Hg
				m	m	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
				10x Crustal Abundance Screening Value				0.75	--	18	100	30	1.5	250	1020	600
A00356301	Andesite, Tuff, and Metasediments	BH-Q-18	2021	4	5	0.080	13800	30	10	0.33	0.050	34	70	65	57500	0.0090
A00356302	Andesite, Tuff, and Metasediments	BH-Q-18	2021	9	10	0.23	11700	57	14	0.30	0.060	26	24	73	53300	<0.0050
A00356303	Volcanic Breccia	BH-Q-18	2021	14	15	0.080	21700	4.4	16	0.40	0.040	23	52	39	57700	<0.0050
A00356304	Porphyry	BH-Q-18	2021	20	21	0.37	4900	24	15	0.27	0.20	26	35	73	51900	0.011
A00356305	Porphyry	BH-Q-18	2021	24	25	0.30	3000	35	24	0.27	0.17	21	31	50	42900	0.013
A00356306	Andesite, Tuff, and Metasediments	BH-Q-19	2021	4	5	0.030	17600	1.5	16	0.50	0.10	25	45	56	57600	<0.0050
A00356307	Andesite, Tuff, and Metasediments	BH-Q-19	2021	9	10	0.050	5900	5.0	24	0.52	0.060	20	23	56	46200	0.014
A00356308	Andesite, Tuff, and Metasediments	BH-Q-19	2021	14	15	0.050	14600	6.6	16	0.51	0.090	28	34	66	53700	0.013
A00356309	Andesite, Tuff, and Metasediments	BH-Q-19	2021	20	21	0.040	21000	2.7	18	0.41	0.070	26	46	59	54100	<0.0050
A00356310	Andesite, Tuff, and Metasediments	BH-Q-20	2021	6	7	0.040	4200	5.8	18	0.52	0.080	17	43	54	57900	<0.0050
A00356311	Andesite, Tuff, and Metasediments	BH-Q-20	2021	10	11	0.080	7300	19	16	0.34	0.070	21	44	104	79600	<0.0050
A00356312	Andesite, Tuff, and Metasediments	BH-Q-20	2021	14	15	0.070	5000	4.3	21	0.49	0.090	28	40	34	68700	<0.0050
A00356313	Andesite, Tuff, and Metasediments	BH-Q-20	2021	19	20	0.040	3800	3.8	15	0.37	0.11	21	37	28	65800	<0.0050
A00356314	Andesite, Tuff, and Metasediments	BH-Q-20	2021	24	25	0.040	4200	6.3	15	0.42	0.10	25	35	32	68400	<0.0050
A00356315	Andesite, Tuff, and Metasediments	BH-Q-21	2021	4	5	0.030	3800	3.5	18	0.39	0.070	19	39	47	64000	<0.0050
A00356316	Andesite, Tuff, and Metasediments	BH-Q-21	2021	9	10	0.060	4800	14	18	0.52	0.13	21	46	58	61900	<0.0050
A00356317	Andesite, Tuff, and Metasediments	BH-Q-21	2021	14	15	0.040	7800	3.3	16	0.39	0.050	20	40	41	62800	<0.0050
A00356318	Andesite, Tuff, and Metasediments	BH-Q-21	2021	19	20	0.28	5900	6.7	19	0.47	0.080	44	37	81	71900	<0.0050
A00356319	Andesite, Tuff, and Metasediments	BH-Q-21	2021	24	25	0.070	4400	6.7	19	0.42	0.090	23	43	42	65600	<0.0050
A00356320	Volcanic Breccia	BH-Q-18	2021	7	8	0.16	3100	26	<10	0.25	0.070	18	40	36	47700	0.036
A00356321	Andesite, Tuff, and Metasediments	BH-Q-18	2021	11	12	0.15	11200	15	<10	0.30	0.060	24	21	50	48700	0.012
A00356322	Andesite, Tuff, and Metasediments	BH-Q-19	2021	12	13	0.14	6100	8.5	<10	0.37	0.11	29	22	70	54900	0.011
A00356323	Andesite, Tuff, and Metasediments	BH-Q-19	2021	23	24	0.080	11800	18	<10	0.16	0.10	27	41	71	50100	0.011
A00356324	Andesite, Tuff, and Metasediments	BH-Q-20	2021	5	6	0.050	3700	5.0	<10	0.36	0.080	22	24	45	70900	<0.0050
A00356325	Andesite, Tuff, and Metasediments	BH-Q-20	2021	16	17	0.030	7500	4.1	<10	0.41	0.080	28	18	37	56400	<0.0050
A00356326	Andesite, Tuff, and Metasediments	BH-Q-21	2021	12	13	0.060	4500	16	<10	0.36	0.12	25	27	55	50100	0.0090
A00356327	Andesite, Tuff, and Metasediments	BH-Q-21	2021	21	22	0.030	4600	4.1	<10	0.42	0.090	19	21	37	55600	<0.0050
A00356328	Andesite, Tuff, and Metasediments	BH-Q-22	2021	8	9	0.060	9400	18	<10	0.54	0.080	40	18	56	50300	0.0060
A00356329	Andesite, Tuff, and Metasediments	BH-Q-22	2021	10	11	0.040	12600	3.5	<10	0.42	0.10	25	21	32	54000	<0.0050
A00356330	Andesite, Tuff, and Metasediments	BH-Q-22	2021	12	13	0.070	5300	4.3	<10	0.48	0.22	25	20	27	46200	<0.0050
A00356331	Andesite, Tuff, and Metasediments	BH-Q-22	2021	14	15	0.040	8700	6.7	<10	0.37	0.080	21	25	24	48400	<0.0050
A00356332	Andesite, Tuff, and Metasediments	BH-Q-22	2021	18	19	0.14	4500	14	<10	0.41	0.090	24	13	38	50600	<0.0050
A00356333	Andesite, Tuff, and Metasediments	BH-Q-22	2021	23	24	0.050	4700	11	<10	0.46	0.090	26	16	35	54000	<0.0050
A00356334	Andesite, Tuff, and Metasediments	BH-Q-23	2021	8	9	0.020	16000	2.9	<10	0.33	0.070	21	18	60	51600	<0.0050
A00356335	Andesite, Tuff, and Metasediments	BH-Q-23	2021	10	11	0.030	15000	3.0	<10	0.35	0.070	18	20	42	49100	<0.0050
A00356336	Andesite, Tuff, and Metasediments	BH-Q-23	2021	13	14	0.030	15100	3.1	<10	0.39	0.060	20	21	54	51800	<0.0050
A00356337	Andesite, Tuff, and Metasediments	BH-Q-23	2021	15	16	0.060	13800	4.1	<10	0.40	0.060	21	17	40	56500	<0.0050
A00356338	Andesite, Tuff, and Metasediments	BH-Q-23	2021	18	19	0.020	13600	2.9	<10	0.47	0.070	17	15	51	49700	<0.0050
A00356339	Andesite, Tuff, and Metasediments	BH-Q-23	2021	20	21	0.020	17700	5.1	<10	0.49	0.050	23	15	48	55000	<0.0050
A00356340	Andesite, Tuff, and Metasediments	BH-Q-23	2021	25	26	0.020	14000	3.1	<10	0.39	0.070	19	18	48	51400	<0.0050

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)

Bold text indicates concentration is greater than the screening criteria for agricultural soils

Comparison with screening values holds no regulatory significance

Table B-8. Fish Habitat Development Area Elemental Content Results

Sample ID	Lithology	Drillhole	Year	From m	To m	Mo ppm 12	Ni ppm 840	P ppm 10500	Pb ppm 140	Sb ppm 2	Se ppm 0.6	Tl ppm 8.5	U ppm 27	V ppm 1200	W ppm 12.5	Zn ppm 700
10x Crustal Abundance Screening Value																
A00356301	Andesite, Tuff, and Metasediments	BH-Q-18	2021	4	5	0.42	85	642	2.6	0.57	<0.20	0.11	0.14	48	3.9	89
A00356302	Andesite, Tuff, and Metasediments	BH-Q-18	2021	9	10	1.4	29	1374	4.9	0.96	<0.20	0.19	0.34	46	0.89	131
A00356303	Volcanic Breccia	BH-Q-18	2021	14	15	0.75	42	1335	3.1	0.32	<0.20	0.070	0.26	60	0.25	97
A00356304	Porphyry	BH-Q-18	2021	20	21	0.60	30	886	8.6	0.34	0.40	0.080	0.26	42	0.80	66
A00356305	Porphyry	BH-Q-18	2021	24	25	0.44	22	845	5.0	0.34	<0.20	0.080	0.34	28	0.62	51
A00356306	Andesite, Tuff, and Metasediments	BH-Q-19	2021	4	5	0.45	40	915	2.2	0.12	<0.20	0.050	0.16	58	0.060	85
A00356307	Andesite, Tuff, and Metasediments	BH-Q-19	2021	9	10	0.36	21	911	2.0	0.16	<0.20	0.080	0.17	42	0.090	44
A00356308	Andesite, Tuff, and Metasediments	BH-Q-19	2021	14	15	0.65	32	952	3.2	0.16	<0.20	0.070	0.17	57	0.070	72
A00356309	Andesite, Tuff, and Metasediments	BH-Q-19	2021	20	21	0.51	38	941	2.1	0.070	<0.20	0.060	0.15	69	<0.050	88
A00356310	Andesite, Tuff, and Metasediments	BH-Q-20	2021	6	7	1.0	9.0	1191	2.0	0.23	<0.20	0.11	0.40	63	0.10	42
A00356311	Andesite, Tuff, and Metasediments	BH-Q-20	2021	10	11	0.98	11	1053	2.2	0.19	<0.20	0.10	0.40	81	0.070	109
A00356312	Andesite, Tuff, and Metasediments	BH-Q-20	2021	14	15	2.1	11	1674	2.5	0.22	<0.20	0.12	0.42	63	0.12	59
A00356313	Andesite, Tuff, and Metasediments	BH-Q-20	2021	19	20	0.41	7.9	1647	2.5	0.29	<0.20	0.13	0.41	57	0.090	69
A00356314	Andesite, Tuff, and Metasediments	BH-Q-20	2021	24	25	1.1	9.0	1465	2.5	0.48	<0.20	0.13	0.35	63	0.080	62
A00356315	Andesite, Tuff, and Metasediments	BH-Q-21	2021	4	5	0.78	17	1173	2.0	0.19	<0.20	0.10	0.35	67	0.20	40
A00356316	Andesite, Tuff, and Metasediments	BH-Q-21	2021	9	10	0.87	28	1159	3.4	0.19	<0.20	0.12	0.33	64	0.14	71
A00356317	Andesite, Tuff, and Metasediments	BH-Q-21	2021	14	15	0.23	13	1310	2.1	0.11	<0.20	0.090	0.38	82	0.090	96
A00356318	Andesite, Tuff, and Metasediments	BH-Q-21	2021	19	20	1.2	20	1282	3.8	0.21	0.30	0.13	0.46	72	0.080	76
A00356319	Andesite, Tuff, and Metasediments	BH-Q-21	2021	24	25	0.49	11	1251	2.6	0.17	<0.20	0.11	0.45	75	0.070	53
A00356320	Volcanic Breccia	BH-Q-18	2021	7	8	2.0	28	1018	5.3	1.5	<0.20	0.14	0.47	44	8.6	46
A00356321	Andesite, Tuff, and Metasediments	BH-Q-18	2021	11	12	1.7	22	1163	3.6	1.0	<0.20	0.14	0.30	40	0.48	86
A00356322	Andesite, Tuff, and Metasediments	BH-Q-19	2021	12	13	0.40	27	847	3.5	0.24	<0.20	0.10	0.16	48	0.20	55
A00356323	Andesite, Tuff, and Metasediments	BH-Q-19	2021	23	24	0.90	29	836	3.7	0.24	<0.20	0.080	0.26	70	0.11	63
A00356324	Andesite, Tuff, and Metasediments	BH-Q-20	2021	5	6	0.51	9.3	1087	2.0	0.24	<0.20	0.090	0.39	71	0.13	49
A00356325	Andesite, Tuff, and Metasediments	BH-Q-20	2021	16	17	1.1	12	1385	1.9	0.36	<0.20	0.080	0.35	59	0.20	107
A00356326	Andesite, Tuff, and Metasediments	BH-Q-21	2021	12	13	0.49	26	1187	3.4	0.23	<0.20	0.070	0.36	60	0.14	62
A00356327	Andesite, Tuff, and Metasediments	BH-Q-21	2021	21	22	0.22	8.9	1302	2.3	0.23	<0.20	0.080	0.35	66	0.11	61
A00356328	Andesite, Tuff, and Metasediments	BH-Q-22	2021	8	9	1.1	13	1448	2.5	1.9	0.30	0.12	0.29	37	0.59	72
A00356329	Andesite, Tuff, and Metasediments	BH-Q-22	2021	10	11	0.45	13	1319	2.8	4.4	<0.20	0.14	0.24	65	3.9	100
A00356330	Andesite, Tuff, and Metasediments	BH-Q-22	2021	12	13	0.62	14	1374	6.6	7.3	<0.20	0.28	0.34	37	12	174
A00356331	Andesite, Tuff, and Metasediments	BH-Q-22	2021	14	15	0.51	12	1299	3.1	3.2	<0.20	0.48	0.32	64	3.1	76
A00356332	Andesite, Tuff, and Metasediments	BH-Q-22	2021	18	19	1.6	13	1370	4.1	3.7	<0.20	0.22	0.49	46	0.61	45
A00356333	Andesite, Tuff, and Metasediments	BH-Q-22	2021	23	24	0.65	9.7	1290	4.6	4.4	<0.20	0.18	0.32	48	1.8	102
A00356334	Andesite, Tuff, and Metasediments	BH-Q-23	2021	8	9	0.61	31	1229	1.9	1.0	<0.20	0.080	0.31	60	0.12	87
A00356335	Andesite, Tuff, and Metasediments	BH-Q-23	2021	10	11	0.41	29	1174	1.5	1.0	<0.20	0.090	0.30	54	0.13	83
A00356336	Andesite, Tuff, and Metasediments	BH-Q-23	2021	13	14	0.52	24	1207	1.5	1.0	<0.20	0.090	0.31	59	0.13	83
A00356337	Andesite, Tuff, and Metasediments	BH-Q-23	2021	15	16	0.28	21	1205	1.4	1.7	<0.20	0.080	0.29	67	0.13	87
A00356338	Andesite, Tuff, and Metasediments	BH-Q-23	2021	18	19	0.54	23	1196	1.9	0.72	<0.20	0.070	0.29	56	0.16	75
A00356339	Andesite, Tuff, and Metasediments	BH-Q-23	2021	20	21	0.58	24	1268	20	0.87	<0.20	0.090	0.30	63	0.19	85
A00356340	Andesite, Tuff, and Metasediments	BH-Q-23	2021	25	26	0.64	21	1191	1.4	1.1	<0.20	0.070	0.34	58	0.13	68

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)

Bold text indicates concentration is greater than the screening criteria for agricultural soils

Comparison with screening values holds no regulatory significance

Table B-9. Fish Habitat Development Area Elemental Content Statistical Summary

Group	Statistical Parameter	Ag	Al	As	B	Be	Cd	Co	Cr	Cu	Fe	Hg
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
All Future Fish Habitat Development Area Samples	Count	40	40	40	40	40	40	40	40	40	40	40
	Count Greater than 10x Crustal	0	0	8	0	0	0	0	0	0	0	0
	Percent > 10x Crustal	0%	0%	20%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	0.020	3000	1.5	10	0.16	0.040	17	13	24	42900	0.0050
	10th Percentile	0.029	3800	3.0	10	0.30	0.059	18	17	32	48330	0.0050
	Median	0.050	7400	5.5	10	0.40	0.080	23	26	49	54050	0.0050
	Average	0.082	9208	10	13	0.40	0.088	24	30	50	56113	0.0073
	Standard Deviation	0.081	5313	11	4.3	0.083	0.037	5.6	13	16	7992	0.0054
	90th Percentile	0.17	16160	24	19	0.51	0.12	28	45	71	68430	0.012
	Maximum	0.37	21700	57	24	0.54	0.22	44	70	104	79600	0.036

Table B-9. Fish Habitat Development Area Elemental Content Statistical Summary

Group	Statistical Parameter	Mo	Ni	P	Pb	Sb	Se	Tl	U	V	W	Zn
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
All Future Fish Habitat Development Area Samples	Count	40	40	40	40	40	40	40	40	40	40	40
	Count Greater than 10x Crustal	0	0	0	0	5	0	0	0	0	0	0
	Percent > 10x Crustal	0%	0%	0%	0%	13%	0%	0%	0%	0%	0%	0%
	Minimum	0.22	7.9	642	1.4	0.070	0.20	0.050	0.14	28	0.050	40
	10th Percentile	0.40	9.3	882	1.9	0.16	0.20	0.070	0.17	42	0.070	46
	Median	0.61	21	1201	2.6	0.34	0.20	0.095	0.33	60	0.14	74
	Average	0.76	22	1185	3.5	1.0	0.21	0.12	0.32	58	1.0	77
	Standard Deviation	0.46	14	219	3.0	1.5	0.037	0.073	0.088	12	2.4	26
	90th Percentile	1.4	33	1391	5.0	3.2	0.20	0.18	0.42	71	3.2	103
	Maximum	2.1	85	1674	20	7.3	0.40	0.48	0.49	82	12	174

Table B-10. Fish Habitat Development Area Shake Flask Extraction Results

Parameter	Lithology	Drillhole	Year	From	To	Dry Sample Weight	DI Water Volume	pH	EC	Acidity	Alkalinity	Sulphate	P (CVAF)
						g	mL	pH units	mV	mg CaCO ₃ /L	mg CaCO ₃ /L	mg/L	mg/L
<i>PWQO Screening Value</i>						-	-	6.5-8.5	-	-	-	-	-
<i>Interim PWQO Screening Value</i>						-	-	-	-	-	-	-	0.02
A00356301	And_Tuf_Metaseds	BH-Q-18	2021	4	5	250	750	7.4	73	2.8	34	6.5	0.0050
A00356303	VBX	BH-Q-18	2021	14	15	250	750	7.7	63	2.9	40	<0.50	0.0050
A00356304	POR	BH-Q-18	2021	20	21	250	750	7.6	80	3.2	41	6.5	0.0050
A00356321	And_Tuf_Metaseds	BH-Q-18	2022	11	12	250	750	7.8	56	2.0	36	5.0	0.0064
A00356307	And_Tuf_Metaseds	BH-Q-19	2021	9	10	250	750	7.6	80	3.1	41	6.7	0.0052
A00356309	And_Tuf_Metaseds	BH-Q-19	2021	20	21	250	750	7.8	70	2.7	43	<0.50	0.0050
A00356322	And_Tuf_Metaseds	BH-Q-19	2023	12	13	250	750	7.8	69	2.3	37	<6.5	0.0071
A00356310	And_Tuf_Metaseds	BH-Q-20	2021	6	7	250	750	7.3	69	4.3	37	1.3	0.0050
A00356312	And_Tuf_Metaseds	BH-Q-20	2021	14	15	250	750	7.5	62	4.8	32	1.5	0.0050
A00356314	And_Tuf_Metaseds	BH-Q-20	2021	24	25	250	750	7.6	65	4.3	37	2.1	0.0050
A00356316	And_Tuf_Metaseds	BH-Q-21	2021	9	10	250	750	7.5	54	5.0	29	1.7	0.0050
A00356318	And_Tuf_Metaseds	BH-Q-21	2021	19	20	250	750	7.6	49	4.5	26	3.0	0.0050
A00356319	And_Tuf_Metaseds	BH-Q-21	2021	24	25	250	750	7.6	56	4.3	30	1.4	0.0050
A00356328	And_Tuf_Metaseds	BH-Q-22	2024	8	9	250	750	8.8	57	<0.50	30	5.2	0.0054
A00356330	And_Tuf_Metaseds	BH-Q-22	2025	12	13	250	750	8.7	69	<0.50	32	8.3	0.0050
A00356332	And_Tuf_Metaseds	BH-Q-22	2026	18	19	250	750	8.1	65	1.3	37	6.0	0.0060
A00356334	And_Tuf_Metaseds	BH-Q-23	2027	8	9	250	750	8.8	53	<0.50	32	5.2	0.0051
A00356336	And_Tuf_Metaseds	BH-Q-23	2028	13	14	250	750	8.7	52	<0.50	30	0.50	0.0050
A00356338	And_Tuf_Metaseds	BH-Q-23	2029	18	19	250	750	8.8	44	<0.50	27	5.0	0.0050
A00356340	And_Tuf_Metaseds	BH-Q-23	2030	25	26	250	750	8.9	54	<0.50	31	0.50	0.0050

Red highlight indicates value is greater than the PWQO screening value.

Bold italic text indicates value is greater than the interim PWQO screening value.

Comparison with screening values holds no regulatory significance

Table B-10. Fish Habitat Development Area Shake Flask Extraction Results

Parameter	Lithology	Drillhole	Year	From	To	Al	Sb	As	Be	B	Cd	Cr	Co	Cu	Fe	Pb
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PWQO Screening Value						-	-	0.1	0.011	-	0.0002	0.001	0.0009	0.005	0.3	0.005
Interim PWQO Screening Value						0.075	0.02	0.005	-	0.2	0.0001	-	-	0.005	-	0.001
A00356301	And. Tuf. Metaseds	BH-Q-18	2021	4	5	0.23	0.0023	0.0024	0.00026	<0.050	<0.000010	<0.00050	<0.00010	0.00072	<0.010	0.0010
A00356303	VBX	BH-Q-18	2021	14	15	0.38	0.0017	0.0017	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	0.00052	<0.010	<0.00020
A00356304	POR	BH-Q-18	2021	20	21	0.20	0.0010	0.0016	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020
A00356321	And. Tuf. Metaseds	BH-Q-18	2022	11	12	0.33	0.0016	0.00089	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00045	<0.010	<0.00020
A00356307	And. Tuf. Metaseds	BH-Q-19	2021	9	10	0.19	0.00054	0.00064	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	0.00054	<0.010	<0.00020
A00356309	And. Tuf. Metaseds	BH-Q-19	2021	20	21	0.25	0.00038	0.00080	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020
A00356322	And. Tuf. Metaseds	BH-Q-19	2023	12	13	0.16	0.00052	0.00058	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00070	<0.010	<0.00020
A00356310	And. Tuf. Metaseds	BH-Q-20	2021	6	7	0.22	0.00034	<0.00050	<0.00010	<0.050	0.000045	<0.00050	<0.00010	<0.00040	<0.010	0.00036
A00356312	And. Tuf. Metaseds	BH-Q-20	2021	14	15	0.16	<0.00020	0.00056	<0.00010	<0.050	0.00019	<0.00050	<0.00010	<0.00040	<0.010	0.0011
A00356314	And. Tuf. Metaseds	BH-Q-20	2021	24	25	0.24	0.00066	0.00058	<0.00010	<0.050	0.00049	<0.00050	<0.00010	<0.00040	<0.010	0.00070
A00356316	And. Tuf. Metaseds	BH-Q-21	2021	9	10	0.17	0.00022	0.00080	<0.00010	<0.050	0.00012	<0.00050	<0.00010	<0.00040	<0.010	0.00050
A00356318	And. Tuf. Metaseds	BH-Q-21	2021	19	20	0.20	<0.00020	<0.00050	<0.00010	<0.050	0.000086	<0.00050	<0.00010	<0.00040	<0.010	0.00020
A00356319	And. Tuf. Metaseds	BH-Q-21	2021	24	25	0.23	0.00029	0.0016	<0.00010	<0.050	0.000084	<0.00050	<0.00010	<0.00040	<0.010	0.00033
A00356328	And. Tuf. Metaseds	BH-Q-22	2024	8	9	0.29	0.0038	0.00074	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	0.00026
A00356330	And. Tuf. Metaseds	BH-Q-22	2025	12	13	0.24	0.0047	<0.00050	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	0.00024
A00356332	And. Tuf. Metaseds	BH-Q-22	2026	18	19	0.30	0.0022	<0.00050	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	0.00072	<0.010	<0.00020
A00356334	And. Tuf. Metaseds	BH-Q-23	2027	8	9	0.37	0.0017	<0.00050	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020
A00356336	And. Tuf. Metaseds	BH-Q-23	2028	13	14	0.38	0.0012	0.00062	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020
A00356338	And. Tuf. Metaseds	BH-Q-23	2029	18	19	0.32	0.0011	0.00075	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020
A00356340	And. Tuf. Metaseds	BH-Q-23	2030	25	26	0.38	0.0015	0.00070	<0.00010	<0.050	<0.000010	<0.00050	<0.00010	<0.00040	<0.010	<0.00020

Red highlight indicates value is greater than the PWQO screening value.

Bold italic text indicates value is greater than the interim PWQO screening value.

Comparison with screening values holds no regulatory significance

Table B-10. Fish Habitat Development Area Shake Flask Extraction Results

Parameter	Lithology	Drillhole	Year	From	To	Hg	Mo	Ni	Se	Ag	Tl	W	U	V	Zn
						mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
<i>PWQO Screening Value</i>						<i>0.0002</i>	-	<i>0.025</i>	<i>0.1</i>	<i>0.0001</i>	-	-	-	-	<i>0.03</i>
<i>Interim PWQO Screening Value</i>						-	<i>0.04</i>	-	-	-	<i>0.0003</i>	<i>0.03</i>	<i>0.005</i>	<i>0.006</i>	<i>0.02</i>
A00356301	And_Tuf_Metaseds	BH-Q-18	2021	4	5	<0.000010	0.00065	0.00052	<0.00050	<0.000050	0.00020	0.0014	0.00027	<0.0010	<0.0040
A00356303	VBX	BH-Q-18	2021	14	15	<0.000010	0.0028	<0.0004	<0.00050	<0.000050	<0.000020	<0.0010	<0.000020	<0.0010	<0.0040
A00356304	POR	BH-Q-18	2021	20	21	<0.000010	0.00038	0.00091	<0.00050	<0.000050	<0.000020	<0.0010	0.000076	<0.0010	<0.0040
A00356321	And_Tuf_Metaseds	BH-Q-18	2022	11	12	<0.000010	0.00034	<0.00040	<0.00050	<0.000050	<0.000034	<0.0010	<0.000020	<0.0010	<0.0040
A00356307	And_Tuf_Metaseds	BH-Q-19	2021	9	10	<0.000010	0.00032	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.000077	<0.0010	<0.0040
A00356309	And_Tuf_Metaseds	BH-Q-19	2021	20	21	<0.000010	0.00034	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	<0.000020	<0.0010	<0.0040
A00356322	And_Tuf_Metaseds	BH-Q-19	2023	12	13	<0.000010	0.00026	<0.00040	<0.00050	<0.000050	<0.000020	<0.0041	<0.000045	<0.0010	<0.0040
A00356310	And_Tuf_Metaseds	BH-Q-20	2021	6	7	<0.000010	0.00037	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.000097	<0.0010	<0.0040
A00356312	And_Tuf_Metaseds	BH-Q-20	2021	14	15	<0.000010	0.00059	<0.00040	<0.00050	<0.000050	<0.000020	0.0021	0.00014	<0.0010	0.0077
A00356314	And_Tuf_Metaseds	BH-Q-20	2021	24	25	<0.000010	0.00035	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.000083	<0.0010	0.0061
A00356316	And_Tuf_Metaseds	BH-Q-21	2021	9	10	<0.000010	0.00016	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.000098	<0.0010	0.0053
A00356318	And_Tuf_Metaseds	BH-Q-21	2021	19	20	<0.000010	0.00013	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.000055	<0.0010	<0.0040
A00356319	And_Tuf_Metaseds	BH-Q-21	2021	24	25	<0.000010	0.00011	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	0.00015	<0.0010	<0.0040
A00356328	And_Tuf_Metaseds	BH-Q-22	2024	8	9	<0.000010	0.0033	<0.00040	0.00057	<0.000050	0.000025	<0.0010	0.000023	<0.0010	<0.0040
A00356330	And_Tuf_Metaseds	BH-Q-22	2025	12	13	<0.000010	0.00057	<0.00040	<0.00050	<0.000050	<0.000020	0.0015	0.000045	<0.0010	<0.0040
A00356332	And_Tuf_Metaseds	BH-Q-22	2026	18	19	<0.000010	0.0013	<0.00040	<0.00050	<0.000050	0.000026	<0.0010	0.00022	<0.0010	<0.0040
A00356334	And_Tuf_Metaseds	BH-Q-23	2027	8	9	<0.000010	0.00031	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	<0.000020	<0.0010	<0.0040
A00356336	And_Tuf_Metaseds	BH-Q-23	2028	13	14	<0.000010	0.00069	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	<0.000020	<0.0010	<0.0040
A00356338	And_Tuf_Metaseds	BH-Q-23	2029	18	19	<0.000010	0.00024	<0.00040	<0.00050	<0.000050	<0.000020	<0.0010	<0.000020	<0.0010	<0.0040
A00356340	And_Tuf_Metaseds	BH-Q-23	2030	25	26	<0.000010	0.00049	<0.00040	<0.00050	<0.000050	0.000021	<0.0010	<0.000020	<0.0010	<0.0040

Red highlight indicates value is greater than the PWQO screening value.

Bold italic text indicates value is greater than the interim PWQO screening value.

Comparison with screening values holds no regulatory significance

Table B-11. Lake Sediment Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Ag ppm	Al ppm	As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm	Ca ppm	Cd ppm	Ce ppm	Co ppm
10x Crustal Abundance Screening Value										0.75	--	18	0.04	100	4250	30	0.085	--	1.5	--	250
L-15-S-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.22	17000	27	--	9.7	210	0.61	<1.0	7500	0.91	--	16
L-15-S-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.22	17000	12	--	9.2	130	0.52	<1.0	7200	0.72	--	13
L-15-S-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.20	18000	20	--	11	170	0.57	<1.0	7500	0.94	--	15
L-15-S-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.21	18000	23	--	10	200	0.60	<1.0	7400	0.91	--	17
L-15-S-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.22	17000	21	--	9.3	180	0.55	<1.0	7200	0.79	--	15
L-15-D-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.29	18000	8.0	--	9.3	110	0.49	<1.0	7400	1.1	--	11
L-15-D-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.29	18000	8.2	--	9.4	120	0.51	<1.0	7400	1.0	--	11
L-15-D-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.25	18000	8.3	--	<9.1	110	0.50	<1.0	7200	1.0	--	11
L-15-D-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.25	17000	8.4	--	9.3	120	0.50	<1.0	7300	1.0	--	11
L-15-D-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	17000	11	--	9.0	140	0.56	<1.0	6900	0.82	--	16
S-9-U502-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	4400	1.3	--	10	120	0.20	<1.0	31000	0.27	--	3.9
S-9-U501-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	8200	1.1	--	<5.0	120	0.20	<1.0	19000	0.22	--	6.5
S-9-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	9600	1.5	--	<5.0	120	0.20	<1.0	17000	0.25	--	12
WB02-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	8300	4.5	--	<5.0	59	0.25	<1.0	6300	0.19	--	6.7
WB05-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		0.20	9700	3.0	--	<5.0	81	0.26	<1.0	17000	0.22	--	7.8
WB06-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	7400	5.0	--	<5.0	37	0.20	<1.0	9300	<0.10	--	7.9
WB16-IN-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		<0.20	9500	7.5	--	<5.0	87	0.23	<1.0	15000	0.19	--	12

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-11. Lake Sediment Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Cr ppm	Cs ppm	Cu ppm
10x Crustal Abundance Screening Value										1020	--	600
L-15-S-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		42	--	47
L-15-S-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		43	--	47
L-15-S-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		43	--	46
L-15-S-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		44	--	49
L-15-S-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		41	--	46
L-15-D-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		42	--	53
L-15-D-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		40	--	51
L-15-D-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		41	--	51
L-15-D-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		41	--	51
L-15-D-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		42	--	47
S-9-US02-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		8.1	--	16
S-9-US01-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		22	--	17
S-9-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		26	--	22
WB02-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		20	--	<17
WB05-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		28	--	35
WB06-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		23	--	11
WB16-IN-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		27	--	16

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Table B-11. Lake Sediment Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Fe	Ga	Ge	Hf	Hg	In	K	La	Li	Mg	Mn	Mo
										ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
10x Crustal Abundance Screening Value										--	190	15	--	0.85	--	--	390	200	--	9500	12
L-15-S-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		52000	--	--	--	0.14	--	1900	--	--	7700	3000	1.8
L-15-S-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		37000	--	--	--	0.13	--	1900	--	--	7600	1000	1.4
L-15-S-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		46000	--	--	--	0.15	--	1900	--	--	7900	1900	1.4
L-15-S-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		51000	--	--	--	0.14	--	1900	--	--	7900	2700	1.8
L-15-S-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		48000	--	--	--	0.15	--	1900	--	--	7500	2300	1.5
L-15-D-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		29000	--	--	--	0.18	--	2000	--	--	7500	470	1.2
L-15-D-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		29000	--	--	--	0.16	--	1900	--	--	7200	490	1.2
L-15-D-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		28000	--	--	--	0.18	--	1900	--	--	7200	470	1.2
L-15-D-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		30000	--	--	--	0.19	--	2000	--	--	7200	520	1.2
L-15-D-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		36000	--	--	--	0.14	--	1900	--	--	7400	960	1.6
S-9-U502-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		7000	--	--	--	0.11	--	200	--	--	1500	210	0.76
S-9-U501-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		10000	--	--	--	0.092	--	430	--	--	2700	450	<0.50
S-9-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		17000	--	--	--	0.11	--	510	--	--	4100	950	<0.50
WB02-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		15000	--	--	--	0.064	--	740	--	--	3100	430	<0.50
WB05-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		16000	--	--	--	0.15	--	560	--	--	3600	660	<0.50
WB06-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		21000	--	--	--	<0.050	--	670	--	--	4200	680	<0.50
WB16-IN-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		26000	--	--	--	0.083	--	1000	--	--	4500	1500	<0.65

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Table B-11. Lake Sediment Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Na ppm	Nb ppm	Ni ppm	P ppm	Pb ppm	Rb ppm	Re ppm	S ppm	Sb ppm	Sc ppm	Se ppm	Sn ppm
10x Crustal Abundance Screening Value										--	--	840	10500	140	--	--	3500	2	220	0.5	23
L-15-S-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		190	--	36	2600	33	--	--	--	0.53	--	2.2	1.0
L-15-S-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		160	--	33	1700	29	--	--	--	0.51	--	1.8	1.0
L-15-S-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		170	--	35	2300	32	--	--	--	0.55	--	2.0	<1.0
L-15-S-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		170	--	37	2600	33	--	--	--	0.41	--	2.1	<1.0
L-15-S-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		160	--	33	2500	31	--	--	--	0.52	--	2.1	<1.0
L-15-D-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		200	--	32	1400	35	--	--	--	0.41	--	2.0	1.0
L-15-D-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		180	--	31	1500	35	--	--	--	0.49	--	2.0	1.0
L-15-D-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		180	--	31	1400	34	--	--	--	0.48	--	2.0	1.1
L-15-D-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		180	--	31	1800	35	--	--	--	0.40	--	2.0	<1.0
L-15-D-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		170	--	34	1500	36	--	--	--	0.61	--	2.0	<1.0
S-9-U502-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		60	--	6.8	600	5.9	--	--	--	0.20	--	0.90	<1.0
S-9-U501-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		66	--	12	770	5.3	--	--	--	0.20	--	0.72	<1.0
S-9-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		91	--	17	870	5.2	--	--	--	0.20	--	0.91	<1.0
WB02-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		110	--	16	690	7.3	--	--	--	0.25	--	<0.50	<1.0
WB05-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		70	--	15	820	7.7	--	--	--	0.20	--	0.89	<1.0
WB06-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		94	--	14	750	4.5	--	--	--	0.20	--	<0.50	<1.0
WB16-IN-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		91	--	18	930	6.6	--	--	--	0.20	--	0.55	<1.0

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Comparison with screening values holds no regulatory significance

Table B-11. Lake Sediment Elemental Content Results

Sample ID	Data Source	Metals Digest Method	Classification	Lithology	Zone	Drillhole	Year	From	To	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
										ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
10x Crustal Abundance Screening Value										3700	--	--	96	--	8.5	27	1200	12.5	330	700	1650
L-15-S-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		26	--	--	--	450	0.41	2.4	63	--	--	120	--
L-15-S-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		24	--	--	--	450	0.36	2.1	57	--	--	110	--
L-15-S-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		25	--	--	--	520	0.40	2.2	63	--	--	120	--
L-15-S-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		26	--	--	--	510	0.42	2.2	65	--	--	120	--
L-15-S-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		25	--	--	--	430	0.35	2.2	59	--	--	110	--
L-15-D-01	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		25	--	--	--	510	0.32	2.0	53	--	--	110	--
L-15-D-02	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		25	--	--	--	500	0.35	2.0	51	--	--	100	--
L-15-D-03	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		23	--	--	--	500	0.33	1.9	51	--	--	100	--
L-15-D-04	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		24	--	--	--	490	0.31	1.9	51	--	--	110	--
L-15-D-05	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		24	--	--	--	530	0.38	2.1	64	--	--	120	--
S-9-U502-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		120	--	--	--	--	0.066	1.9	12	--	--	19	--
S-9-U501-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		35	--	--	--	--	0.086	0.79	20	--	--	30	--
S-9-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		34	--	--	--	--	0.11	1.9	28	--	--	42	--
WB02-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		29	--	--	--	--	0.16	0.63	22	--	--	80	--
WB05-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		29	--	--	--	--	0.14	1.1	26	--	--	46	--
WB06-OUT-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		15	--	--	--	--	0.096	0.52	26	--	--	35	--
WB16-IN-S	Wood (2021b)	Strong Acid Leach	Waste	Lake Sediment	Lake	n/a	2019	Surface Sample		24	--	--	--	--	0.14	0.79	32	--	--	45	--

Red highlight indicates concentration is greater than ten times the crustal abundance concentration from Price (1997)
Comparison with screening values holds no regulatory significance

Table B-12. Lake Sediment Elemental Content Statistical Summary

Group	Statistical Parameter	Ag	Al	As	B	Be	Cd	Co	Cr	Cu	Fe	Hg
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance		0.75	--	18	100	30	1.5	250	1020	600	--	0.85
All Lake Sediment Samples	Count	17	17	17	17	17	17	17	17	17	17	17
	Count Greater than 10x Crustal Abundance	0	0	4	0	0	0	0	0	0	0	0
	Percent > 10x Crustal Abundance	0%	0%	24%	0%	0%	0%	0%	0%	0%	0%	0%
	Minimum	0.20	4400	1.1	5.0	0.20	0.10	3.9	8.1	11	7000	0.050
	10th Percentile	0.20	7880	1.4	5.0	0.20	0.19	6.6	21	16	13000	0.075
	Median	0.20	17000	8.2	9.2	0.50	0.79	11	41	46	29000	0.14
	Average	0.22	13653	10	8.0	0.41	0.63	11	34	37	29294	0.13
	Standard Deviation	0.030	4746	7.8	2.2	0.16	0.36	3.7	11	15	13727	0.039
	90th Percentile	0.27	18000	22	10	0.58	1.0	16	43	51	49200	0.18
	Maximum	0.29	18000	27	11	0.61	1.1	17	44	53	52000	0.19

Table B-12. Lake Sediment Elemental Content Statistical Summary

Group	Statistical Parameter	Mo	Ni	P	Pb	Sb	Se	Tl	U	V	W	Zn
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
10x Crustal Abundance		12	840	10500	140	2	0.5	8.5	27	1200	12.5	700
All Lake Sediment Samples	Count	17	17	17	17	17	17	17	17	17	0	17
	Count Greater than 10x Crustal Abundance	0	0	0	0	0	15	0	0	0	--	0
	Percent > 10x Crustal Abundance	0%	0%	0%	0%	0%	88%	0%	0%	0%	--	0%
	Minimum	0.50	6.8	600	4.5	0.20	0.50	0.066	0.52	12	--	19
	10th Percentile	0.50	13	726	5.3	0.20	0.53	0.092	0.73	21	--	33
	Median	1.2	31	1400	31	0.41	2.0	0.32	1.9	51	--	100
	Average	1.1	25	1455	22	0.37	1.5	0.26	1.7	44	--	83
	Standard Deviation	0.47	9.8	683	14	0.15	0.66	0.13	0.62	18	--	37
	90th Percentile	1.7	35	2540	35	0.54	2.1	0.40	2.2	63	--	120
Maximum	1.8	37	2600	36	0.61	2.2	0.42	2.4	65	--	120	