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BURNCO AGGREGATE PROJECT

Baseline Data Collection and Results

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REPORT



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Acronyms and Abbreviations

ALS	ALS Environmental
BC	British Columbia
BURNCO	BURNCO Rock Products Ltd.
CVAS	Cold vapour atomic fluorescence spectrophotometry
DF	Difference factor
DQO	Data quality objective
HR-ICPMS	High resolution inductively coupled plasma mass spectrometry
i.e.	<i>id est</i> (that is)
ICPOES	Inductively coupled plasma – optical emissions spectrophotometry
QA/QC	Quality Assurance/Quality Control
RPD	Relative percent difference
The Proposed Project	BURNCO Aggregate Project
US EPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator

Units of Measure

%	Percent
cm	Centimetre
g	Gram
km	Kilometre
masl	Metres above sea level



1.0 INTRODUCTION

This appendix provides a summary of the baseline data collected in support of the human health assessment conducted as part of the overall Environmental Assessment Certificate Application/Environmental Impact Statement (hereafter referred to as the EA) for the Proposed BURNCO Aggregate Project (the Proposed Project). A baseline sampling program that included both terrestrial and aquatic components was conducted for the Proposed Project. The terrestrial component (soil and vegetation sampling) was conducted in August 2013, and the aquatic component (crab, mussel, and fish tissue sampling) was conducted in December 2013. The Proposed Project site is located within the Lower McNab Valley, situated on the north shore of Howe Sound, BC, approximately 22 km west-southwest of Squamish, BC, and 35 km northwest of Vancouver, BC. The Proposed Project proponent is BURNCO Rock Products Ltd. (BURNCO).

The purpose of the sampling program was to provide site-specific chemistry results that will be used to determine baseline exposure concentrations and calculate site-specific bioaccumulation factors as a part of the public health assessment. The terrestrial baseline sampling program targeted the collection of berries and sea asparagus, along with co-located soil samples. The aquatic baseline sampling program targeted the collection of crab and mussels in the marine environment (Howe Sound) and fish in the freshwater environment (McNab Creek). Berries, sea asparagus, crab, mussels and freshwater fish were targeted for collection as these country foods are consumed by people in the area.

The terrestrial and aquatic baseline sampling programs was developed to be consistent with a country foods guidance document prepared for Health Canada (Golder Associates Ltd. [Golder] 2005).

2.0 FIELD SAMPLING AND ANALYSIS METHODS

2.1 Terrestrial Baseline Sampling

The terrestrial baseline sampling program targeted the collection of edible berries and sea asparagus as they are consumed by people in the area. Sea asparagus could not be located around the site, therefore only berries were collected with co-located soil samples.

Nine (9) sites located within and outside of the Proposed Project area were selected for berry and soil sampling. Sampling was conducted August 19, 2013 by Golder field personnel and sampling locations were accessed on foot.



BASELINE DATA COLLECTION AND RESULTS

The locations of the soil and vegetation samples are provided in Table 9.1-A-1 and shown on Figures 9.1-A-1 and 2.

Table 9.1-A-1: Soil and Berry Sample Locations

Location	Coordinates (UTM 10)		Elevation (masl)
	Easting	Northing	
13-BRP-01	472157	5490389	6
13-BRP-02	472128	5490444	7
13-BRP-03	471940	5490529	9
13-BRP-04	471955	5490753	9
13-BRP-05	471951	5490397	7
13-BRP-06	472454	5490133	1
13-BRP-07	471762	5490244	7
13-BRP-08	471518	5491144	20
13-BRP-09	471284	5489725	27

Notes:

masl = metres above sea level; UTM = Universal Transverse Mercator.



BASELINE DATA COLLECTION AND RESULTS

Table 9.1-A-2 summarizes the sample IDs, the type of berries and soil collected, and the surrounding growing environment.

Table 9.1-A-2: Terrestrial Baseline Sampling Program Summary Table

Berry	Soil	Berry Sample Type	Soil Depth (cm)	Soil Type	Growing Environment (%)				
					Trees	Shrubs	Grass	Moss/Lichen	Rock/Bare Ground
13-BRP-B-01	13-BRP-S-01	<i>Vaccinium parvifolium</i> (red huckleberry)	9	fine, silt, organic	30	50	0	20	0
13-BRP-B-02	13-BRP-S-02	<i>Rubus armeniacus</i> (himalayan blackberry)	15	fine, silt, organic	20	80	0	0	0
13-BRP-B-03	13-BRP-S-03	<i>Rubus armeniacus</i> (himalayan blackberry)	7	fine, silt, organic	10	80	10	0	0
13-BRP-B-04	13-BRP-S-04	<i>Vaccinium parvifolium</i> (red huckleberry)	10	fine, silt, organic	30	55	5	5	5
13-BRP-B-05	13-BRP-S-05	<i>Rubus armeniacus</i> (himalayan blackberry)	12	loam, rocky	20	60	5	5	10
13-BRP-B-06	13-BRP-S-06	<i>Rubus armeniacus</i> (himalayan blackberry)	8	fine, loam	30	40	30	0	0
13-BRP-B-07	13-BRP-S-07	<i>Rubus ursinus</i> (trailing blackberry)	8	coarse gravel, sand	10	70	10	0	10
13-BRP-B-08	13-BRP-S-08	<i>Rubus armeniacus</i> (himalayan blackberry)	11	-	20	40	0	0	40
13-BRP-B-09	13-BRP-S-09	<i>Rubus armeniacus</i> (himalayan blackberry)	9	sand, gravel	20	70	10	0	0

Notes:

“-“ = not recorded; % = percent; cm = centimeter.



2.1.1 Sampling Methods

At each collection site, the following sampling methods were undertaken:

- Photographs were taken including: the surrounding area and ground cover; soil in the sample jar, the berry sample in the collection bag; and, the entire plant including leaves and branches (see photographs 1 to 10, Attachment 1);
- Surficial soil samples (i.e., top 15 centimetres (cm)) were collected at the base of the plant sampled for berries using a stainless steel trowel, removing the top layer of litter/fibre and humus. The collected soils were placed in a stainless steel bowl and mixed to create a homogenous sample. The soil sample was then placed in clean, labelled glass jars. Samples were stored on ice in a cooler and transported to the lab for analysis;
- Berry samples were handpicked while wearing nitrile gloves, avoiding the inclusion of any soil or debris. Berry samples were placed in clean, labelled ziploc bags, and were placed on ice in coolers until they could be frozen. Frozen vegetation samples were then submitted to the lab for analysis; and
- A plant and soil identification form was conducted at each site and included date, sample #, photo numbers, location, growing environment, vegetation type, soil type, soil depth, and field notes.

The following quality assurance measures were taken:

- Cross-contamination during sample collection was minimized by wearing disposable nitrile gloves, which were changed between each sample. Stainless steel equipment (i.e., trowels) were washed with decontamination soap and rinsed with distilled water between sample collection sites.
- One duplicate berry and soil sample was collected for quality assurance/quality control (QA/QC).
- Samples were placed on ice in a cooler immediately upon collection and were kept cool until submitted to the lab for analysis.
- One duplicate berry and one duplicate soil sample were collected 13-BRP-B-07 to assess reproducibility (see Section 3.2).



2.1.2 Analysis Methods

Soil and berry samples were submitted to ALS Environmental (ALS; Burnaby, BC) for chemistry analysis.

Berry samples (9 plus 1 duplicate sample) were analyzed for:

- Moisture (analysis carried out gravimetrically by drying the sample); and
- Metals in tissue (high resolution inductively coupled plasma mass spectrometry [HR-ICPMS] and inductively coupled plasma – optical emissions spectrophotometry [ICPOES]) including silver (HR-ICPMS) and mercury (cold vapour atomic fluorescence spectrophotometry [CVAFS]).

Soil samples (9 plus 1 duplicate sample) were analyzed for:

- pH (1:2 H₂O extract); and
- Metals in soil (HR-ICPMS), including mercury (CVAFS).

Metals concentrations in soil samples are screened against applicable environmental quality guidelines and are presented in Appendix 9.1-C. There are no standards or guidelines available against which to screen concentrations of metals in berry tissue, however, screening of soil is considered to be a conservative surrogate for expected changes in concentrations of chemicals of potential concern in berries as uptake from soil into berries is considered a primary fate and transport pathway.

2.2 Aquatic Baseline Sampling

The aquatic baseline sampling program targeted collection of Dungeness crab, Pacific Blue mussels and salmon as these items are consumed by people in the area.

Crab and mussel samples were collected from two (2) locations in Howe Sound; along the foreshore of the Proposed Project area and at Camp Potlatch, a reference location located on the north shoreline of Howe Sound approximately 7 km east of the Proposed Project area. The three (3) mussel samples collected at the Proposed Project area on August 17, 2012 were obtained while diving. The two (2) mussel samples collected at Camp Potlatch on September 12, 2012 were obtained during a foot survey. The remainder of the samples were collected on December 5, 2013 by Golder field personnel and sampling locations were accessed by boat.

Four (4) locations on McNab Creek were selected for fish sampling. Sampling was conducted on December 9 2013 by Golder field personnel and sampling locations were accessed on foot. A single fish was caught by angling at one of the four locations where collection was attempted.



BASELINE DATA COLLECTION AND RESULTS

The locations of the crab, mussel and fish sampling are provided in Table 9.1-A-3 and shown on Figure 9.1-A-1, 9.1-A-2 and 9.1-A-3.

Table 9.1-A-3: Crab, Mussel and Fish Sample Locations

Location	Sample ID	Coordinates (UTM 10)	
		Easting	Northing
Camp Potlatch			
Crab Trap #1	CP-CRAB-TS 1 to 7	477266	5491971
Crab Trap #2		477091	5491940
Mussel Site (beach) ¹	CP-MUSSEL-TS 1 to 8	477094	5492048
		477019	5492071
Mussel Site #2 (Tox R1) ²	BMREF1-T	477396	5492107
Mussel Site #3 (Tox R2) ²	BMREF2-T	477452	5491274
Foreshore of the Proposed Project area			
Crab Trap	MCNAB-CRAB-TS 1 to 10	472172	5489579
Mussel Site #1 (beach)	MCNAB-MUSSEL-TS 1A and 1B	471332	5489391
Mussel Site #2 (piling)	MCNAB-MUSSEL-TS 5	471744	5489712
Mussel Site #3 (piling)	MCNAB-MUSSEL-TS 6	471635	5489678
Mussel Site #4 (piling)	MCNAB-MUSSEL-TS 7 and 10	471492	5489624
Mussel Site #5 (piling)	MCNAB-MUSSEL-TS 8 and 9	471386	5489596
Mussel Site #6 (Tox 1) ²	MCM1	471513	5489684
Mussel Site #7 (Tox 2) ²	MCM2	471419	5489643
Mussel Site #8 (Tox 3) ²	MCM3	471610	5489704
McNab Creek			
Fish Site #1	No fish caught	471359	5492849
Fish Site #2	ONCL	471429	5492772
Fish Site #3	No fish caught	471591	5491747
Fish Site #4	No fish caught	472112	5490989

Notes:

¹ Coordinates presented represent the start and endpoints of a stretch of beach from which mussel samples were collected.

² Approximate sample location.

ONCL = *O. clarkii clarkii* (Coastal Cut-throat trout); UTM = Universal Transverse Mercator



2.2.1 Sampling Methods

Crab were collected by placing baited crab traps at the sampling locations for 24-48 hours and then retrieving them. Fish carcasses were used as bait. A separate cooler was labeled for each of the Sites (i.e., a total of 2 coolers) and crab were transferred to the appropriate cooler. Ice in each of the coolers was used to slow movement of the crabs for transport. The crab were put into the freezer immediately upon submission to the laboratory.

Mussel samples were collected from exposed rocks or pilings along the foreshore area at both the Proposed Project area site (samples labelled "McNab Creek") (13 samples) and Camp Potlatch (10 samples). Each sample consisted of approximately five mussels that were transferred to labeled plastic collection bags and placed on ice in coolers until submission to the laboratory. A duplicate mussel sample was collected at each of the two areas (Camp Potlatch and McNab Creek). The duplicate was a separate sample of mussels collected from the same rock or piling as the original sample.

Fish sampling was conducted using a combination of gill nets and angling. The fish was transferred to a labelled plastic collection bag and placed on ice in a cooler until submission to the laboratory. Species, length, weight, sex (if possible), life stage (if possible), and external condition was recorded.

2.2.2 Analysis Methods

Crab, mussel and fish samples were submitted to ALS for chemical analysis. The lab attempted to extract the hepatopancreas from each of the crabs by dissection; however, due to degradation from the freeze and thaw process, the hepatopancreas could not be confidently extracted. For this reason, all internal organs were extracted and composited for analysis. A separate sample of muscle tissue was also extracted. Mussels were shucked at the lab; the tissue was extracted from each mussel in a sample and was composited before analysis.

Crab, mussel and fish tissue samples were analyzed for:

- Moisture (analysis carried out gravimetrically by drying the sample); and
- Metals in tissue (HR-ICPMS and ICPOES) including silver (HR-ICPMS) and mercury (CVAFS).

Metal concentrations in tissue samples are screened against applicable environmental quality guidelines and are presented in Attachment 1 of Appendix 9.1-C.



2.3 Quality Assurance/Quality Control

2.3.1 Field

For field QA/QC purposes, duplicate sample of berries, soil and mussels were collected with approximately 10% frequency. The duplicate site was selected randomly and based on sample medium availability during the field program. Sample duplicates are collected to provide an indication of natural sample variation and the reproducibility results from within the same sample plot or plant. For soil, the duplicate was a sample that was blended and divided into two equal portions, each of which is analyzed in exactly the same manner. For berries and mussels, it involved collection of a separate sample of the same tissue type from the same location.

The results of the duplicate pair are often expressed as relative percent difference (RPD). The RPD is an indicator of sample heterogeneity. Lower RPD numbers indicate that samples are homogeneous. The formula for computing the RPD is given below:

$$RPD = \frac{abs (Sample - Dup)}{Mean} \times 100$$

Where:

- RPD is the relative percent difference;
- abs(Sample - Dup) is the absolute value of the original sample minus the duplicate sample; and
- Mean is the average of the two samples.

RPDs were not calculated if concentrations were not detected in one or both of the two replicate samples.

When detected concentrations are less than five times the detection limit, a difference factor (DF) is calculated according to the following formula:

$$DF = \frac{abs (Sample - Dup)}{Method\ Detection\ Limit}$$

Where:

- DF is the difference factor;
- abs(Sample - Dup) is the absolute value of the original sample minus the duplicate sample; and
- Method Detection Limit is the smaller of the two detection limits.



Variability in sample results can be introduced in the field and laboratory. Generally, higher variability is accepted from field duplicates compared to laboratory duplicates. Field duplicate variability of 30% to 50% (RPD) is common for soil, and could also be expected for berries and mussels, although because the berry and mussel duplicates are not true “split” samples, variability could also be higher. Laboratory duplicate variability is generally less than field duplicate variability since fewer steps are involved and RPDs of 20% may be expected.

A QA/QC RPD criterion of 35% and DF criterion of 2.0 was applied to identify soil, berry and mussel duplicates with higher than expected variability. Duplicate samples that have larger variation indicate high sample variability, which can be attributed to sampling technique or natural sample heterogeneity.

Specific procedures were followed in the field during the collection of duplicate soil samples (i.e., sample homogenization) to reduce the effect of sampling techniques on variability. For berries and mussels, duplicate samples were separate berries or mussels collected at the same location.

2.3.2 Laboratory

In addition to field duplicate QA/QC procedures, analyses conducted by ALS followed appropriate laboratory QA/QC procedures. Each analytical method and standard sample has control limits that must be met to verify the results for both the standard materials and the unknown samples submitted. The results of the laboratory QA were reported with each laboratory data summary report. Laboratory QA/QC included analysis of method blanks, laboratory control samples, matrix spikes, and reference materials to assess precision and accuracy of analyses. All laboratory duplicate samples were analyzed for the full suite of analytes listed in Sections 2.1.2 and 2.2.2. Laboratory data QA/QC reports were reviewed upon receipt to confirm that the laboratory data quality objectives (DQOs) had been met and that the appropriate QA/QC information had been reported.

3.0 RESULTS

3.1 Analytical Results

3.1.1 Soil

Laboratory analytical results for the soil samples are presented in Attachment 2 and analytical results are presented in Table 9.1-A-4 at the end of this section.

Tin was the only metal not detected in any soil sample. The following metals were detected in one or more samples of soil with a detection frequency of 10 to 80%: beryllium, bismuth, lithium, selenium, silver, and thallium. The remaining metals were detected at frequencies higher than 80%.

Baseline soil concentrations have also been screened against applicable soil screening values for informational purposes and are presented in Table 1 of Attachment 1 of Appendix 9.1-C.



3.1.2 Berries

Laboratory analytical results for the berry samples are attached to this Appendix and results are presented in Table 9.1-A-5.

The following metals were detected in one or more samples of berries with a detection frequency of 10 to 80%: arsenic, cadmium, chromium, cobalt, lead, and mercury. Metals that were not detected in any of the berry samples collected included antimony, beryllium, bismuth, gallium, lithium, rhenium, selenium, silver, sodium, tellurium, thallium, thorium, uranium, vanadium, yttrium, and zirconium. The remaining metals were detected at frequencies higher than 80%.

3.1.3 Crab

Laboratory analytical results for crab muscle and organ tissue samples are attached to this Appendix and results are presented in Table 9.1-A-6.

Metals that were not detected in any of the crab samples analyzed included beryllium, rhenium, tellurium, and zirconium. The following metals were detected in one or more samples of crab with a detection frequency of 3 to 80%: antimony, bismuth, chromium, gallium, lead, thallium, thorium, tin, vanadium, and yttrium. The remaining metals were detected at frequencies higher than 80%.

3.1.4 Mussel

Laboratory analytical results for mussel samples are attached to this Appendix and results are presented in Table 9.1-A-7.

The following metals were detected in one or more samples of mussels with a detection frequency of 6 to 77%: antimony, beryllium, thallium, tin, and zirconium. Bismuth, rhenium and tellurium were not detected in any of the mussel samples analyzed. Polycyclic aromatic hydrocarbons were not detected in the samples analyzed.

3.1.5 Fish

Laboratory analytical results for a cutthroat trout sample are attached to this appendix and results are presented in Table 9.1-A-8.

Metals not detected in the fish sample included beryllium, bismuth, boron, gallium, lithium, rhenium, tellurium, thorium, tin, uranium, yttrium, and zirconium. The remaining metals were detected in the fish sample.



3.2 Quality Assurance/Quality Control Results

3.2.1 Field

3.2.1.1 *Soil Duplicate Quality Assurance/Quality Control*

Duplicate soil samples were collected at 13-BRP-S-07 for metals. The results for the duplicate soil samples for metal analysis are shown in Table 9.1-A-9. RPDs of all metal parameters were below the guideline of 35%, except for uranium (47%), and DFs of all applicable metal parameters were below the guideline of 2. This suggests general similarity between the soil duplicates at this location.

3.2.1.2 *Berry Duplicate Quality Assurance/Quality Control*

The QA/QC duplicate samples results for metal concentrations in berries collected at 13-BRP-B-07 are presented in Table 9.1-A-10. RPDs and DFs of all the metal parameters analyzed were below the guidelines of 35% and 2, respectively and this suggests there is little degree of metals heterogeneity in berries at this location.

3.2.1.3 *Mussel Duplicate Quality Assurance/Quality Control*

The QA/QC duplicate samples results for metal concentrations in mussel samples collected at CP MUSSEL-TS-1 of Camp Potlatch and MCNAB MUSSEL-TS-1 of the Proposed Project area foreshore are presented in Table 9.1-A-11. RPDs were greater than 35% for moisture, barium, calcium, cesium, iron, lead, manganese, strontium, and vanadium at CP MUSSEL-TS-1 and for chromium, cobalt, lead, molybdenum, uranium, and vanadium at MCNAB MUSSEL-TS-1. DFs were greater than 2 for gallium and tin at CP MUSSEL-TS-1. RPDs and DFs for the other metals analyzed were below the respective acceptance limit of 35% and 2.

These duplicate results suggest there is some degree of metals heterogeneity in the mussels at both the Proposed Project site and Camp Potlatch (the reference site). The samples were not split and therefore high sample heterogeneity is expected.

3.2.2 Laboratory

ALS laboratory reported no QA/QC issues with the soil, berry or crab data. For the fish data, ALS reported exceedances of the DQO for calcium and mercury in the method blank. Sample results were at least 5-times greater than the blank result and are considered reliable. For the mussel data, ALS reported laboratory duplicate results outside of the ALS DQO for several metals (aluminum, barium, cesium, chromium, cobalt, gallium, iron, lead, lithium, manganese, nickel, thorium, uranium, vanadium and yttrium) due to sample heterogeneity. Variability is expected with composite tissue samples due to differences in age and life history of the individual mussels. During laboratory analysis, homogenization of the sample may also not be 'complete', such that subsampling for analysis will result in additional variability in the results.



4.0 CONCLUSIONS

The purpose of the baseline sampling program was to determine the baseline concentrations of metals in vegetation, soil, fish and shellfish within the Proposed Project area. The review of the methods, results, detection limits and QA/QC did identify some variability issues with laboratory and field duplicates. However, because the data will be pooled and central tendency values calculated, and the variability within samples was random (i.e., had no systematic bias); the data are considered suitable for inclusion in the human health assessment.

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5.0 REFERENCES

Golder (Golder Associated Ltd). 2005. Guidance for Including Country Foods in Human Health Assessments for Federal Contaminated Sites. HECS-SEP-BC/Yukon/05/06-01. Submitted to Health Canada. Burnaby, BC.

**Table 9.1-A-4: Soil Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Sample ID		13-BRP-S-01	13-BRP-S-02	13-BRP-S-03	13-BRP-S-04	13-BRP-S-05	13-BRP-S-06	13-BRP-S-07	13-BRP-S-07D	13-BRP-S-08	13-BRP-S-09
Date Sampled		19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13	19-Aug-13
ALS Sample ID	Units	L1350062-11	L1350062-12	L1350062-13	L1350062-14	L1350062-15	L1350062-16	L1350062-17	L1350062-20	L1350062-18	L1350062-19
QA/QC								FDA	FD		
Physical Tests											
pH	pH units	4.40	4.05	3.63	3.65	5.01	4.83	5.02	5.21	5.23	5.85
Metals											
Aluminum (Al)	mg/kg	16,600	11,400	3420	3910	17,000	44,000	12,600	12,400	18,400	17,000
Antimony (Sb)	mg/kg	0.53	0.53	0.80	1.14	0.34	0.17	0.25	0.28	0.32	0.34
Arsenic (As)	mg/kg	13.40	12.7	4.77	8.64	15.70	5.39	9.49	8.22	11.5	10.8
Barium (Ba)	mg/kg	70.5	57.6	34.0	67.1	75.9	217	76.4	71.4	78.0	61.2
Beryllium (Be)	mg/kg	<0.20	<0.20	<0.20	<0.20	<0.20	0.36	<0.20	<0.20	<0.20	0.21
Bismuth (Bi)	mg/kg	0.21	0.23	<0.20	0.29	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Cadmium (Cd)	mg/kg	0.137	0.157	0.186	0.133	0.101	0.090	0.051	0.058	0.073	0.106
Calcium (Ca)	mg/kg	3080	4130	2990	4040	2870	3530	2740	2780	3190	3070
Chromium (Cr)	mg/kg	21.9	16.6	5.14	7.50	25.6	23.1	29.0	34.4	30.2	35.8
Cobalt (Co)	mg/kg	6.32	4.31	1.01	1.40	9.76	11.1	6.44	6.64	8.19	7.46
Copper (Cu)	mg/kg	24.7	23.2	21.8	14.4	26.5	40.2	26.9	26.7	23.8	24.3
Iron (Fe)	mg/kg	17,900	13,100	3640	4870	19,100	28,000	18,200	19,300	22,000	22,100
Lead (Pb)	mg/kg	36.1	37.2	58.0	46.1	5.20	6.61	3.00	2.47	3.40	5.44
Lithium (Li)	mg/kg	10.8	7.1	<5.0	<5.0	16.1	14.9	15.2	15.9	14.7	16.9
Magnesium (Mg)	mg/kg	4180	3040	638	1130	4800	8110	4730	4820	5310	5910
Manganese (Mn)	mg/kg	202	178	119	36.8	297	497	228	221	316	391
Mercury (Hg)	mg/kg	0.105	0.329	0.380	0.336	0.0336	0.0230	0.0085	0.0058	0.0264	0.0117
Molybdenum (Mo)	mg/kg	0.88	0.79	0.63	0.59	0.62	0.72	0.51	<0.50	0.75	0.82
Nickel (Ni)	mg/kg	11.8	12.0	7.51	7.23	18.7	17.6	19.7	19.4	16.3	23.1
Phosphorus (P)	mg/kg	325	592	853	713	483	704	406	404	364	408
Potassium (K)	mg/kg	890	960	500	340	1850	2320	1710	1690	1490	1760
Selenium (Se)	mg/kg	0.42	0.40	0.40	0.53	<0.20	<0.20	<0.20	<0.20	0.27	<0.20
Silver (Ag)	mg/kg	<0.10	<0.10	<0.10	0.14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Sodium (Na)	mg/kg	590	400	180	180	390	300	370	400	490	510
Strontium (Sr)	mg/kg	24.6	25.7	17.5	29.2	19.3	40.8	20.6	17.6	22.3	22.7
Thallium (Tl)	mg/kg	0.103	0.094	<0.050	<0.050	0.117	0.110	0.101	0.095	0.131	0.104
Tin (Sn)	mg/kg	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Titanium (Ti)	mg/kg	827	498	133	188	666	1750	528	574	711	573
Uranium (U)	mg/kg	1.98	1.39	0.254	0.209	3.14	0.803	1.24	2.01	2.14	0.502
Vanadium (V)	mg/kg	53.7	36.2	12.1	16.5	49.9	73.5	50.6	63.2	70.0	56.6
Zinc (Zn)	mg/kg	35.5	38.3	34.7	33.2	44.5	63.1	41.5	41.2	43.8	57.6

Notes:

< = below laboratory detection limit; FD = Field duplicate; FDA = Field duplicate available; mg/kg = milligram per kilogram; QA/QC = Quality assurance/quality control.

**Table 9.1-A-6: Fish Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Location	Camp Potlatch													
	CP CRAB-TS-1	CP CRAB-TS-2	CP CRAB-TS-3	CP CRAB-TS-4	CP CRAB-TS-5	CP CRAB-TS-6	CP CRAB-TS-7	CP CRAB-TS-1	CP CRAB-TS-2	CP CRAB-TS-3	CP CRAB-TS-4	CP CRAB-TS-5	CP CRAB-TS-6	CP CRAB-TS-7
Sample ID														
Date Sampled	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13	5-Dec-13
Matrix	Muscle Tissue							Organ Tissue						
Physical Tests														
% Moisture	81.5	84.2	84.2	81.0	82.0	82.9	81.8	75.0	86.7	90.5	88.1	88.9	91.3	86.6
Metals														
Aluminum (Al)	0.98	1.11	3.52	3.71	2.15	1.71	4.23	2.21	3.86	8.77	1.85	13.9	3.35	2.51
Antimony (Sb)	<0.0020	<0.0020	0.0023	<0.0020	0.0028	<0.0020	<0.0020	0.0024	0.0061	<0.0020	<0.0020	0.0040	0.0029	0.0026
Arsenic (As)	3.76	3.10	9.48	3.50	11.60	1.66	4.84	3.81	1.72	5.45	1.82	6.31	1.06	3.15
Barium (Ba)	0.015	0.021	0.047	0.071	0.048	0.023	0.038	0.047	0.129	0.108	0.144	0.840	0.071	0.135
Beryllium (Be)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Bismuth (Bi)	<0.0020	<0.0020	0.0044	<0.0020	0.0064	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020
Boron (B)	0.71	0.88	1.38	1.12	1.37	0.96	1.13	1.11	1.06	1.47	0.88	1.54	0.93	1.16
Cadmium (Cd)	0.0205	0.0180	0.0139	0.0086	0.0144	0.0101	0.0131	0.1980	0.1540	0.0952	0.0486	0.1030	0.0720	0.1140
Calcium (Ca)	642	840	682	927	764	645	450	3000	2870	819	1480	3570	889	1800
Cesium (Cs)	0.0033	0.0030	0.0044	0.0034	0.0032	0.0032	0.0037	0.0035	0.0029	0.0031	0.0026	0.0035	0.0047	0.0054
Chromium (Cr)	0.015	0.014	<0.010	0.011	<0.010	0.012	<0.010	0.018	0.106	0.012	0.015	0.065	0.072	0.011
Cobalt (Co)	0.0215	0.0315	0.0408	0.0368	0.0518	0.0337	0.0431	0.0644	0.0734	0.0855	0.0557	0.106	0.0884	0.107
Copper (Cu)	5.18	5.43	11.0	8.33	12.3	9.06	12.5	6.86	4.85	58.1	10.8	33.1	16.6	30.1
Gallium (Ga)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	0.0068	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Iron (Fe)	3.41	3.62	7.18	5.01	4.90	3.53	6.71	19.2	37.3	19.4	11.2	19.4	12.3	17.3
Lead (Pb)	<0.0040	<0.0040	0.0062	0.0048	<0.0040	0.0045	<0.0040	0.0222	0.0658	0.123	0.0229	0.0821	0.0233	0.0416
Lithium (Li)	0.098	0.112	0.096	0.073	0.076	0.111	0.051	0.130	0.095	0.146	0.089	0.134	0.133	0.089
Magnesium (Mg)	448	543	532	376	445	498	398	745	927	735	509	830	1080	821
Manganese (Mn)	0.0923	0.111	0.123	0.195	0.180	0.106	0.120	0.520	0.883	0.695	0.523	2.57	0.437	1.16
Mercury (Hg)	0.0340	0.0298	0.151	0.0544	0.296	0.0248	0.0988	0.0160	0.0533	0.0861	0.0236	0.117	0.0250	0.0518
Molybdenum (Mo)	0.0122	0.0240	0.0124	0.0147	0.0116	0.0390	0.0104	0.0735	0.466	0.0641	0.0601	0.0529	0.437	0.0654
Nickel (Ni)	0.017	0.015	0.025	0.012	0.015	0.018	0.011	0.050	0.055	0.027	0.017	0.080	0.062	0.024
Phosphorus (P)	1040	868	999	1270	1120	943	1380	1080	1550	1020	858	1960	1280	2300
Potassium (K)	2550	2300	2550	2670	2530	2330	2670	1800	1050	1330	1260	1550	1420	1950
Rhenium (Re)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Rubidium (Rb)	0.820	0.750	0.701	0.719	0.667	0.790	0.660	0.731	0.480	0.660	0.517	0.605	0.845	0.846
Selenium (Se)	0.288	0.298	0.326	0.331	0.427	0.271	0.330	0.649	0.618	0.559	0.340	0.532	0.399	0.769
Silver (Ag)	0.0357	0.0555	0.0569	0.0539	0.0772	0.0843	0.100	0.0799	0.136	0.877	0.107	0.414	0.217	0.566
Sodium (Na)	4490	5560	4810	3980	5090	3350	5550	4510	5610	4220	5420	5550	5240	5240
Strontium (Sr)	7.28	14.5	8.10	11.2	9.01	8.29	4.30	23.9	36.6	13.7	20.3	64.0	13.2	31.5
Tellurium (Te)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Thallium (Tl)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00066	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Thorium (Th)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Tin (Sn)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.058	0.089	0.084	0.049	0.043	0.054	<0.020
Uranium (U)	0.00080	0.00094	0.00840	0.00098	0.00054	0.00055	0.00049	0.0350	0.0898	0.00743	0.0169	0.0256	0.0218	0.0201
Vanadium (V)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.029	0.066	0.043	0.026	0.074	0.108	0.037
Yttrium (Y)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0030	0.0148	0.0042	<0.0020	0.0108	0.0033	0.0036
Zinc (Zn)	26.1	26.4	29.8	28.4	30.5	27.0	32.3	10.1	10.9	10.3	8.21	10.7	9.23	23.2
Zirconium (Zr)	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040

Notes:
Units in mg/kg wet weight unless otherwise specified.
< = below laboratory detection limit.

**Table 9.1-A-6: Fish Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Location Sample ID Date Sampled Matrix	Burnco Project Site																			
	Muscle Tissue										Organ Tissue									
	MCNAB - CRAB- TS-1 5-Dec-13	MCNAB - CRAB- TS-2 5-Dec-13	MCNAB - CRAB- TS-3 5-Dec-13	MCNAB - CRAB- TS-4 5-Dec-13	MCNAB - CRAB- TS-5 5-Dec-13	MCNAB - CRAB- TS-6 5-Dec-13	MCNAB - CRAB- TS-7 5-Dec-13	MCNAB - CRAB- TS-9 5-Dec-13	MCNAB - CRAB- TS-10 5-Dec-13	MCNAB - CRAB- TS-1 5-Dec-13	MCNAB - CRAB- TS-2 5-Dec-13	MCNAB - CRAB- TS-3 5-Dec-13	MCNAB - CRAB- TS-4 5-Dec-13	MCNAB - CRAB- TS-5 5-Dec-13	MCNAB - CRAB- TS-6 5-Dec-13	MCNAB - CRAB- TS-7 5-Dec-13	MCNAB - CRAB- TS-9 5-Dec-13	MCNAB - CRAB- TS-10 5-Dec-13		
Physical Tests																				
% Moisture	80.8	82.8	86.9	79.6	81.3	81.5	88.3	82.5	86.8	90.9	84.7	86.4	79.4	81.8	84.4	88.4	87.6	86.6		
Metals																				
Aluminum (Al)	1.55	1.80	1.88	1.40	1.11	2.32	2.02	3.73	1.87	0.67	2.68	0.89	5.85	0.99	1.66	1.68	0.73	1.40		
Antimony (Sb)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0028	<0.0020	0.0033	<0.0020	0.0033	0.0021	<0.0020	0.0048	0.0020	0.0025	<0.0020	0.0022	<0.0020		
Arsenic (As)	2.79	3.71	1.25	2.93	2.80	8.15	1.77	12.20	5.56	1.66	1.96	1.08	3.01	2.66	4.87	1.60	7.12	3.33		
Barium (Ba)	0.021	0.030	0.050	0.029	0.040	0.029	0.064	0.059	0.052	0.314	0.136	0.106	0.089	0.087	0.055	0.085	0.085	0.087		
Beryllium (Be)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		
Bismuth (Bi)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0046	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020		
Boron (B)	1.47	1.70	1.40	1.56	1.12	1.18	0.87	2.10	1.19	1.23	1.57	1.20	1.28	0.93	1.00	0.90	1.45	1.09		
Cadmium (Cd)	0.0097	0.0392	0.0121	0.0251	0.0343	0.0229	0.0521	0.0087	0.0384	0.0816	0.2210	0.0371	0.3040	0.3280	0.1540	0.1930	0.0503	0.1100		
Calcium (Ca)	655	908	815	989	1070	859	1960	895	1110	2160	3390	2750	3220	2410	1510	2420	1370	2980		
Cesium (Cs)	0.0038	0.0039	0.0031	0.0040	0.0038	0.0041	0.0027	0.0041	0.0031	0.0040	0.0034	0.0023	0.0046	0.0034	0.0032	0.0024	0.0031	0.0020		
Chromium (Cr)	0.018	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.024	0.010	<0.010	0.016	<0.010	<0.010	<0.010	<0.010	0.015		
Cobalt (Co)	0.0266	0.0271	0.0257	0.0333	0.0293	0.0387	0.0243	0.0570	0.0416	0.0427	0.0416	0.0380	0.0751	0.0648	0.0797	0.0349	0.0902	0.0639		
Copper (Cu)	10.1	8.68	8.88	8.37	7.57	13.4	4.99	10.5	10.7	15.4	9.55	12.2	17.8	13.5	35.9	6.62	33.5	18.3		
Gallium (Ga)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040		
Iron (Fe)	4.64	3.81	3.45	3.53	3.70	6.51	3.53	8.44	4.18	25.7	11.9	4.56	11.7	19.6	4.46	8.38	8.91	8.91		
Lead (Pb)	0.0043	<0.0040	<0.0040	<0.0040	<0.0040	0.0041	<0.0040	0.0057	<0.0040	0.0404	0.0273	0.0284	0.0426	0.0096	0.0230	0.0104	0.0141	0.0240		
Lithium (Li)	0.088	0.124	0.158	0.075	0.088	0.083	0.172	0.107	0.161	0.111	0.151	0.175	0.105	0.113	0.121	0.172	0.137	0.158		
Magnesium (Mg)	476	578	682	468	437	486	602	672	486	836	1010	889	679	523	584	783	649	707		
Manganese (Mn)	0.132	0.148	0.134	0.117	0.165	0.373	0.153	2.83	0.338	0.915	1.01	0.334	0.649	0.789	1.94	0.434	3.51	0.686		
Mercury (Hg)	0.0301	0.0493	0.0243	0.0355	0.0297	0.0627	0.0367	0.0932	0.0492	0.0288	0.0470	0.0103	0.0273	0.0160	0.0391	0.0205	0.0488	0.0262		
Molybdenum (Mo)	0.0154	0.0170	0.0140	0.0122	0.0127	0.0160	0.0124	0.0295	0.0135	0.0835	0.0537	0.0301	0.0670	0.0457	0.0453	0.0329	0.0345	0.0305		
Nickel (Ni)	0.017	0.015	0.022	0.025	0.013	0.017	0.014	0.020	0.016	0.025	0.028	0.024	0.032	0.021	0.017	0.017	0.022	0.029		
Phosphorus (P)	1020	873	698	1000	1050	996	719	919	700	1460	1580	849	1110	1310	949	958	1300	719		
Potassium (K)	2680	2490	1900	2830	2740	2640	1730	2500	1870	1270	1910	1590	2280	2100	1870	1360	1840	1440		
Rhenium (Re)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		
Rubidium (Rb)	0.732	0.803	0.729	0.815	0.796	0.713	0.649	0.750	0.693	0.607	0.632	0.539	0.832	0.724	0.596	0.544	0.563	0.443		
Selenium (Se)	0.284	0.377	0.251	0.331	0.314	0.273	0.229	0.415	0.286	0.375	0.603	0.291	0.548	0.526	0.522	0.345	0.521	0.374		
Silver (Ag)	0.102	0.0839	0.126	0.0860	0.0864	0.115	0.0697	0.145	0.136	0.192	0.194	0.144	0.229	0.290	0.384	0.0826	1.02	0.234		
Sodium (Na)	4410	5130	6520	3760	4300	4190	8600	4430	6650	4780	6200	7560	5370	5280	5330	7360	5700	7200		
Strontium (Sr)	7.38	15.5	21.2	11.9	14.4	10.2	25.5	11.0	23.5	41.7	51.5	51.1	32.2	29.7	18.6	31.0	20.6	38.1		
Tellurium (Te)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040		
Thallium (Tl)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040		
Thorium (Th)	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		
Tin (Sn)	<0.020	0.029	0.035	0.027	0.022	<0.020	0.040	0.065	0.026	0.031	0.122	0.121	0.067	0.102	0.062	0.121	0.111	0.108		
Uranium (U)	0.00062	0.00050	0.00045	0.00050	0.00051	0.00119	0.00098	0.00146	0.00261	0.0241	0.0243	0.00594	0.0232	0.0159	0.0268	0.0272	0.0183	0.0422		
Vanadium (V)	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.025	<0.020	0.023	<0.020	<0.020	0.054	0.024	0.028	0.023	0.025	0.029		
Yttrium (Y)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0039	<0.0020	<0.0020	0.0044	<0.0020	0.0028		
Zinc (Zn)	34.2	31.8	24.5	35.3	30.5	33.9	18.6	32.7	21.6	9.08	9.89	9.72	12.2	14.3	15.7	9.24	14.2	8.77		
Zirconium (Zr)	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040		

Notes:
Units in mg/kg wet weight unless otherwise specified.
< = below laboratory detection limit.

Table 9.1-A-7: Mussel Data
Public Health Assessment
Proposed Burnco Aggregate Project

Table with columns for Location, Sample ID, Date Sampled, Matrix QA/QC, and various chemical elements (Metals and Polycyclic Aromatic Hydrocarbons) measured at Camp Potlatch and Burnco Project Site.

Notes:
Units in mg/kg wet weight . unless otherwise specified

**Table 9.1-A-8: Fish Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Location	McNab Creek	
	ONCL	ONCL
Sample ID	9-Dec-13	9-Dec-13
Date Sampled	Tissue	Tissue
Matrix	mg/kg wwt	mg/kg dwt
Units		
Physical Tests		
% Moisture	76.2	76.2
Metals		
Aluminum (Al)	1.68	7.1
Antimony (Sb)	0.0047	0.020
Arsenic (As)	0.381	1.61
Barium (Ba)	0.058	0.244
Beryllium (Be)	<0.0020	<0.010
Bismuth (Bi)	<0.0020	<0.010
Boron (B)	<0.20	<1.0
Cadmium (Cd)	0.0083	0.035
Calcium (Ca)	1260	5300
Cesium (Cs)	0.0230	0.0968
Chromium (Cr)	0.259	1.09
Cobalt (Co)	0.0112	0.047
Copper (Cu)	1.62	6.83
Gallium (Ga)	<0.0040	<0.020
Iron (Fe)	15.0	63.1
Lead (Pb)	2.35	9.89
Lithium (Li)	<0.020	<0.10
Magnesium (Mg)	364	1530
Manganese (Mn)	0.335	1.41
Mercury (Hg)	0.099	0.418
Molybdenum (Mo)	0.0175	0.074
Nickel (Ni)	0.097	0.407
Phosphorus (P)	3190	13400
Potassium (K)	3850	16200
Rhenium (Re)	<0.0020	<0.010
Rubidium (Rb)	1.53	6.42
Selenium (Se)	0.489	2.060
Silver (Ag)	0.0018	0.0077
Sodium (Na)	509	2140
Strontium (Sr)	4.62	19.4
Tellurium (Te)	<0.0040	<0.020
Thallium (Tl)	0.00062	0.0026
Thorium (Th)	<0.0020	<0.010
Tin (Sn)	<0.020	<0.10
Uranium (U)	<0.00040	<0.0020
Vanadium (V)	0.104	0.44
Yttrium (Y)	<0.0020	<0.010
Zinc (Zn)	34.5	145.0
Zirconium (Zr)	<0.040	<0.20

Notes:

< = below laboratory detection limit; mg/kg wwt = milligrams per kilogram in wet weight;
mg/kg dwt = milligrams per kilogram in dry weight; ONCL= cutthroat trout.

**Table 9.1-A-9: QA/QC Results for Soil Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Sample Identification	13-BRP-S-07	13-BRP-S-07D	Method Detection Limit	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Date Sampled	19-Aug-13	19-Aug-13				
ALS Sample ID	L1350062-17	L1350062-20				
Matrix	Soil	Soil				
QA/QC	FDA	FD				
Physical Tests						
pH (1:2 soil:water)	5.02	5.21				
Metals						
Aluminum (Al)	12600	12400	50	12500	2%	-
Antimony (Sb)	0.25	0.28	0.10	0.265	-	0.3
Arsenic (As)	9.49	8.22	0.050	8.855	14%	-
Barium (Ba)	76.4	71.4	0.50	73.9	7%	-
Beryllium (Be)	<0.20	<0.20	0.20	-	-	-
Bismuth (Bi)	<0.20	<0.20	0.20	-	-	-
Cadmium (Cd)	0.051	0.058	0.050	0.0545	-	0.14
Calcium (Ca)	2740	2780	50	2760	1%	-
Chromium (Cr)	29.0	34.4	0.50	31.7	17%	-
Cobalt (Co)	6.44	6.64	0.10	6.54	3%	-
Copper (Cu)	26.9	26.7	0.50	26.8	1%	-
Iron (Fe)	18200	19300	50	18750	6%	-
Lead (Pb)	3.00	2.47	0.50	2.735	19%	-
Lithium (Li)	15.2	15.9	5.0	15.55	-	0.14
Magnesium (Mg)	4730	4820	20	4775	2%	-
Manganese (Mn)	228	221	1.0	224.5	3%	-
Mercury (Hg)	0.0085	0.0058	0.0050	0.00715	-	0.54
Molybdenum (Mo)	0.51	<0.50	0.50	-	-	-
Nickel (Ni)	19.7	19.4	0.50	19.55	2%	-
Phosphorus (P)	406	404	50	405	0%	-
Potassium (K)	1710	1690	100	1700	1%	-
Selenium (Se)	<0.20	<0.20	0.20	-	-	-
Silver (Ag)	<0.10	<0.10	0.10	-	-	-
Sodium (Na)	370	400	100	385	-	0.3
Strontium (Sr)	20.6	17.6	0.50	19.1	16%	-
Thallium (Tl)	0.101	0.095	0.050	0.098	-	0.12
Tin (Sn)	<2.0	<2.0	2.0	-	-	-
Titanium (Ti)	528	574	1.0	551	8%	-
Uranium (U)	1.24	2.01	0.050	1.625	47%	-
Vanadium (V)	50.6	63.2	0.20	56.9	22%	-
Zinc (Zn)	41.5	41.2	1.0	41.35	1%	-

Notes:

All concentrations in milligrams per kilogram (mg/kg), unless otherwise noted.

"-" = not calculated; < = below laboratory detection limit; % = percent; FD = Field duplicate; FDA = Field duplicate available; QA/QC = Quality assurance/quality control.

Mean = average of two values.

Relative percent difference (RPD) = absolute difference between two values divided by the mean of the two values. RPD is calculated when the concentrations is greater than five times the detection limit.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. Difference factor is calculated when the concentration is less than five times the detection limit.

Bold and red results indicate the RPD exceeds 35% or the DF exceeds 2.0.

**Table 9.1-A-10: QA/QC Results for Berry Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Sample ID	13-BRP-B-07	13-BRP-B-07D	Method	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Date Sampled	19-Aug-13	19-Aug-13	Detection Limit			
ALS Sample ID	L1350062-7	L1350062-10				
QA/QC	FDA	FD				
Physical Tests						
% Moisture	85.6	86.4	0.10	86	1%	-
Metals						
Aluminum	3.3	5.7	2.0	4.5	-	1.2
Antimony	<0.010	<0.010	0.010	-	-	-
Arsenic	0.024	0.02	0.020	0.02	-	0.2
Barium	11.6	11.6	0.050	11.6	0%	-
Beryllium	<0.010	<0.010	0.010	-	-	-
Bismuth	<0.010	<0.010	0.010	-	-	-
Boron	11.8	12.8	1.0	12.3	8%	-
Cadmium	0.013	0.014	0.010	0.014	-	0.1
Calcium	2140	2110	3.0	2125	1%	-
Cesium	0.349	0.406	0.0050	0.378	15%	-
Chromium	<0.050	0.062	0.050	-	-	-
Cobalt	0.219	0.25	0.020	0.23	13%	-
Copper	9.95	11.4	0.050	10.7	14%	-
Gallium	<0.020	<0.020	0.020	-	-	-
Iron	38.3	46	1.0	42.2	18%	-
Lead	<0.020	<0.020	0.020	-	-	-
Lithium	<0.10	<0.10	0.10	-	-	-
Magnesium	1190	1160	5.0	1175	3%	-
Manganese	370	393	0.020	382	6%	-
Mercury	<0.0050	<0.0050	0.0050	-	-	-
Molybdenum	0.736	0.788	0.020	0.762	7%	-
Nickel	3.36	3.97	0.050	3.67	17%	-
Phosphorus	1750	1800	20	1775	3%	-
Potassium	8770	9560	100	9165	9%	-
Rhenium	<0.010	<0.010	0.010	-	-	-
Rubidium	40.6	44.5	0.050	42.6	9%	-
Selenium	<0.10	<0.10	0.10	-	-	-
Silver	<0.0050	<0.0050	0.0050	-	-	-
Sodium	<100	<100	100	-	-	-
Strontium	14.6	14.6	0.050	14.6	0%	-
Tellurium	<0.020	<0.020	0.020	-	-	-
Thallium	<0.0020	<0.0020	0.0020	-	-	-
Thorium	<0.010	<0.010	0.010	-	-	-
Tin	0.15	0.19	0.10	0.17	-	0.4
Uranium	<0.0020	<0.0020	0.0020	-	-	-
Vanadium	<0.10	<0.10	0.10	-	-	-
Yttrium	<0.010	<0.010	0.010	-	-	-
Zinc	15.7	16.6	0.50	16.2	6%	-
Zirconium	<0.20	<0.20	0.20	-	-	-

Notes:

All concentrations in milligrams per kilogram (mg/kg), unless otherwise noted.

"-" = not calculated; < = below laboratory detection limit; % = percent; FD = Field duplicate; FDA = Field duplicate available; QA/QC = Quality assurance/quality control.

Mean = average of two values.

Relative percent difference (RPD) = absolute difference between two values divided by the mean of the two values. RPD is calculated when the concentrations is greater than five times the detection limit.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. Difference factor is calculated when the concentration is less than five times the detection limit.

Bold and red results indicate the RPD exceeds 20% or the DF exceeds 2.0.

**Table 9.1-A-11: QA/QC Results for Mussel Data
Public Health Assessment
Proposed Burnco Aggregate Project**

Location	Camp Potlach						Burnco Project Site					
	CP MUSSEL-TS-1A	CP MUSSEL-TS-1B	Method	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)	MCNAB-MUSSEL-TS-1A	MCNAB-MUSSEL-TS-1B	Method	Mean	Relative Percent Difference (RPD)	Difference Factor (DF)
Sample ID	5-Dec-13	5-Dec-13	Detection Limit				5-Dec-13	5-Dec-13	Detection Limit			
Date Sampled	Tissue	Tissue					Tissue	Tissue				
Matrix												
Physical Tests												
% Moisture	82.5	51.4	0.10	67.0	46%	-	65.3	82.2	0.1	73.8	23%	-
Metals												
Aluminum (Al)	49.4	69.6	0.40	59.5	34%	-	114	141	0.40	128	21%	-
Antimony (Sb)	0.0025	<0.0020	0.0020	-	-	-	0.0059	0.0081	0.0020	0.0070	-	1.1
Arsenic (As)	1.22	1.41	0.0040	1.32	14%	-	1.38	1.28	0.0040	1.33	8%	-
Barium (Ba)	0.316	0.953	0.010	0.635	100%	-	0.750	0.934	0.010	0.842	22%	-
Beryllium (Be)	<0.0020	<0.0020	0.0020	-	-	-	0.0021	0.0026	0.0020	0.0024	-	0.3
Bismuth (Bi)	<0.0020	<0.0020	0.0020	-	-	-	<0.0020	<0.0020	0.0020	-	-	-
Boron (B)	3.53	3.67	0.20	3.60	4%	-	3.91	4.53	0.20	4.22	15%	-
Cadmium (Cd)	0.428	0.355	0.0020	0.392	19%	-	0.405	0.416	0.0020	0.411	3%	-
Calcium (Ca)	571	3400	5.0	1986	142%	-	693	829	5.0	761	18%	-
Cesium (Cs)	0.0052	0.0118	0.0010	0.0085	78%	-	0.0093	0.0120	0.0010	0.0107	25%	-
Chromium (Cr)	0.070	0.090	0.010	0.080	25%	-	0.152	0.228	0.010	0.190	40%	-
Cobalt (Co)	0.0654	0.0780	0.0040	0.0717	18%	-	0.0859	0.126	0.0040	0.106	38%	-
Copper (Cu)	1.04	0.891	0.010	0.966	15%	-	1.33	1.44	0.010	1.39	8%	-
Gallium (Ga)	0.0113	0.0234	0.0040	0.0174	-	3.0	0.0272	0.0345	0.0040	0.0309	24%	-
Iron (Fe)	65.1	98.7	0.20	81.9	41%	-	120	167	0.20	144	33%	-
Lead (Pb)	0.0758	0.0518	0.0040	0.0638	38%	-	0.465	0.704	0.0040	0.585	41%	-
Lithium (Li)	0.164	0.208	0.020	0.186	24%	-	0.139	0.176	0.020	0.158	23%	-
Magnesium (Mg)	848	754	10	801	12%	-	780	848	10	814	8%	-
Manganese (Mn)	1.79	3.23	0.0040	2.51	57%	-	4.51	5.81	0.0040	5.16	25%	-
Mercury (Hg)	0.0085	0.0070	0.0010	0.0078	19%	-	0.0080	0.0106	0.0010	0.0093	28%	-
Molybdenum (Mo)	0.0876	0.106	0.0040	0.097	19%	-	0.101	0.329	0.0040	0.215	106%	-
Nickel (Ni)	0.141	0.138	0.010	0.140	2%	-	0.236	0.309	0.010	0.273	27%	-
Phosphorus (P)	1050	1080	50	1065	3%	-	1230	1200	50	1215	2%	-
Potassium (K)	1210	1330	200	1270	9%	-	1580	1400	200	1490	12%	-
Rhenium (Re)	<0.0020	<0.0020	0.0020	-	-	-	<0.0020	<0.0020	0.0020	-	-	-
Rubidium (Rb)	0.564	0.659	0.010	0.612	16%	-	0.723	0.690	0.010	0.707	5%	-
Selenium (Se)	0.327	0.431	0.020	0.379	27%	-	0.387	0.353	0.020	0.370	9%	-
Silver (Ag)	0.0052	0.0049	0.0010	0.0051	6%	-	0.0043	0.0043	0.0010	0.0043	-	0
Sodium (Na)	5720	4750	200	5235	19%	-	4850	5090	200	4970	5%	-
Strontium (Sr)	6.76	30.5	0.010	18.6	127%	-	7.20	8.56	0.010	7.88	17%	-
Tellurium (Te)	<0.0040	<0.0040	0.0040	-	-	-	<0.0040	<0.0040	0.0040	-	-	-
Thallium (Tl)	0.00163	0.00218	0.00040	0.00191	-	1.4	0.00342	0.00329	0.00040	0.00336	4%	-
Thorium (Th)	0.0050	0.0038	0.0020	0.0044	-	0.6	0.0142	0.0182	0.0020	0.0162	25%	-
Tin (Sn)	0.088	0.035	0.020	0.062	-	2.7	0.080	0.044	0.020	0.062	-	1.8
Uranium (U)	0.0333	0.0316	0.00040	0.0325	5%	-	0.0515	0.125	0.00040	0.088	83%	-
Vanadium (V)	0.229	0.371	0.020	0.300	47%	-	0.336	0.699	0.020	0.518	70%	-
Yttrium (Y)	0.0335	0.0252	0.0020	0.0294	28%	-	0.0550	0.0765	0.0020	0.0658	33%	-
Zinc (Zn)	10.2	9.89	0.10	10.05	3%	-	12.2	13.1	0.10	12.7	7%	-
Zirconium (Zr)	<0.040	<0.040	0.040	-	-	-	0.041	<0.040	0.040	-	-	-

Notes:

All concentrations in milligrams per kilogram (mg/kg), unless otherwise noted.

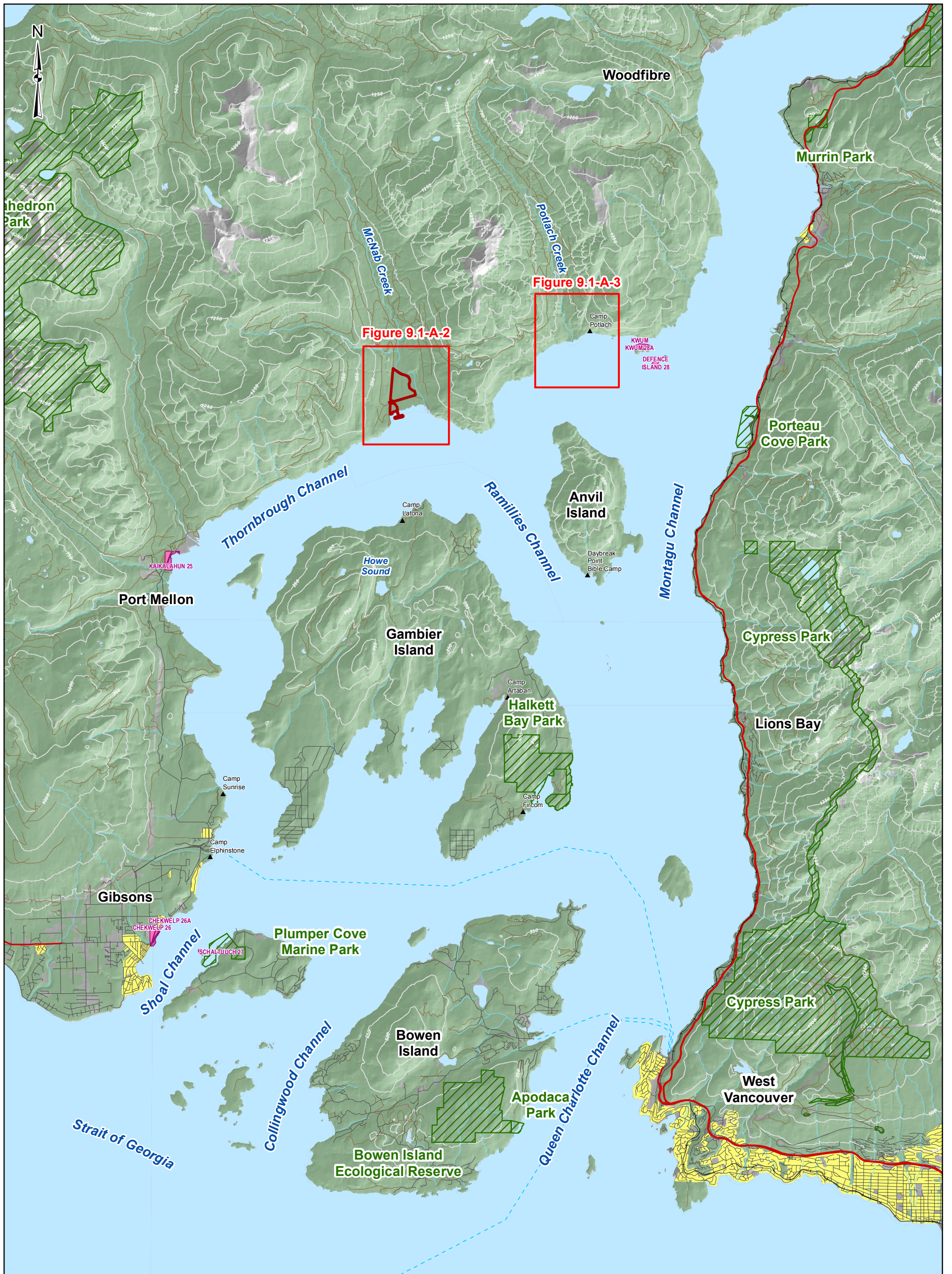
"-" = not calculated; < = below laboratory detection limit; % = percent.

Mean = average of two values.

Relative percent difference (RPD) = absolute difference between two values divided by the mean of the two values. RPD is calculated when the concentrations is greater than five times the detection limit.

Difference factor (DF) = absolute difference between two values divided by the method detection limit. Difference factor is calculated when the concentration is less than five times the detection limit.

Bold and red results indicate the RPD exceeds 35% or the DF exceeds 2.0.



LEGEND

Project Area	Highway
Park / Protected Area	Road
Vegetation	Resource Road
Indian Reserve	Railway
Residential Area	Ferry
Camp	Contour (250m)

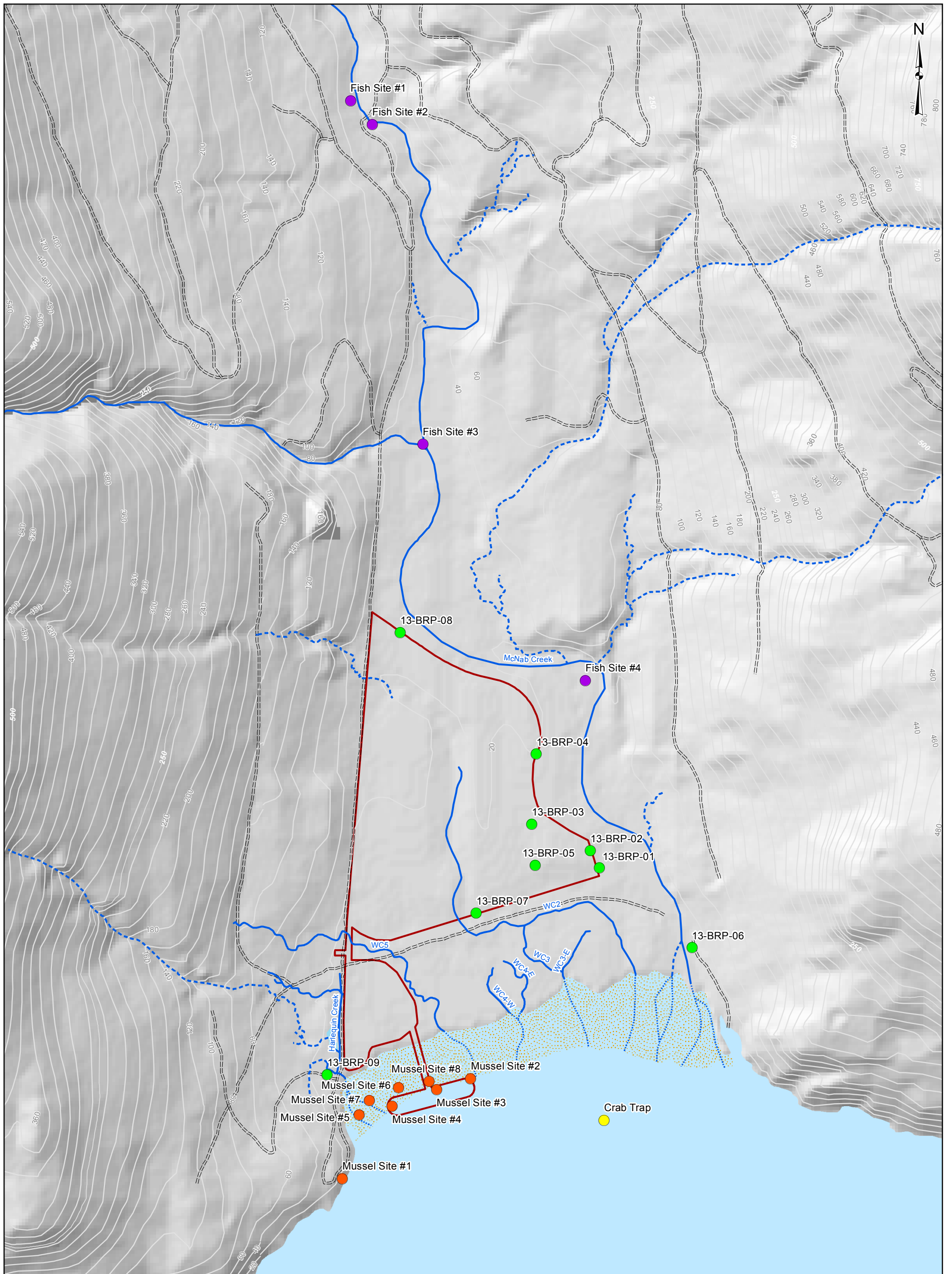
REFERENCE
 Parks/protected areas from BC LRDW. Contours and Indian reserves from Geobase. Base data from CanVec10.
 Projection: UTM Zone 10 Datum: NAD 83



PROJECT		BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.	
TITLE		SAMPLE LOCATIONS OVERVIEW	
PROJECT NO. 11-1422-0046		PHASE No. 2220	
DESIGN	AA	16 July 2014	SCALE AS SHOWN
GIS	DL	05 Apr. 2016	REV. 0
CHECK	VH	05 Apr. 2016	FIGURE 9.1-A-1
REVIEW	AW	05 Apr. 2016	



Path: X:\Project Data\BC\Burnco\Figures\WDX\Human Health\EA\BURNCO_PUBLIC_HEALTH_Figure_9_1-A-1_Sample_Locations_Overview.mxd



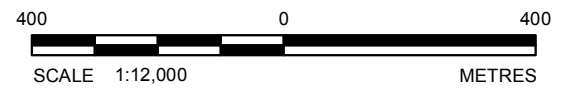
Path: X:\Project Data\BC\Burnco\Figures\MXD\Human Health\EA\BURNCO_PUBLIC_HEALTH_Figure_9_1-A-2_Soil_Berry_Fish_Shellfish_Sampling_Locations.mxd

LEGEND

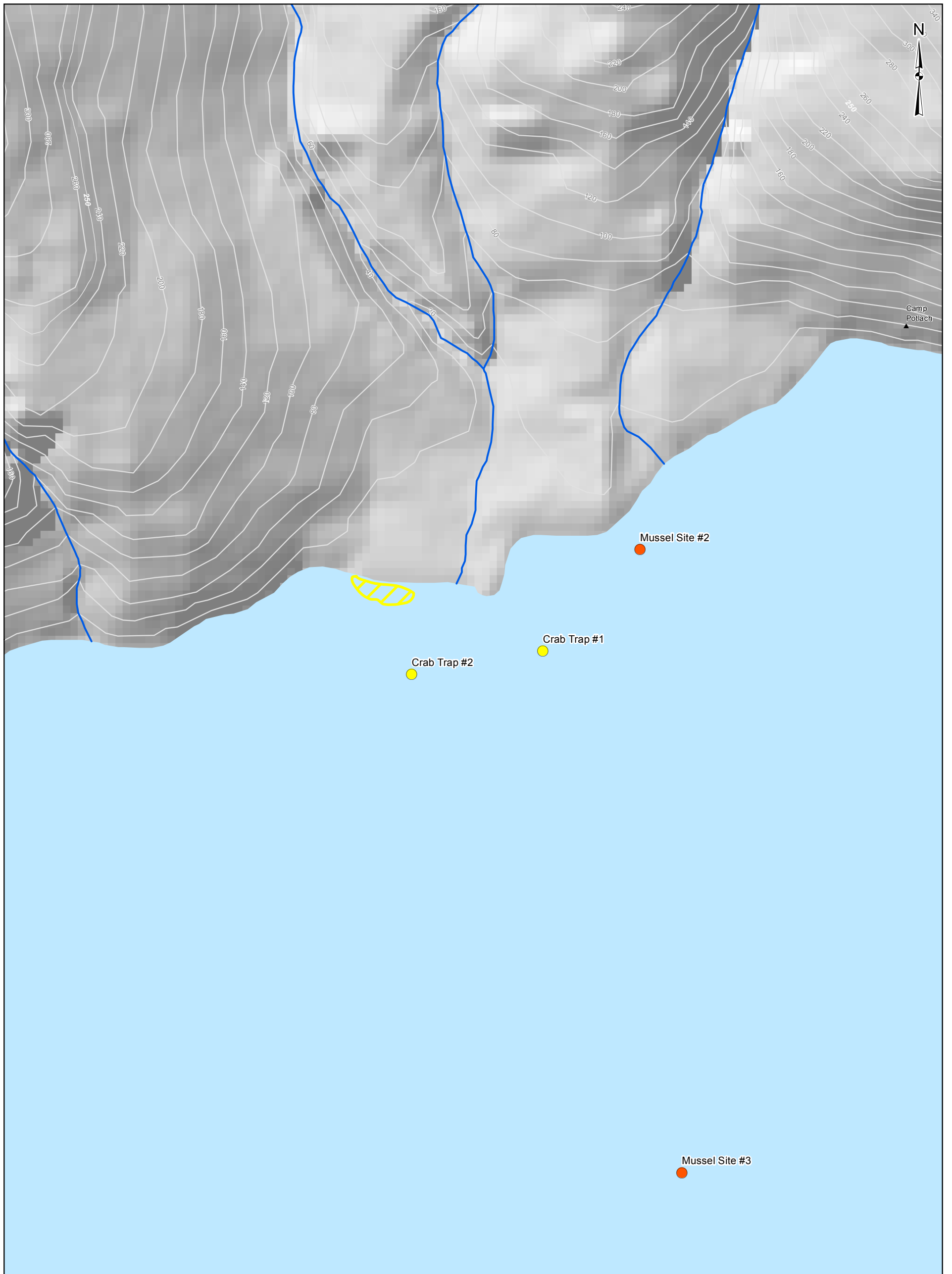
- Project Area
- Intertidal Zone
- Permanent / Perennial Watercourse
- Intermittent Watercourse
- Intertidal Watercourse
- Road (Existing)
- Contour (20m)
- Co-Located Soil and Berry Sample Location
- Crab Sample Location
- Fish Sample Location
- Mussel Sample Location

REFERENCE

Sample locations located through field observations by Golder Associates Ltd field crews. DEM from Geobase. Watercourses from the Province of British Columbia and field data. Base data from the Province of British Columbia. Contours from TRIM positional data. Projection: UTM Zone 10 Datum: NAD 83



PROJECT		BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.	
TITLE		SOIL, BERRY, FISH AND SHELLFISH SAMPLING LOCATIONS AT THE PROJECT SITE	
	PROJECT NO. 11-1422-0046		PHASE No. 2220
	DESIGN	AA	16 July 2014
	GIS	DL	05 Apr. 2016
	CHECK	VH	05 Apr. 2016
REVIEW	AW	05 Apr. 2016	FIGURE 9.1-A-2



LEGEND

- Shellfish Sampling Location
- Mussel Sample Location
- Mussel Collection Site #1
- Watercourse
- Contour (20m)
- ▲ Camp

REFERENCE

Shellfish sampling locations, mussel sample locations and mussel collection area located through field observations by Golder Associates Ltd field personnel. DEM from Geobase. Base data from the Province of British Columbia. Contours from TRIM positional data.
 Projection: UTM Zone 10 Datum: NAD 83



PROJECT			
BURNCO ROCK PRODUCTS LTD. BURNCO AGGREGATE PROJECT, HOWE SOUND, B.C.			
TITLE			
SHELLFISH SAMPLING LOCATIONS AT CAMP POTLATCH			
	PROJECT NO. 11-1422-0046		PHASE No. 2220
	DESIGN	AA	16 July 2014
	GIS	DL	05 Apr. 2016
	CHECK	VH	05 Apr. 2016
REVIEW	AW	05 Apr. 2016	FIGURE 9.1-A-3

Path: X:\Project Data\BC\MC\Nab\Figures\MXD\Human Health\EA\BURNCO_PUBLIC_HEALTH\Figure_9_1-A-3_Shellfish_Sampling_Locations_At_Camp_Potlatch.mxd



ATTACHMENT 1

Site Photographs

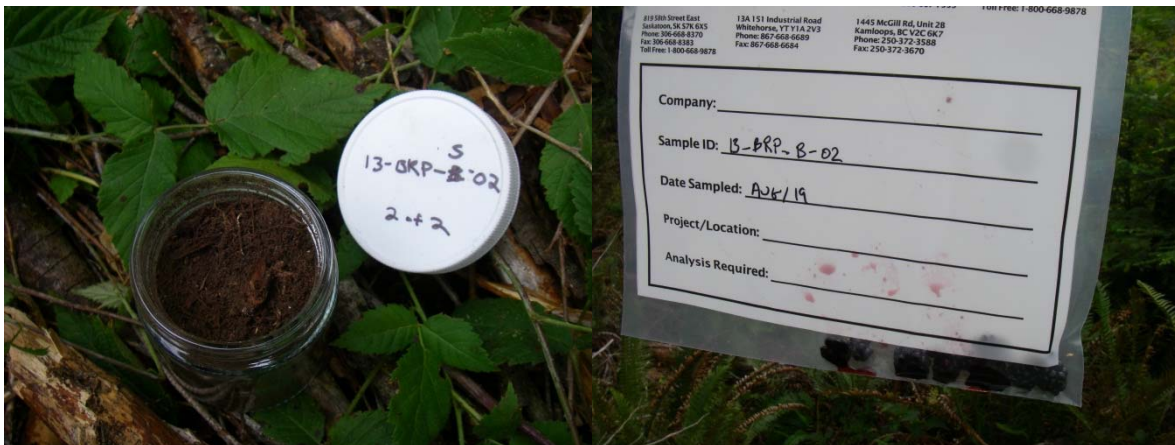


ATTACHMENT 1 Photographs

1.0 CO-LOCATED SOIL AND BERRY SAMPLE COLLECTION



Photograph 1: Soil and berries (red huckleberry) collected at 13-BRP-01, August 2013.



Photograph 2: Soil and berries (Himalayan blackberry) collected at 13-BRP-02, August 2013.



Photograph 3: Soil and berries (Himalayan blackberry) collected at 13-BRP-03, August 2013.

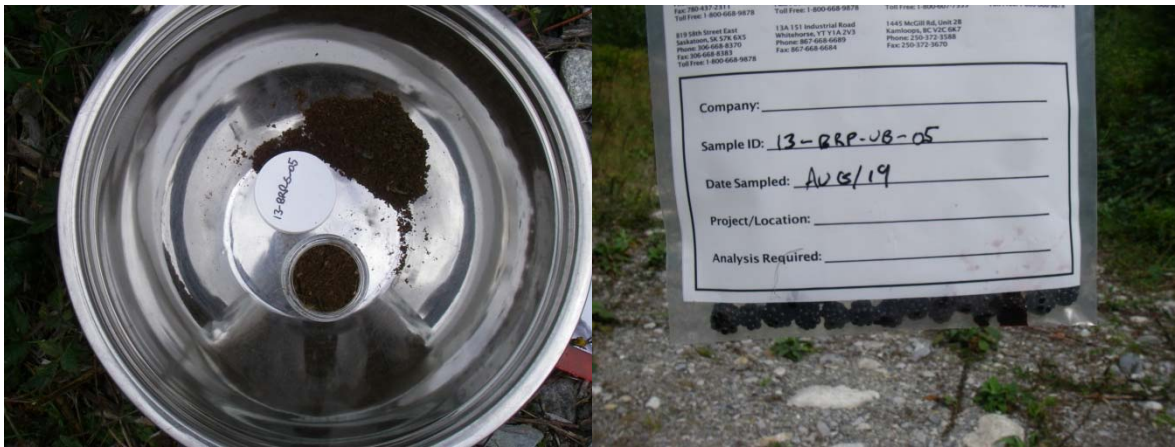


ATTACHMENT 1

Photographs



Photograph 4: Soil and berries (red huckleberry) collected at 13-BRP-04, August 2013.



Photograph 5: Soil and berries (Himalayan blackberry) collected at 13-BRP-05, August 2013.

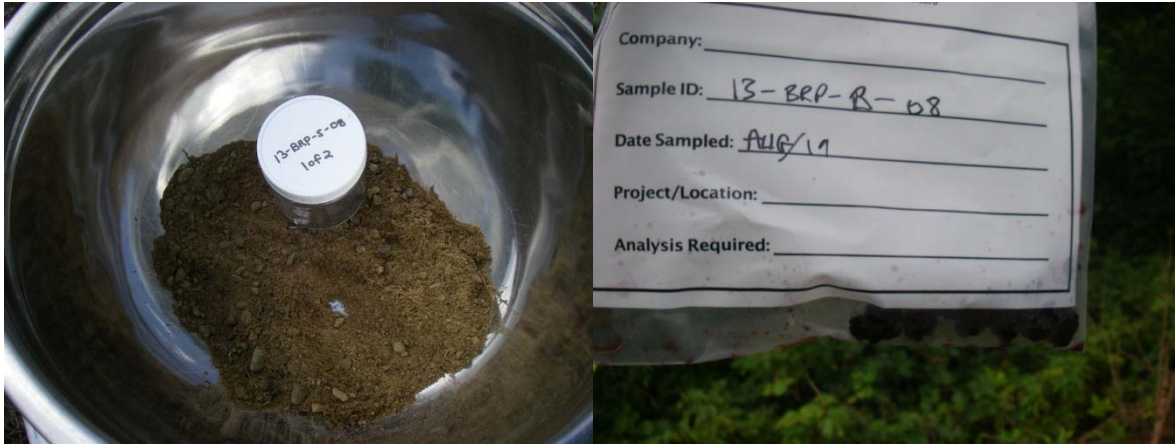


Photograph 6: Soil and berries (trailing blackberry) collected at 13-BRP-07, August 2013.

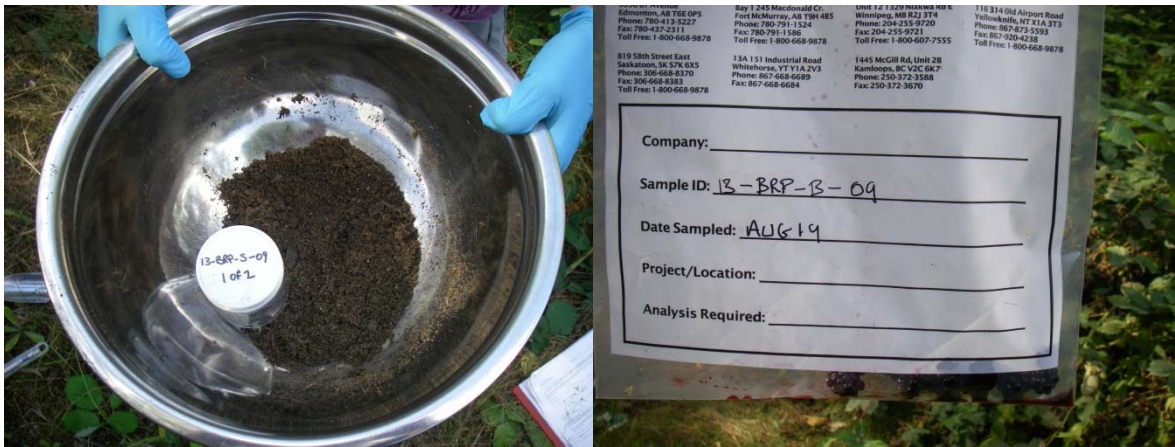


ATTACHMENT 1

Photographs



Photograph 7: Soil and berries (Himalayan blackberry) collected at 13-BRP-08, August 2013.



Photograph 8: Soil and berries (Himalayan blackberry) collected at 13-BRP-09, August 2013.



ATTACHMENT 1

Photographs



Photograph 9: Red huckleberry.



Photograph 10: Himalayan blackberry.



Photograph 11: Trailing blackberry.



2.0 CRAB AND MUSSEL SAMPLE COLLECTION



Photograph 12: Baited crab trap pre and post submersion for 24-48 hours, December 2013.



Photograph 13: Dungenese crab caught and put on ice, December 2013.



Photograph 14: Dungenese crab caught near mouth of McNab Creek covered in black substance, December 2013.



ATTACHMENT 1 Photographs



Photograph 15: Beach at Camp Potlatch, facing west and east, December 2013.



Photograph 16: Pacific blue mussels collected off rocks and driftwood along the beach at Camp Potlatch, December 2013.



Photograph 17: Beach near mouth of McNab Creek, facing west and east, December 2013.



ATTACHMENT 1

Photographs



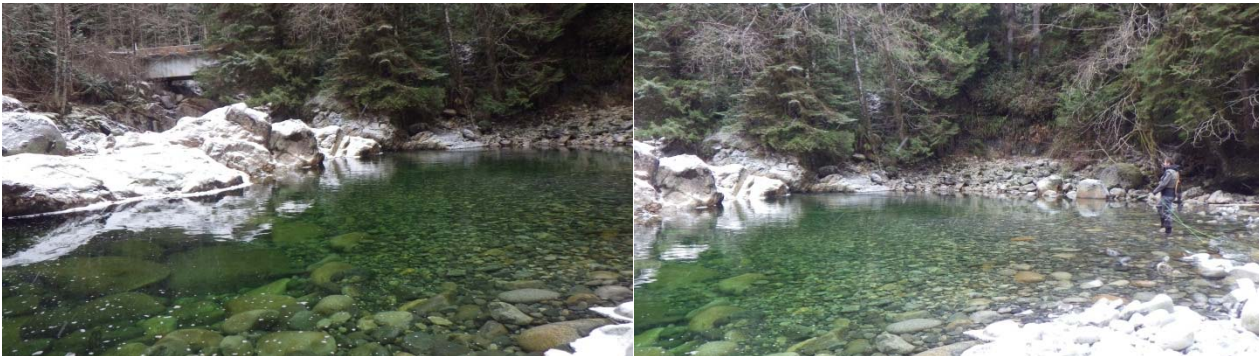
Photograph 18: Pacific blue mussels collected off rocks along the beach and from pilings near the mouth of McNab Creek, December 2013.



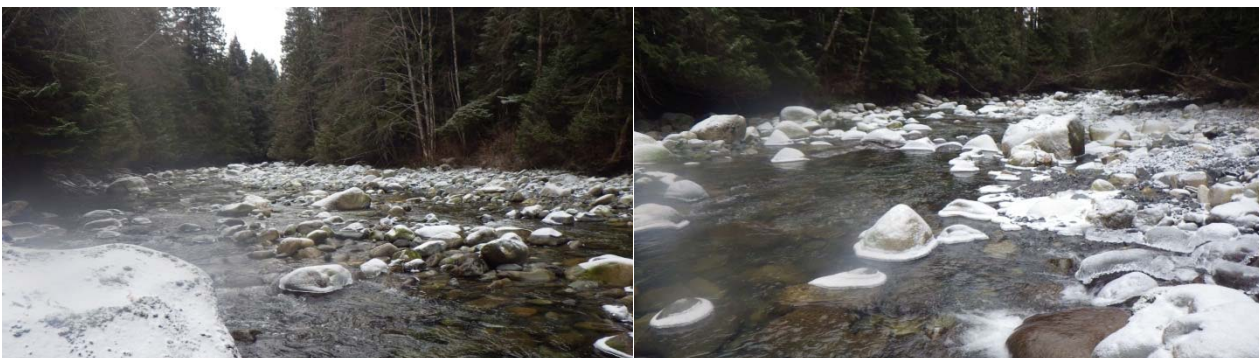
3.0 FISH SAMPLE COLLECTION



Photograph 19: Downstream and upstream views of site #1 on McNab Creek, December 2013.



Photograph 20: View of left downstream bank and angling at site #2 on McNab Creek, December 2013.



Photograph 21: Downstream and upstream views of site #3 on McNab Creek, December 2013.



ATTACHMENT 1 Photographs



Photograph 22: Upstream view and fish (coastal cut-throat trout) caught at site #4 on McNab Creek, December 2013.

o:\final\2011\1422\11-1422-0046\1114220046-559-r-rev0\att\att 1_site photographs.docx



ATTACHMENT 2

ALS Laboratory Reports



GOLDER ASSOCIATES LTD.
ATTN: Audrey Wagenaar
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6

Date Received: 20-AUG-13
Report Date: 04-DEC-13 11:54 (MT)
Version: FINAL REV. 2

Client Phone: 604-297-2036

Certificate of Analysis

Lab Work Order #: L1350062
Project P.O. #: Burnco Rock Products
Job Reference: 11-1422-0046
C of C Numbers: 10-050130, 10-050150
Legal Site Desc:

Comments:

4-DEC-2013 Tissue data has been added.

Amber Springer
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1350062-11 Soil 19-AUG-13 13-BRP-S-01	L1350062-12 Soil 19-AUG-13 13-BRP-S-02	L1350062-13 Soil 19-AUG-13 13-BRP-S-03	L1350062-14 Soil 19-AUG-13 13-BRP-S-04	L1350062-15 Soil 19-AUG-13 13-BRP-S-05
Grouping	Analyte					
SOIL						
Physical Tests	pH (1:2 soil:water) (pH)	4.40	4.05	3.63	3.65	5.01
Metals	Aluminum (Al) (mg/kg)	16600	11400	3420	3910	17000
	Antimony (Sb) (mg/kg)	0.53	0.53	0.80	1.14	0.34
	Arsenic (As) (mg/kg)	13.4	12.7	4.77	8.64	15.7
	Barium (Ba) (mg/kg)	70.5	57.6	34.0	67.1	75.9
	Beryllium (Be) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Bismuth (Bi) (mg/kg)	0.21	0.23	<0.20	0.29	<0.20
	Cadmium (Cd) (mg/kg)	0.137	0.157	0.186	0.133	0.101
	Calcium (Ca) (mg/kg)	3080	4130	2990	4040	2870
	Chromium (Cr) (mg/kg)	21.9	16.6	5.14	7.50	25.6
	Cobalt (Co) (mg/kg)	6.32	4.31	1.01	1.40	9.76
	Copper (Cu) (mg/kg)	24.7	23.2	21.8	14.4	26.5
	Iron (Fe) (mg/kg)	17900	13100	3640	4870	19100
	Lead (Pb) (mg/kg)	36.1	37.2	58.0	46.1	5.20
	Lithium (Li) (mg/kg)	10.8	7.1	<5.0	<5.0	16.1
	Magnesium (Mg) (mg/kg)	4180	3040	638	1130	4800
	Manganese (Mn) (mg/kg)	202	178	119	36.8	297
	Mercury (Hg) (mg/kg)	0.105	0.329	0.380	0.336	0.0336
	Molybdenum (Mo) (mg/kg)	0.88	0.79	0.63	0.59	0.62
	Nickel (Ni) (mg/kg)	11.8	12.0	7.51	7.23	18.7
	Phosphorus (P) (mg/kg)	325	592	853	713	483
	Potassium (K) (mg/kg)	890	960	500	340	1850
	Selenium (Se) (mg/kg)	0.42	0.40	0.40	0.53	<0.20
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	0.14	<0.10
	Sodium (Na) (mg/kg)	590	400	180	180	390
	Strontium (Sr) (mg/kg)	24.6	25.7	17.5	29.2	19.3
	Thallium (Tl) (mg/kg)	0.103	0.094	<0.050	<0.050	0.117
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0
	Titanium (Ti) (mg/kg)	827	498	133	188	666
	Uranium (U) (mg/kg)	1.98	1.39	0.254	0.209	3.14
	Vanadium (V) (mg/kg)	53.7	36.2	12.1	16.5	49.9
	Zinc (Zn) (mg/kg)	35.5	38.3	34.7	33.2	44.5

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1350062-16	L1350062-17	L1350062-18	L1350062-19	L1350062-20
		Description	Soil	Soil	Soil	Soil	Soil
		Sampled Date	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13
		Sampled Time					
		Client ID	13-BRP-S-06	13-BRP-S-07	13-BRP-S-08	13-BRP-S-09	13-BRP-S-07D
Grouping	Analyte						
SOIL							
Physical Tests	pH (1:2 soil:water) (pH)	4.83	5.02	5.23	5.85	5.21	
Metals	Aluminum (Al) (mg/kg)	44000	12600	18400	17000	12400	
	Antimony (Sb) (mg/kg)	0.17	0.25	0.32	0.34	0.28	
	Arsenic (As) (mg/kg)	5.39	9.49	11.5	10.8	8.22	
	Barium (Ba) (mg/kg)	217	76.4	78.0	61.2	71.4	
	Beryllium (Be) (mg/kg)	0.36	<0.20	<0.20	0.21	<0.20	
	Bismuth (Bi) (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20	
	Cadmium (Cd) (mg/kg)	0.090	0.051	0.073	0.106	0.058	
	Calcium (Ca) (mg/kg)	3530	2740	3190	3070	2780	
	Chromium (Cr) (mg/kg)	23.1	29.0	30.2	35.8	34.4	
	Cobalt (Co) (mg/kg)	11.1	6.44	8.19	7.46	6.64	
	Copper (Cu) (mg/kg)	40.2	26.9	23.8	24.3	26.7	
	Iron (Fe) (mg/kg)	28000	18200	22000	22100	19300	
	Lead (Pb) (mg/kg)	6.61	3.00	3.40	5.44	2.47	
	Lithium (Li) (mg/kg)	14.9	15.2	14.7	16.9	15.9	
	Magnesium (Mg) (mg/kg)	8110	4730	5310	5910	4820	
	Manganese (Mn) (mg/kg)	497	228	316	391	221	
	Mercury (Hg) (mg/kg)	0.0230	0.0085	0.0264	0.0117	0.0058	
	Molybdenum (Mo) (mg/kg)	0.72	0.51	0.75	0.82	<0.50	
	Nickel (Ni) (mg/kg)	17.6	19.7	16.3	23.1	19.4	
	Phosphorus (P) (mg/kg)	704	406	364	408	404	
	Potassium (K) (mg/kg)	2320	1710	1490	1760	1690	
	Selenium (Se) (mg/kg)	<0.20	<0.20	0.27	<0.20	<0.20	
	Silver (Ag) (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	
	Sodium (Na) (mg/kg)	300	370	490	510	400	
	Strontium (Sr) (mg/kg)	40.8	20.6	22.3	22.7	17.6	
	Thallium (Tl) (mg/kg)	0.110	0.101	0.131	0.104	0.095	
	Tin (Sn) (mg/kg)	<2.0	<2.0	<2.0	<2.0	<2.0	
	Titanium (Ti) (mg/kg)	1750	528	711	573	574	
	Uranium (U) (mg/kg)	0.803	1.24	2.14	0.502	2.01	
	Vanadium (V) (mg/kg)	73.5	50.6	70.0	56.6	63.2	
	Zinc (Zn) (mg/kg)	63.1	41.5	43.8	57.6	41.2	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1350062-1	L1350062-2	L1350062-3	L1350062-4	L1350062-5
		Description	Berry	Berry	Berry	Berry	Berry
		Sampled Date	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13
		Sampled Time					
		Client ID	13-BRP-B-01	13-BRP-B-02	13-BRP-B-03	13-BRP-B-04	13-BRP-B-05
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	85.0	84.5	86.5	84.4	84.7	
Metals	Aluminum (Al)-Total (mg/kg)	27.9	2.3	2.2	33.1	<2.0	
	Aluminum (Al)-Total (mg/kg wwt)	4.17	<0.40	<0.40	5.16	<0.40	
	Antimony (Sb)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Antimony (Sb)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Arsenic (As)-Total (mg/kg)	0.033	<0.020	<0.020	<0.020	<0.020	
	Arsenic (As)-Total (mg/kg wwt)	0.0049	<0.0040	<0.0040	<0.0040	<0.0040	
	Barium (Ba)-Total (mg/kg)	31.2	5.47	1.92	29.1	4.73	
	Barium (Ba)-Total (mg/kg wwt)	4.66	0.845	0.260	4.55	0.722	
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Boron (B)-Total (mg/kg)	11.4	7.9	4.8	11.2	5.6	
	Boron (B)-Total (mg/kg wwt)	1.70	1.22	0.66	1.76	0.86	
	Cadmium (Cd)-Total (mg/kg)	<0.010	0.058	0.017	<0.010	0.027	
	Cadmium (Cd)-Total (mg/kg wwt)	<0.0020	0.0090	0.0023	<0.0020	0.0041	
	Calcium (Ca)-Total (mg/kg)	4480	2330	1000	3400	1640	
	Calcium (Ca)-Total (mg/kg wwt)	669	360	135	531	251	
	Cesium (Cs)-Total (mg/kg)	0.873	0.258	0.316	1.01	0.381	
	Cesium (Cs)-Total (mg/kg wwt)	0.131	0.0399	0.0427	0.158	0.0581	
	Chromium (Cr)-Total (mg/kg)	<0.050	<0.050	<0.050	<0.050	<0.050	
	Chromium (Cr)-Total (mg/kg wwt)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cobalt (Co)-Total (mg/kg)	<0.020	0.061	0.026	<0.020	0.069	
	Cobalt (Co)-Total (mg/kg wwt)	<0.0040	0.0094	<0.0040	<0.0040	0.0106	
	Copper (Cu)-Total (mg/kg)	6.57	8.33	8.68	6.17	9.47	
	Copper (Cu)-Total (mg/kg wwt)	0.983	1.29	1.17	0.963	1.45	
	Gallium (Ga)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Iron (Fe)-Total (mg/kg)	19.6	29.4	24.6	19.7	25.7	
	Iron (Fe)-Total (mg/kg wwt)	2.93	4.54	3.33	3.07	3.92	
	Lead (Pb)-Total (mg/kg)	0.021	<0.020	<0.020	0.024	<0.020	
	Lead (Pb)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Lithium (Li)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	
	Lithium (Li)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Magnesium (Mg)-Total (mg/kg)	770	2040	1370	630	1470	
	Magnesium (Mg)-Total (mg/kg wwt)	115	315	186	98	224	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1350062-6 Berry 19-AUG-13 13-BRP-B-06	L1350062-7 Berry 19-AUG-13 13-BRP-B-07	L1350062-8 Berry 19-AUG-13 13-BRP-B-08	L1350062-9 Berry 19-AUG-13 13-BRP-B-09	L1350062-10 Berry 19-AUG-13 13-BRP-B-07D
Grouping	Analyte					
TISSUE						
Physical Tests	% Moisture (%)	83.6	85.6	85.5	86.4	86.4
Metals	Aluminum (Al)-Total (mg/kg)	4.4	3.3	2.7	22.6	5.7
	Aluminum (Al)-Total (mg/kg wwt)	0.73	0.48	<0.40	3.06	0.78
	Antimony (Sb)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Antimony (Sb)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Arsenic (As)-Total (mg/kg)	<0.020	0.024	<0.020	<0.020	0.020
	Arsenic (As)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Barium (Ba)-Total (mg/kg)	8.70	11.6	6.33	12.4	11.6
	Barium (Ba)-Total (mg/kg wwt)	1.43	1.67	0.916	1.69	1.59
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Boron (B)-Total (mg/kg)	13.1	11.8	4.6	4.4	12.8
	Boron (B)-Total (mg/kg wwt)	2.15	1.69	0.66	0.60	1.75
	Cadmium (Cd)-Total (mg/kg)	0.014	0.013	0.013	0.036	0.014
	Cadmium (Cd)-Total (mg/kg wwt)	0.0023	<0.0020	<0.0020	0.0048	<0.0020
	Calcium (Ca)-Total (mg/kg)	2730	2140	1900	2140	2110
	Calcium (Ca)-Total (mg/kg wwt)	448	308	275	290	287
	Cesium (Cs)-Total (mg/kg)	0.0510	0.349	0.276	0.124	0.406
	Cesium (Cs)-Total (mg/kg wwt)	0.0084	0.0502	0.0400	0.0168	0.0554
	Chromium (Cr)-Total (mg/kg)	0.052	<0.050	<0.050	<0.050	0.062
	Chromium (Cr)-Total (mg/kg wwt)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cobalt (Co)-Total (mg/kg)	0.037	0.219	0.092	0.085	0.250
	Cobalt (Co)-Total (mg/kg wwt)	0.0062	0.0316	0.0133	0.0116	0.0341
	Copper (Cu)-Total (mg/kg)	7.39	9.95	7.29	9.25	11.4
	Copper (Cu)-Total (mg/kg wwt)	1.21	1.43	1.05	1.25	1.55
	Gallium (Ga)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Iron (Fe)-Total (mg/kg)	24.4	38.3	23.8	38.8	46.0
	Iron (Fe)-Total (mg/kg wwt)	4.01	5.51	3.45	5.27	6.27
	Lead (Pb)-Total (mg/kg)	<0.020	<0.020	<0.020	0.023	<0.020
	Lead (Pb)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Lithium (Li)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Lithium (Li)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020
	Magnesium (Mg)-Total (mg/kg)	1310	1190	1070	1130	1160
	Magnesium (Mg)-Total (mg/kg wwt)	215	171	155	153	159

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1350062-1 Berry 19-AUG-13 13-BRP-B-01	L1350062-2 Berry 19-AUG-13 13-BRP-B-02	L1350062-3 Berry 19-AUG-13 13-BRP-B-03	L1350062-4 Berry 19-AUG-13 13-BRP-B-04	L1350062-5 Berry 19-AUG-13 13-BRP-B-05	
Grouping	Analyte					
TISSUE						
Metals	Manganese (Mn)-Total (mg/kg)	328	254	124	152	133
	Manganese (Mn)-Total (mg/kg wwt)	49.1	39.3	16.7	23.8	20.4
	Mercury (Hg)-Total (mg/kg)	<0.0050	<0.0050	<0.0050	0.0079	<0.0050
	Mercury (Hg)-Total (mg/kg wwt)	<0.0010	<0.0010	<0.0010	0.0012	<0.0010
	Molybdenum (Mo)-Total (mg/kg)	0.481	0.304	0.264	0.177	0.441
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0720	0.0471	0.0357	0.0276	0.0672
	Nickel (Ni)-Total (mg/kg)	0.662	1.35	0.836	0.511	1.16
	Nickel (Ni)-Total (mg/kg wwt)	0.099	0.209	0.113	0.080	0.176
	Phosphorus (P)-Total (mg/kg)	1510	1780	1400	960	1230
	Phosphorus (P)-Total (mg/kg wwt)	230	275	190	150	187
	Potassium (K)-Total (mg/kg)	7600	9560	9580	5700	8150
	Potassium (K)-Total (mg/kg wwt)	1130	1480	1300	880	1240
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Rubidium (Rb)-Total (mg/kg)	43.0	52.6	41.9	29.8	33.5
	Rubidium (Rb)-Total (mg/kg wwt)	6.43	8.13	5.67	4.65	5.11
	Selenium (Se)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Selenium (Se)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020
	Silver (Ag)-Total (mg/kg)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Silver (Ag)-Total (mg/kg wwt)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Sodium (Na)-Total (mg/kg)	<2000 ^{DLIV}	<100	<100	<2000 ^{DLIV}	<100
	Sodium (Na)-Total (mg/kg wwt)	<400 ^{DLIV}	<20	<20	<400 ^{DLIV}	<20
	Strontium (Sr)-Total (mg/kg)	9.01	7.07	3.91	5.40	8.05
	Strontium (Sr)-Total (mg/kg wwt)	1.35	1.09	0.530	0.843	1.23
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tin (Sn)-Total (mg/kg)	0.65	0.20	0.15	0.85	0.12
	Tin (Sn)-Total (mg/kg wwt)	0.097	0.030	0.021	0.133	<0.020
	Uranium (U)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Uranium (U)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Vanadium (V)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10
	Vanadium (V)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020
	Yttrium (Y)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1350062-6	L1350062-7	L1350062-8	L1350062-9	L1350062-10
		Description	Berry	Berry	Berry	Berry	Berry
		Sampled Date	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13	19-AUG-13
		Sampled Time					
		Client ID	13-BRP-B-06	13-BRP-B-07	13-BRP-B-08	13-BRP-B-09	13-BRP-B-07D
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	56.8	370	54.1	49.6	393	
	Manganese (Mn)-Total (mg/kg wwt)	9.32	53.3	7.82	6.73	53.6	
	Mercury (Hg)-Total (mg/kg)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
	Mercury (Hg)-Total (mg/kg wwt)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
	Molybdenum (Mo)-Total (mg/kg)	0.861	0.736	0.299	0.194	0.788	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.141	0.106	0.0432	0.0263	0.108	
	Nickel (Ni)-Total (mg/kg)	0.678	3.36	2.58	3.16	3.97	
	Nickel (Ni)-Total (mg/kg wwt)	0.111	0.483	0.373	0.429	0.542	
	Phosphorus (P)-Total (mg/kg)	1210	1750	1080	1410	1800	
	Phosphorus (P)-Total (mg/kg wwt)	198	252	156	192	245	
	Potassium (K)-Total (mg/kg)	8430	8770	8300	8130	9560	
	Potassium (K)-Total (mg/kg wwt)	1380	1260	1200	1100	1310	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	21.9	40.6	39.5	29.1	44.5	
	Rubidium (Rb)-Total (mg/kg wwt)	3.59	5.84	5.72	3.94	6.07	
	Selenium (Se)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	
	Selenium (Se)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Silver (Ag)-Total (mg/kg)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	
	Silver (Ag)-Total (mg/kg wwt)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	
	Sodium (Na)-Total (mg/kg)	<100	<100	<100	<100	<100	
	Sodium (Na)-Total (mg/kg wwt)	<20	<20	<20	<20	<20	
	Strontium (Sr)-Total (mg/kg)	16.1	14.6	10.6	22.9	14.6	
	Strontium (Sr)-Total (mg/kg wwt)	2.65	2.10	1.53	3.11	1.99	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.19	0.15	0.13	0.15	0.19	
	Tin (Sn)-Total (mg/kg wwt)	0.031	0.022	<0.020	0.021	0.026	
	Uranium (U)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Uranium (U)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Vanadium (V)-Total (mg/kg)	<0.10	<0.10	<0.10	<0.10	<0.10	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Yttrium (Y)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1350062-1 Berry 19-AUG-13 13-BRP-B-01	L1350062-2 Berry 19-AUG-13 13-BRP-B-02	L1350062-3 Berry 19-AUG-13 13-BRP-B-03	L1350062-4 Berry 19-AUG-13 13-BRP-B-04	L1350062-5 Berry 19-AUG-13 13-BRP-B-05																														
Grouping	Analyte																																		
TISSUE																																			
Metals	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Yttrium (Y)-Total (mg/kg wwt)</td> <td style="text-align: center; padding: 2px;"><0.0020</td> <td style="text-align: center; padding: 2px;"><0.0020</td> <td style="text-align: center; padding: 2px;"><0.0020</td> <td style="text-align: center; padding: 2px;"><0.0020</td> <td style="text-align: center; padding: 2px;"><0.0020</td> </tr> <tr> <td style="padding: 2px;">Zinc (Zn)-Total (mg/kg)</td> <td style="text-align: center; padding: 2px;">7.83</td> <td style="text-align: center; padding: 2px;">16.5</td> <td style="text-align: center; padding: 2px;">18.1</td> <td style="text-align: center; padding: 2px;">7.99</td> <td style="text-align: center; padding: 2px;">19.5</td> </tr> <tr> <td style="padding: 2px;">Zinc (Zn)-Total (mg/kg wwt)</td> <td style="text-align: center; padding: 2px;">1.17</td> <td style="text-align: center; padding: 2px;">2.54</td> <td style="text-align: center; padding: 2px;">2.45</td> <td style="text-align: center; padding: 2px;">1.25</td> <td style="text-align: center; padding: 2px;">2.97</td> </tr> <tr> <td style="padding: 2px;">Zirconium (Zr)-Total (mg/kg)</td> <td style="text-align: center; padding: 2px;"><0.20</td> <td style="text-align: center; padding: 2px;"><0.20</td> <td style="text-align: center; padding: 2px;"><0.20</td> <td style="text-align: center; padding: 2px;"><0.20</td> <td style="text-align: center; padding: 2px;"><0.20</td> </tr> <tr> <td style="padding: 2px;">Zirconium (Zr)-Total (mg/kg wwt)</td> <td style="text-align: center; padding: 2px;"><0.040</td> <td style="text-align: center; padding: 2px;"><0.040</td> <td style="text-align: center; padding: 2px;"><0.040</td> <td style="text-align: center; padding: 2px;"><0.040</td> <td style="text-align: center; padding: 2px;"><0.040</td> </tr> </table>					Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	Zinc (Zn)-Total (mg/kg)	7.83	16.5	18.1	7.99	19.5	Zinc (Zn)-Total (mg/kg wwt)	1.17	2.54	2.45	1.25	2.97	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040
Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020																														
Zinc (Zn)-Total (mg/kg)	7.83	16.5	18.1	7.99	19.5																														
Zinc (Zn)-Total (mg/kg wwt)	1.17	2.54	2.45	1.25	2.97																														
Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20																														
Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040																														

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1350062-6 Berry 19-AUG-13 13-BRP-B-06	L1350062-7 Berry 19-AUG-13 13-BRP-B-07	L1350062-8 Berry 19-AUG-13 13-BRP-B-08	L1350062-9 Berry 19-AUG-13 13-BRP-B-09	L1350062-10 Berry 19-AUG-13 13-BRP-B-07D
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Zinc (Zn)-Total (mg/kg)	15.7	15.7	15.5	18.6	16.6
	Zinc (Zn)-Total (mg/kg wwt)	2.58	2.26	2.24	2.53	2.27
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Sodium (Na)-Total	DLIV	L1350062-1, -4
Duplicate	Sodium (Na)-Total	DLIV	L1350062-1, -4

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLIV	Detection Limit Adjusted: Lower Initial Volume

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AG-DRY-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
AG-WET-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
HG-200.2-CVAF-VA	Soil	Mercury in Soil by CVAFS	EPA 200.2/245.7
This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry(EPA Method 245.7).			
Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.			
HG-DRY-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (DRY)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
HG-WET-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (WET)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by inductively coupled plasma - optical emission spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
MET-200.2-CCMS-VA	Soil	Metals in Soil by CRC ICPMS	EPA 200.2/6020A
This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is manually homogenized, dried at 60 degrees Celsius, sieved through a 2 mm (10 mesh) sieve (this sieve step is omitted for international soil samples), and a representative subsample of the dry material is weighed. The sample is then digested at 95 degrees Celsius for 2 hours by block digester using concentrated nitric and hydrochloric acids. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020A).			
Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that may be environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.			
MET-DRY-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
MET-DRY-ICP-VA	Tissue	Metals in Tissue by ICPOES (DRY)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MET-WET-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
MET-WET-ICP-VA	Tissue	Metals in Tissue by ICPOES (WET)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in			

Reference Information

Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.

MOISTURE-TISS-VA Tissue % Moisture in Tissues ASTM D2974-00 Method A

This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.

PH-1:2-VA Soil pH in Soil (1:2 Soil:Water Extraction) BC WLAP METHOD: PH, ELECTROMETRIC, SOIL

This analysis is carried out in accordance with procedures described in the pH, Electrometric in Soil and Sediment method - Section B Physical/Inorganic and Misc. Constituents, BC Environmental Laboratory Manual 2007. The procedure involves mixing the dried (at <60°C) and sieved (No. 10 / 2mm) sample with deionized/distilled water at a 1:2 ratio of sediment to water. The pH of the solution is then measured using a standard pH probe.

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-050130 10-050150

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

Page 1 of 30

Client: GOLDER ASSOCIATES LTD.
 # 500 - 4260 Still Creek Drive
 Burnaby BC V5C 6C6

Contact: Audrey Wagenaar

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-VA		Soil						
Batch	R2707852							
WG1759034-3	CRM	VA-CANMET-TILL1						
Mercury (Hg)			124.5		%		70-130	03-OCT-13
WG1759034-4	CRM	VA-NRC-STSD1						
Mercury (Hg)			103.8		%		70-130	03-OCT-13
WG1759034-2	DUP	L1350062-15						
Mercury (Hg)		0.0336	0.0295		mg/kg	13	40	03-OCT-13
WG1759034-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	03-OCT-13
MET-200.2-CCMS-VA		Soil						
Batch	R2707827							
WG1759034-3	CRM	VA-CANMET-TILL1						
Aluminum (Al)			104.7		%		70-130	03-OCT-13
Antimony (Sb)			98.8		%		70-130	03-OCT-13
Arsenic (As)			108.8		%		70-130	03-OCT-13
Barium (Ba)			101.6		%		70-130	03-OCT-13
Beryllium (Be)			0.52		mg/kg		0.34-0.74	03-OCT-13
Cadmium (Cd)			91.6		%		70-130	03-OCT-13
Calcium (Ca)			114.5		%		70-130	03-OCT-13
Chromium (Cr)			111.3		%		70-130	03-OCT-13
Cobalt (Co)			104.8		%		70-130	03-OCT-13
Copper (Cu)			101.2		%		70-130	03-OCT-13
Iron (Fe)			98.8		%		70-130	03-OCT-13
Lead (Pb)			89.8		%		70-130	03-OCT-13
Lithium (Li)			114.3		%		70-130	03-OCT-13
Magnesium (Mg)			104.6		%		70-130	03-OCT-13
Manganese (Mn)			102.0		%		70-130	03-OCT-13
Molybdenum (Mo)			0.72		mg/kg		0.24-1.24	03-OCT-13
Nickel (Ni)			106.9		%		70-130	03-OCT-13
Phosphorus (P)			103.0		%		70-130	03-OCT-13
Potassium (K)			119.7		%		70-130	03-OCT-13
Selenium (Se)			0.32		mg/kg		0.12-0.52	03-OCT-13
Silver (Ag)			0.22		mg/kg		0.12-0.32	03-OCT-13
Sodium (Na)			127.8		%		70-130	03-OCT-13
Strontium (Sr)			113.6		%		70-130	03-OCT-13
Thallium (Tl)			0.124		mg/kg		0.075-0.175	03-OCT-13
Titanium (Ti)			120.9		%		70-130	03-OCT-13



Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA								
	Soil							
Batch	R2707827							
WG1759034-3	CRM	VA-CANMET-TILL1						
Uranium (U)			108.8		%		70-130	03-OCT-13
Vanadium (V)			111.0		%		70-130	03-OCT-13
Zinc (Zn)			103.1		%		70-130	03-OCT-13
WG1759034-4	CRM	VA-NRC-STSD1						
Aluminum (Al)			102.1		%		70-130	03-OCT-13
Antimony (Sb)			102.8		%		70-130	03-OCT-13
Arsenic (As)			99.6		%		70-130	03-OCT-13
Barium (Ba)			104.3		%		70-130	03-OCT-13
Beryllium (Be)			96.7		%		70-130	03-OCT-13
Cadmium (Cd)			97.3		%		70-130	03-OCT-13
Calcium (Ca)			97.9		%		70-130	03-OCT-13
Chromium (Cr)			102.0		%		70-130	03-OCT-13
Cobalt (Co)			99.4		%		70-130	03-OCT-13
Copper (Cu)			100.5		%		70-130	03-OCT-13
Iron (Fe)			100.3		%		70-130	03-OCT-13
Lead (Pb)			97.8		%		70-130	03-OCT-13
Lithium (Li)			101.6		%		70-130	03-OCT-13
Magnesium (Mg)			100.6		%		70-130	03-OCT-13
Manganese (Mn)			100.9		%		70-130	03-OCT-13
Molybdenum (Mo)			99.5		%		70-130	03-OCT-13
Nickel (Ni)			101.8		%		70-130	03-OCT-13
Phosphorus (P)			100.1		%		70-130	03-OCT-13
Potassium (K)			109.6		%		70-130	03-OCT-13
Selenium (Se)			102.0		%		70-130	03-OCT-13
Silver (Ag)			95.4		%		70-130	03-OCT-13
Sodium (Na)			103.2		%		70-130	03-OCT-13
Strontium (Sr)			99.0		%		70-130	03-OCT-13
Thallium (Tl)			98.3		%		70-130	03-OCT-13
Tin (Sn)			104.8		%		70-130	03-OCT-13
Titanium (Ti)			118.7		%		70-130	03-OCT-13
Vanadium (V)			104.2		%		70-130	03-OCT-13
Zinc (Zn)			98.8		%		70-130	03-OCT-13
WG1759034-2	DUP	L1350062-15						
Aluminum (Al)		17000	16900		mg/kg	0.0	40	03-OCT-13
Antimony (Sb)		0.34	0.40		mg/kg	18	30	03-OCT-13



Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA		Soil						
Batch	R2707827							
WG1759034-2	DUP	L1350062-15						
Arsenic (As)		15.7	14.5		mg/kg	8.0	30	03-OCT-13
Barium (Ba)		75.9	72.4		mg/kg	4.7	40	03-OCT-13
Beryllium (Be)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	03-OCT-13
Bismuth (Bi)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	03-OCT-13
Cadmium (Cd)		0.101	0.084		mg/kg	18	30	03-OCT-13
Calcium (Ca)		2870	3120		mg/kg	8.1	30	03-OCT-13
Chromium (Cr)		25.6	30.1		mg/kg	16	30	03-OCT-13
Cobalt (Co)		9.76	7.86		mg/kg	22	30	03-OCT-13
Copper (Cu)		26.5	23.6		mg/kg	12	30	03-OCT-13
Iron (Fe)		19100	18800		mg/kg	1.4	30	03-OCT-13
Lead (Pb)		5.20	7.12		mg/kg	31	40	03-OCT-13
Lithium (Li)		16.1	15.6		mg/kg	3.4	30	03-OCT-13
Magnesium (Mg)		4800	4900		mg/kg	1.9	30	03-OCT-13
Manganese (Mn)		297	285		mg/kg	4.2	30	03-OCT-13
Molybdenum (Mo)		0.62	0.65		mg/kg	4.7	40	03-OCT-13
Nickel (Ni)		18.7	18.5		mg/kg	0.6	30	03-OCT-13
Phosphorus (P)		483	487		mg/kg	0.8	30	03-OCT-13
Potassium (K)		1850	1690		mg/kg	9.0	40	03-OCT-13
Selenium (Se)		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	03-OCT-13
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-13
Sodium (Na)		390	370		mg/kg	3.3	40	03-OCT-13
Strontium (Sr)		19.3	22.4		mg/kg	15	40	03-OCT-13
Thallium (Tl)		0.117	0.123		mg/kg	5.7	30	03-OCT-13
Tin (Sn)		<2.0	<2.0	RPD-NA	mg/kg	N/A	40	03-OCT-13
Titanium (Ti)		666	606		mg/kg	9.5	40	03-OCT-13
Uranium (U)		3.14	3.28		mg/kg	4.3	30	03-OCT-13
Vanadium (V)		49.9	55.1		mg/kg	9.9	30	03-OCT-13
Zinc (Zn)		44.5	43.7		mg/kg	1.8	30	03-OCT-13
WG1759034-1		MB						
Aluminum (Al)			<50		mg/kg		50	03-OCT-13
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-13
Arsenic (As)			<0.050		mg/kg		0.05	03-OCT-13
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-13
Beryllium (Be)			<0.20		mg/kg		0.2	03-OCT-13



Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-VA								
	Soil							
Batch	R2707827							
WG1759034-1	MB							
Bismuth (Bi)			<0.20		mg/kg		0.2	03-OCT-13
Cadmium (Cd)			<0.050		mg/kg		0.05	03-OCT-13
Calcium (Ca)			<50		mg/kg		50	03-OCT-13
Chromium (Cr)			<0.50		mg/kg		0.5	03-OCT-13
Cobalt (Co)			<0.10		mg/kg		0.1	03-OCT-13
Copper (Cu)			<0.50		mg/kg		0.5	03-OCT-13
Iron (Fe)			<50		mg/kg		50	03-OCT-13
Lead (Pb)			<0.50		mg/kg		0.5	03-OCT-13
Lithium (Li)			<5.0		mg/kg		5	03-OCT-13
Magnesium (Mg)			<20		mg/kg		20	03-OCT-13
Manganese (Mn)			<1.0		mg/kg		1	03-OCT-13
Molybdenum (Mo)			<0.50		mg/kg		0.5	03-OCT-13
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-13
Phosphorus (P)			<50		mg/kg		50	03-OCT-13
Potassium (K)			<100		mg/kg		100	03-OCT-13
Selenium (Se)			<0.20		mg/kg		0.2	03-OCT-13
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-13
Sodium (Na)			<100		mg/kg		100	03-OCT-13
Strontium (Sr)			<0.50		mg/kg		0.5	03-OCT-13
Thallium (Tl)			<0.050		mg/kg		0.05	03-OCT-13
Tin (Sn)			<2.0		mg/kg		2	03-OCT-13
Titanium (Ti)			<1.0		mg/kg		1	03-OCT-13
Uranium (U)			<0.050		mg/kg		0.05	03-OCT-13
Vanadium (V)			<0.20		mg/kg		0.2	03-OCT-13
Zinc (Zn)			<1.0		mg/kg		1	03-OCT-13
PH-1:2-VA								
	Soil							
Batch	R2708059							
WG1759034-2	DUP	L1350062-15						
pH (1:2 soil:water)		5.01	4.82	J	pH	0.19	0.3	03-OCT-13
AG-DRY-HRMS-VA								
	Tissue							
Batch	R2752036							
WG1796067-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			105.2		%		70-130	29-NOV-13
WG1796067-4	DUP	L1350062-1						

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AG-DRY-HRMS-VA		Tissue						
Batch R2752036								
WG1796067-4	DUP	L1350062-1						
Silver (Ag)-Total		<0.0050	<0.0050	RPD-NA	mg/kg	N/A	30	29-NOV-13
WG1796067-1	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	29-NOV-13
WG1796067-2	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	29-NOV-13
WG1796067-3	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	29-NOV-13
Batch R2752039								
WG1794878-4	CRM	VA-NIST-1566B						
Silver (Ag)-Total			88.2		%		70-130	28-NOV-13
WG1794878-3	DUP	L1350062-8						
Silver (Ag)-Total		<0.0050	<0.0050	RPD-NA	mg/kg	N/A	30	28-NOV-13
WG1794878-1	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	28-NOV-13
WG1794878-2	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	28-NOV-13
AG-WET-HRMS-VA		Tissue						
Batch R2751987								
WG1796067-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			105.2		%		70-130	29-NOV-13
WG1796067-4	DUP	L1350062-1						
Silver (Ag)-Total		<0.0010	<0.0010	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
WG1796067-1	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
WG1796067-2	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
WG1796067-3	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
Batch R2752020								
WG1794878-4	CRM	VA-NIST-1566B						
Silver (Ag)-Total			88.2		%		70-130	28-NOV-13
WG1794878-3	DUP	L1350062-8						
Silver (Ag)-Total		<0.0010	<0.0010	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
WG1794878-1	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	28-NOV-13
WG1794878-2	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	28-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-WET-CVAFS-VA		Tissue						
Batch	R2754087							
WG1796067-2 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	02-DEC-13
WG1796067-3 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	02-DEC-13
MET-DRY-HRMS-VA		Tissue						
Batch	R2752036							
WG1796067-5 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			101.4		%		70-130	29-NOV-13
Cadmium (Cd)-Total			95.3		%		70-130	29-NOV-13
Chromium (Cr)-Total			77.4		%		70-130	29-NOV-13
Cobalt (Co)-Total			95.7		%		70-130	29-NOV-13
Copper (Cu)-Total			93.2		%		70-130	29-NOV-13
Iron (Fe)-Total			83.0		%		70-130	29-NOV-13
Lead (Pb)-Total			85.2		%		70-130	29-NOV-13
Manganese (Mn)-Total			91.8		%		70-130	29-NOV-13
Molybdenum (Mo)-Total			92.4		%		70-130	29-NOV-13
Nickel (Ni)-Total			92.2		%		70-130	29-NOV-13
Selenium (Se)-Total			85.5		%		70-130	29-NOV-13
Strontium (Sr)-Total			87.4		%		70-130	29-NOV-13
Vanadium (V)-Total			93.4		%		70-130	29-NOV-13
Zinc (Zn)-Total			90.1		%		70-130	29-NOV-13
WG1796067-6 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.009		mg/kg		0.001-0.021	29-NOV-13
Arsenic (As)-Total			99.6		%		70-130	29-NOV-13
Barium (Ba)-Total			91.6		%		70-130	29-NOV-13
Boron (B)-Total			4.8		mg/kg		3.5-5.5	29-NOV-13
Cadmium (Cd)-Total			105.7		%		70-130	29-NOV-13
Cobalt (Co)-Total			100.5		%		70-130	29-NOV-13
Copper (Cu)-Total			103.5		%		70-130	29-NOV-13
Iron (Fe)-Total			99.5		%		70-130	29-NOV-13
Lead (Pb)-Total			101.8		%		70-130	29-NOV-13
Manganese (Mn)-Total			102.5		%		70-130	29-NOV-13
Nickel (Ni)-Total			94.6		%		70-130	29-NOV-13
Rubidium (Rb)-Total			101.7		%		70-130	29-NOV-13
Selenium (Se)-Total			104.3		%		70-130	29-NOV-13
Strontium (Sr)-Total			92.6		%		70-130	29-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA		Tissue						
Batch	R2752036							
WG1796067-6	CRM	VA-NIST-1566B						
Tin (Sn)-Total			0.02		mg/kg		0-0.13	29-NOV-13
Uranium (U)-Total			102.4		%		70-130	29-NOV-13
Vanadium (V)-Total			97.3		%		70-130	29-NOV-13
Zinc (Zn)-Total			106.5		%		70-130	29-NOV-13
WG1796067-4	DUP	L1350062-1						
Aluminum (Al)-Total		27.9	27.0		mg/kg	3.3	30	29-NOV-13
Antimony (Sb)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Arsenic (As)-Total		0.033	0.022	J	mg/kg	0.011	0.04	29-NOV-13
Barium (Ba)-Total		31.2	29.3		mg/kg	6.1	30	29-NOV-13
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Boron (B)-Total		11.4	11.2		mg/kg	1.2	30	29-NOV-13
Cadmium (Cd)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Cesium (Cs)-Total		0.873	0.927		mg/kg	6.0	30	29-NOV-13
Chromium (Cr)-Total		<0.050	0.059	RPD-NA	mg/kg	N/A	30	29-NOV-13
Cobalt (Co)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	29-NOV-13
Copper (Cu)-Total		6.57	5.91		mg/kg	11	30	29-NOV-13
Gallium (Ga)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	29-NOV-13
Iron (Fe)-Total		19.6	18.4		mg/kg	6.4	30	29-NOV-13
Lead (Pb)-Total		0.021	0.023		mg/kg	12	30	29-NOV-13
Lithium (Li)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-NOV-13
Manganese (Mn)-Total		328	319		mg/kg	2.9	30	29-NOV-13
Molybdenum (Mo)-Total		0.481	0.487		mg/kg	1.2	30	29-NOV-13
Nickel (Ni)-Total		0.662	0.591		mg/kg	11	30	29-NOV-13
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Rubidium (Rb)-Total		43.0	43.8		mg/kg	1.9	30	29-NOV-13
Selenium (Se)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-NOV-13
Strontium (Sr)-Total		9.01	9.81		mg/kg	8.5	50	29-NOV-13
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	29-NOV-13
Thallium (Tl)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	29-NOV-13
Thorium (Th)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Tin (Sn)-Total		0.65	0.63		mg/kg	3.2	30	29-NOV-13
Uranium (U)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	29-NOV-13
Vanadium (V)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-NOV-13



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MET-DRY-HRMS-VA								
	Tissue							
Batch	R2752036							
WG1796067-4	DUP	L1350062-1						
Yttrium (Y)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	29-NOV-13
Zinc (Zn)-Total		7.83	6.84		mg/kg	13	30	29-NOV-13
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	29-NOV-13
WG1796067-1	MB							
Aluminum (Al)-Total			<2.0		mg/kg		2	29-NOV-13
Antimony (Sb)-Total			<0.010		mg/kg		0.01	29-NOV-13
Arsenic (As)-Total			<0.020		mg/kg		0.02	29-NOV-13
Barium (Ba)-Total			<0.050		mg/kg		0.05	29-NOV-13
Beryllium (Be)-Total			<0.010		mg/kg		0.01	29-NOV-13
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	29-NOV-13
Boron (B)-Total			<1.0		mg/kg		1	29-NOV-13
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	29-NOV-13
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	29-NOV-13
Chromium (Cr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Cobalt (Co)-Total			<0.020		mg/kg		0.02	29-NOV-13
Copper (Cu)-Total			<0.050		mg/kg		0.05	29-NOV-13
Gallium (Ga)-Total			<0.020		mg/kg		0.02	29-NOV-13
Iron (Fe)-Total			<1.0		mg/kg		1	29-NOV-13
Lead (Pb)-Total			<0.020		mg/kg		0.02	29-NOV-13
Lithium (Li)-Total			<0.10		mg/kg		0.1	29-NOV-13
Manganese (Mn)-Total			<0.020		mg/kg		0.02	29-NOV-13
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	29-NOV-13
Nickel (Ni)-Total			<0.050		mg/kg		0.05	29-NOV-13
Rhenium (Re)-Total			<0.010		mg/kg		0.01	29-NOV-13
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	29-NOV-13
Selenium (Se)-Total			<0.10		mg/kg		0.1	29-NOV-13
Strontium (Sr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Tellurium (Te)-Total			<0.020		mg/kg		0.02	29-NOV-13
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Thorium (Th)-Total			<0.010		mg/kg		0.01	29-NOV-13
Tin (Sn)-Total			<0.10		mg/kg		0.1	29-NOV-13
Uranium (U)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Vanadium (V)-Total			<0.10		mg/kg		0.1	29-NOV-13
Yttrium (Y)-Total			<0.010		mg/kg		0.01	29-NOV-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2752036							
WG1796067-1 MB								
Zinc (Zn)-Total			<0.50		mg/kg		0.5	29-NOV-13
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	29-NOV-13
WG1796067-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	29-NOV-13
Antimony (Sb)-Total			<0.010		mg/kg		0.01	29-NOV-13
Arsenic (As)-Total			<0.020		mg/kg		0.02	29-NOV-13
Barium (Ba)-Total			<0.050		mg/kg		0.05	29-NOV-13
Beryllium (Be)-Total			<0.010		mg/kg		0.01	29-NOV-13
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	29-NOV-13
Boron (B)-Total			<1.0		mg/kg		1	29-NOV-13
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	29-NOV-13
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	29-NOV-13
Chromium (Cr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Cobalt (Co)-Total			<0.020		mg/kg		0.02	29-NOV-13
Copper (Cu)-Total			<0.050		mg/kg		0.05	29-NOV-13
Gallium (Ga)-Total			<0.020		mg/kg		0.02	29-NOV-13
Iron (Fe)-Total			<1.0		mg/kg		1	29-NOV-13
Lead (Pb)-Total			<0.020		mg/kg		0.02	29-NOV-13
Lithium (Li)-Total			<0.10		mg/kg		0.1	29-NOV-13
Manganese (Mn)-Total			<0.020		mg/kg		0.02	29-NOV-13
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	29-NOV-13
Nickel (Ni)-Total			<0.050		mg/kg		0.05	29-NOV-13
Rhenium (Re)-Total			<0.010		mg/kg		0.01	29-NOV-13
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	29-NOV-13
Selenium (Se)-Total			<0.10		mg/kg		0.1	29-NOV-13
Strontium (Sr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Tellurium (Te)-Total			<0.020		mg/kg		0.02	29-NOV-13
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Thorium (Th)-Total			<0.010		mg/kg		0.01	29-NOV-13
Tin (Sn)-Total			<0.10		mg/kg		0.1	29-NOV-13
Uranium (U)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Vanadium (V)-Total			<0.10		mg/kg		0.1	29-NOV-13
Yttrium (Y)-Total			<0.010		mg/kg		0.01	29-NOV-13
Zinc (Zn)-Total			<0.50		mg/kg		0.5	29-NOV-13



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MET-DRY-HRMS-VA	Tissue							
Batch	R2752036							
WG1796067-2 MB								
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	29-NOV-13
WG1796067-3 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	29-NOV-13
Antimony (Sb)-Total			<0.010		mg/kg		0.01	29-NOV-13
Arsenic (As)-Total			<0.020		mg/kg		0.02	29-NOV-13
Barium (Ba)-Total			<0.050		mg/kg		0.05	29-NOV-13
Beryllium (Be)-Total			<0.010		mg/kg		0.01	29-NOV-13
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	29-NOV-13
Boron (B)-Total			<1.0		mg/kg		1	29-NOV-13
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	29-NOV-13
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	29-NOV-13
Chromium (Cr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Cobalt (Co)-Total			<0.020		mg/kg		0.02	29-NOV-13
Copper (Cu)-Total			<0.050		mg/kg		0.05	29-NOV-13
Gallium (Ga)-Total			<0.020		mg/kg		0.02	29-NOV-13
Iron (Fe)-Total			<1.0		mg/kg		1	29-NOV-13
Lead (Pb)-Total			<0.020		mg/kg		0.02	29-NOV-13
Lithium (Li)-Total			<0.10		mg/kg		0.1	29-NOV-13
Manganese (Mn)-Total			<0.020		mg/kg		0.02	29-NOV-13
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	29-NOV-13
Nickel (Ni)-Total			<0.050		mg/kg		0.05	29-NOV-13
Rhenium (Re)-Total			<0.010		mg/kg		0.01	29-NOV-13
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	29-NOV-13
Selenium (Se)-Total			<0.10		mg/kg		0.1	29-NOV-13
Strontium (Sr)-Total			<0.050		mg/kg		0.05	29-NOV-13
Tellurium (Te)-Total			<0.020		mg/kg		0.02	29-NOV-13
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Thorium (Th)-Total			<0.010		mg/kg		0.01	29-NOV-13
Tin (Sn)-Total			<0.10		mg/kg		0.1	29-NOV-13
Uranium (U)-Total			<0.0020		mg/kg		0.002	29-NOV-13
Vanadium (V)-Total			<0.10		mg/kg		0.1	29-NOV-13
Yttrium (Y)-Total			<0.010		mg/kg		0.01	29-NOV-13
Zinc (Zn)-Total			<0.50		mg/kg		0.5	29-NOV-13
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	29-NOV-13



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MET-DRY-HRMS-VA	Tissue							
Batch	R2752039							
WG1794878-4 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.007		mg/kg		0.001-0.021	28-NOV-13
Arsenic (As)-Total			85.3		%		70-130	28-NOV-13
Barium (Ba)-Total			74.3		%		70-130	28-NOV-13
Boron (B)-Total			3.7		mg/kg		3.5-5.5	28-NOV-13
Cadmium (Cd)-Total			91.4		%		70-130	28-NOV-13
Cobalt (Co)-Total			86.2		%		70-130	28-NOV-13
Copper (Cu)-Total			83.9		%		70-130	28-NOV-13
Iron (Fe)-Total			83.9		%		70-130	28-NOV-13
Lead (Pb)-Total			92.8		%		70-130	28-NOV-13
Manganese (Mn)-Total			83.8		%		70-130	28-NOV-13
Nickel (Ni)-Total			82.7		%		70-130	28-NOV-13
Rubidium (Rb)-Total			85.9		%		70-130	28-NOV-13
Selenium (Se)-Total			79.5		%		70-130	28-NOV-13
Strontium (Sr)-Total			81.8		%		70-130	28-NOV-13
Thorium (Th)-Total			0.027		mg/kg		0.027-0.047	28-NOV-13
Tin (Sn)-Total			0.02		mg/kg		0-0.13	28-NOV-13
Uranium (U)-Total			93.5		%		70-130	28-NOV-13
Vanadium (V)-Total			81.0		%		70-130	28-NOV-13
Zinc (Zn)-Total			91.2		%		70-130	28-NOV-13
WG1794878-5 CRM		VA-NIST-1547						
Aluminum (Al)-Total			85.7		%		70-130	28-NOV-13
Antimony (Sb)-Total			0.017		mg/kg		0.01-0.03	28-NOV-13
Arsenic (As)-Total			0.049		mg/kg		0.04-0.08	28-NOV-13
Barium (Ba)-Total			80.7		%		70-130	28-NOV-13
Boron (B)-Total			72.0		%		70-130	28-NOV-13
Cadmium (Cd)-Total			0.018		mg/kg		0.016-0.036	28-NOV-13
Cobalt (Co)-Total			0.045		mg/kg		0.04-0.08	28-NOV-13
Copper (Cu)-Total			77.1		%		70-130	28-NOV-13
Iron (Fe)-Total			76.8		%		70-130	28-NOV-13
Lead (Pb)-Total			79.3		%		70-130	28-NOV-13
Manganese (Mn)-Total			80.4		%		70-130	28-NOV-13
Molybdenum (Mo)-Total			0.056		mg/kg		0.04-0.08	28-NOV-13
Rubidium (Rb)-Total			82.1		%		70-130	28-NOV-13
Selenium (Se)-Total			0.09		mg/kg		0.02-0.22	28-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA		Tissue						
Batch	R2752039							
WG1794878-5 CRM		VA-NIST-1547						
Strontium (Sr)-Total			86.4		%		70-130	28-NOV-13
Thorium (Th)-Total			72.9		%		70-130	28-NOV-13
Uranium (U)-Total			71.8		%		70-130	28-NOV-13
Vanadium (V)-Total			71.7		%		70-130	28-NOV-13
Zinc (Zn)-Total			80.2		%		70-130	28-NOV-13
WG1794878-3 DUP		L1350062-8						
Aluminum (Al)-Total		2.7	2.8		mg/kg	5.3	30	28-NOV-13
Antimony (Sb)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Arsenic (As)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	28-NOV-13
Barium (Ba)-Total		6.33	5.97		mg/kg	5.8	30	28-NOV-13
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Boron (B)-Total		4.6	4.4		mg/kg	2.6	30	28-NOV-13
Cadmium (Cd)-Total		0.013	0.014		mg/kg	2.4	30	28-NOV-13
Cesium (Cs)-Total		0.276	0.278		mg/kg	0.5	30	28-NOV-13
Chromium (Cr)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	30	28-NOV-13
Cobalt (Co)-Total		0.092	0.096		mg/kg	4.6	30	28-NOV-13
Copper (Cu)-Total		7.29	7.41		mg/kg	1.7	30	28-NOV-13
Gallium (Ga)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	28-NOV-13
Iron (Fe)-Total		23.8	24.8		mg/kg	4.1	30	28-NOV-13
Lead (Pb)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	28-NOV-13
Lithium (Li)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	28-NOV-13
Manganese (Mn)-Total		54.1	55.1		mg/kg	1.8	30	28-NOV-13
Molybdenum (Mo)-Total		0.299	0.294		mg/kg	1.8	30	28-NOV-13
Nickel (Ni)-Total		2.58	2.68		mg/kg	3.9	30	28-NOV-13
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Rubidium (Rb)-Total		39.5	39.5		mg/kg	0.0	30	28-NOV-13
Selenium (Se)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	28-NOV-13
Strontium (Sr)-Total		10.6	11.0		mg/kg	3.5	50	28-NOV-13
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	28-NOV-13
Thallium (Tl)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	28-NOV-13
Thorium (Th)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Tin (Sn)-Total		0.13	0.13		mg/kg	0.5	30	28-NOV-13
Uranium (U)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	28-NOV-13



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MET-DRY-HRMS-VA								
	Tissue							
Batch	R2752039							
WG1794878-3	DUP	L1350062-8						
Vanadium (V)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	28-NOV-13
Yttrium (Y)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	28-NOV-13
Zinc (Zn)-Total		15.5	15.5		mg/kg	0.2	30	28-NOV-13
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	28-NOV-13
WG1794878-1	MB							
Aluminum (Al)-Total			<2.0		mg/kg		2	28-NOV-13
Antimony (Sb)-Total			<0.010		mg/kg		0.01	28-NOV-13
Arsenic (As)-Total			<0.020		mg/kg		0.02	28-NOV-13
Barium (Ba)-Total			<0.050		mg/kg		0.05	28-NOV-13
Beryllium (Be)-Total			<0.010		mg/kg		0.01	28-NOV-13
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	28-NOV-13
Boron (B)-Total			<1.0		mg/kg		1	28-NOV-13
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	28-NOV-13
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	28-NOV-13
Chromium (Cr)-Total			<0.050		mg/kg		0.05	28-NOV-13
Cobalt (Co)-Total			<0.020		mg/kg		0.02	28-NOV-13
Copper (Cu)-Total			<0.050		mg/kg		0.05	28-NOV-13
Gallium (Ga)-Total			<0.020		mg/kg		0.02	28-NOV-13
Iron (Fe)-Total			<1.0		mg/kg		1	28-NOV-13
Lead (Pb)-Total			<0.020		mg/kg		0.02	28-NOV-13
Lithium (Li)-Total			<0.10		mg/kg		0.1	28-NOV-13
Manganese (Mn)-Total			<0.020		mg/kg		0.02	28-NOV-13
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	28-NOV-13
Nickel (Ni)-Total			<0.050		mg/kg		0.05	28-NOV-13
Rhenium (Re)-Total			<0.010		mg/kg		0.01	28-NOV-13
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	28-NOV-13
Selenium (Se)-Total			<0.10		mg/kg		0.1	28-NOV-13
Strontium (Sr)-Total			<0.050		mg/kg		0.05	28-NOV-13
Tellurium (Te)-Total			<0.020		mg/kg		0.02	28-NOV-13
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	28-NOV-13
Thorium (Th)-Total			<0.010		mg/kg		0.01	28-NOV-13
Tin (Sn)-Total			<0.10		mg/kg		0.1	28-NOV-13
Uranium (U)-Total			<0.0020		mg/kg		0.002	28-NOV-13
Vanadium (V)-Total			<0.10		mg/kg		0.1	28-NOV-13

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MET-DRY-HRMS-VA	Tissue							
Batch	R2752039							
WG1794878-1 MB								
Yttrium (Y)-Total			<0.010		mg/kg		0.01	28-NOV-13
Zinc (Zn)-Total			<0.50		mg/kg		0.5	28-NOV-13
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	28-NOV-13
WG1794878-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	28-NOV-13
Antimony (Sb)-Total			<0.010		mg/kg		0.01	28-NOV-13
Arsenic (As)-Total			<0.020		mg/kg		0.02	28-NOV-13
Barium (Ba)-Total			<0.050		mg/kg		0.05	28-NOV-13
Beryllium (Be)-Total			<0.010		mg/kg		0.01	28-NOV-13
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	28-NOV-13
Boron (B)-Total			<1.0		mg/kg		1	28-NOV-13
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	28-NOV-13
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	28-NOV-13
Chromium (Cr)-Total			<0.050		mg/kg		0.05	28-NOV-13
Cobalt (Co)-Total			<0.020		mg/kg		0.02	28-NOV-13
Copper (Cu)-Total			<0.050		mg/kg		0.05	28-NOV-13
Gallium (Ga)-Total			<0.020		mg/kg		0.02	28-NOV-13
Iron (Fe)-Total			<1.0		mg/kg		1	28-NOV-13
Lead (Pb)-Total			<0.020		mg/kg		0.02	28-NOV-13
Lithium (Li)-Total			<0.10		mg/kg		0.1	28-NOV-13
Manganese (Mn)-Total			<0.020		mg/kg		0.02	28-NOV-13
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	28-NOV-13
Nickel (Ni)-Total			<0.050		mg/kg		0.05	28-NOV-13
Rhenium (Re)-Total			<0.010		mg/kg		0.01	28-NOV-13
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	28-NOV-13
Selenium (Se)-Total			<0.10		mg/kg		0.1	28-NOV-13
Strontium (Sr)-Total			<0.050		mg/kg		0.05	28-NOV-13
Tellurium (Te)-Total			<0.020		mg/kg		0.02	28-NOV-13
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	28-NOV-13
Thorium (Th)-Total			<0.010		mg/kg		0.01	28-NOV-13
Tin (Sn)-Total			<0.10		mg/kg		0.1	28-NOV-13
Uranium (U)-Total			<0.0020		mg/kg		0.002	28-NOV-13
Vanadium (V)-Total			<0.10		mg/kg		0.1	28-NOV-13
Yttrium (Y)-Total			<0.010		mg/kg		0.01	28-NOV-13

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MET-DRY-HRMS-VA								
	Tissue							
Batch	R2752039							
WG1794878-2 MB								
Zinc (Zn)-Total			<0.50		mg/kg		0.5	28-NOV-13
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	28-NOV-13
Batch	R2753385							
WG1794878-5 CRM		VA-NIST-1547						
Chromium (Cr)-Total			70.4		%		70-130	29-NOV-13
MET-DRY-ICP-VA								
	Tissue							
Batch	R2753162							
WG1796067-1 MB								
Calcium (Ca)-Total			<60		mg/kg		60	29-NOV-13
Magnesium (Mg)-Total			<100		mg/kg		100	29-NOV-13
Phosphorus (P)-Total			<400		mg/kg		400	29-NOV-13
Potassium (K)-Total			<2000		mg/kg		2000	29-NOV-13
Sodium (Na)-Total			<2000		mg/kg		2000	29-NOV-13
WG1796067-2 MB								
Calcium (Ca)-Total			<60		mg/kg		60	29-NOV-13
Magnesium (Mg)-Total			<100		mg/kg		100	29-NOV-13
Phosphorus (P)-Total			<400		mg/kg		400	29-NOV-13
Potassium (K)-Total			<2000		mg/kg		2000	29-NOV-13
Sodium (Na)-Total			<2000		mg/kg		2000	29-NOV-13
WG1796067-3 MB								
Calcium (Ca)-Total			<60		mg/kg		60	29-NOV-13
Magnesium (Mg)-Total			<100		mg/kg		100	29-NOV-13
Phosphorus (P)-Total			<400		mg/kg		400	29-NOV-13
Potassium (K)-Total			<2000		mg/kg		2000	29-NOV-13
Sodium (Na)-Total			<2000		mg/kg		2000	29-NOV-13
Batch	R2753414							
WG1794878-4 CRM		VA-NIST-1566B						
Calcium (Ca)-Total			93.1		%		70-130	02-DEC-13
Magnesium (Mg)-Total			94.9		%		70-130	02-DEC-13
Potassium (K)-Total			98.8		%		70-130	02-DEC-13
Sodium (Na)-Total			95.6		%		70-130	02-DEC-13
WG1794878-5 CRM		VA-NIST-1547						
Calcium (Ca)-Total			88.5		%		70-130	02-DEC-13
Magnesium (Mg)-Total			89.7		%		70-130	02-DEC-13

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MET-DRY-ICP-VA		Tissue						
Batch	R2753414							
WG1794878-5	CRM	VA-NIST-1547						
Phosphorus (P)-Total			91.2		%		70-130	02-DEC-13
Potassium (K)-Total			98.6		%		70-130	02-DEC-13
WG1794878-3	DUP	L1350062-8						
Calcium (Ca)-Total		1900	1860		mg/kg	2.4	50	02-DEC-13
Magnesium (Mg)-Total		1070	1060		mg/kg	1.2	30	02-DEC-13
Phosphorus (P)-Total		1080	980		mg/kg	9.8	30	02-DEC-13
Potassium (K)-Total		8300	8290		mg/kg	0.1	30	02-DEC-13
Sodium (Na)-Total		<100	<100	RPD-NA	mg/kg	N/A	30	02-DEC-13
WG1794878-1	MB							
Calcium (Ca)-Total			<3.0		mg/kg		3	02-DEC-13
Magnesium (Mg)-Total			<5.0		mg/kg		5	02-DEC-13
Phosphorus (P)-Total			<20		mg/kg		20	02-DEC-13
Potassium (K)-Total			<100		mg/kg		100	02-DEC-13
Sodium (Na)-Total			<100		mg/kg		100	02-DEC-13
WG1794878-2	MB							
Calcium (Ca)-Total			<3.0		mg/kg		3	02-DEC-13
Magnesium (Mg)-Total			<5.0		mg/kg		5	02-DEC-13
Phosphorus (P)-Total			<20		mg/kg		20	02-DEC-13
Potassium (K)-Total			<100		mg/kg		100	02-DEC-13
Sodium (Na)-Total			<100		mg/kg		100	02-DEC-13
Batch	R2754123							
WG1796067-5	CRM	VA-NRC-TORT3						
WG1796067-6	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			100.6		%		70-130	02-DEC-13
Magnesium (Mg)-Total			104.0		%		70-130	02-DEC-13
Potassium (K)-Total			103.7		%		70-130	02-DEC-13
Sodium (Na)-Total			99.8		%		70-130	02-DEC-13
WG1796067-4	DUP	L1350062-1						
Calcium (Ca)-Total		4480	4350		mg/kg	2.8	50	02-DEC-13
Magnesium (Mg)-Total		770	670		mg/kg	14	30	02-DEC-13
Phosphorus (P)-Total		1510	1340		mg/kg	11	30	02-DEC-13
Potassium (K)-Total		7600	7100		mg/kg	6.2	30	02-DEC-13
Sodium (Na)-Total		<2000	<2000	RPD-NA	mg/kg	N/A	30	02-DEC-13
MET-WET-HRMS-VA		Tissue						



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MET-WET-HRMS-VA								
	Tissue							
Batch	R2751987							
WG1796067-5	CRM	VA-NRC-TORT3						
Arsenic (As)-Total			101.4		%		70-130	29-NOV-13
Cadmium (Cd)-Total			95.3		%		70-130	29-NOV-13
Chromium (Cr)-Total			77.4		%		70-130	29-NOV-13
Cobalt (Co)-Total			95.7		%		70-130	29-NOV-13
Copper (Cu)-Total			93.2		%		70-130	29-NOV-13
Iron (Fe)-Total			91.3		%		70-130	29-NOV-13
Lead (Pb)-Total			85.2		%		70-130	29-NOV-13
Manganese (Mn)-Total			91.8		%		70-130	29-NOV-13
Molybdenum (Mo)-Total			92.4		%		70-130	29-NOV-13
Nickel (Ni)-Total			92.2		%		70-130	29-NOV-13
Selenium (Se)-Total			85.5		%		70-130	29-NOV-13
Strontium (Sr)-Total			87.4		%		70-130	29-NOV-13
Vanadium (V)-Total			93.4		%		70-130	29-NOV-13
Zinc (Zn)-Total			90.1		%		70-130	29-NOV-13
WG1796067-6	CRM	VA-NIST-1566B						
Antimony (Sb)-Total			0.0085		mg/kg wwt		0.001-0.021	29-NOV-13
Arsenic (As)-Total			99.6		%		70-130	29-NOV-13
Barium (Ba)-Total			91.6		%		70-130	29-NOV-13
Boron (B)-Total			4.80		mg/kg wwt		3.5-5.5	29-NOV-13
Cadmium (Cd)-Total			105.7		%		70-130	29-NOV-13
Cobalt (Co)-Total			100.5		%		70-130	29-NOV-13
Copper (Cu)-Total			103.5		%		70-130	29-NOV-13
Iron (Fe)-Total			99.5		%		70-130	29-NOV-13
Lead (Pb)-Total			101.8		%		70-130	29-NOV-13
Manganese (Mn)-Total			102.5		%		70-130	29-NOV-13
Nickel (Ni)-Total			94.6		%		70-130	29-NOV-13
Rubidium (Rb)-Total			101.7		%		70-130	29-NOV-13
Selenium (Se)-Total			104.3		%		70-130	29-NOV-13
Strontium (Sr)-Total			92.6		%		70-130	29-NOV-13
Thorium (Th)-Total			70.4		%		70-130	29-NOV-13
Tin (Sn)-Total			0.023		mg/kg wwt		0-0.131	29-NOV-13
Vanadium (V)-Total			97.3		%		70-130	29-NOV-13
Zinc (Zn)-Total			106.5		%		70-130	29-NOV-13
WG1796067-4	DUP	L1350062-1						
Aluminum (Al)-Total		4.17	4.04		mg/kg wwt	3.3	30	29-NOV-13

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MET-WET-HRMS-VA Tissue								
Batch	R2751987							
WG1796067-4 DUP		L1350062-1						
Antimony (Sb)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Arsenic (As)-Total		0.0049	<0.0040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Barium (Ba)-Total		4.66	4.39		mg/kg wwt	6.1	30	29-NOV-13
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Boron (B)-Total		1.70	1.68		mg/kg wwt	1.2	30	29-NOV-13
Cadmium (Cd)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Cesium (Cs)-Total		0.131	0.139		mg/kg wwt	6.0	30	29-NOV-13
Chromium (Cr)-Total		<0.010	<0.010	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Cobalt (Co)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Copper (Cu)-Total		0.983	0.883		mg/kg wwt	11	30	29-NOV-13
Gallium (Ga)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Iron (Fe)-Total		2.93	2.75		mg/kg wwt	6.4	30	29-NOV-13
Lead (Pb)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Lithium (Li)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Manganese (Mn)-Total		49.1	47.7		mg/kg wwt	2.9	30	29-NOV-13
Molybdenum (Mo)-Total		0.0720	0.0728		mg/kg wwt	1.2	30	29-NOV-13
Nickel (Ni)-Total		0.099	0.088		mg/kg wwt	11	30	29-NOV-13
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Rubidium (Rb)-Total		6.43	6.56		mg/kg wwt	1.9	30	29-NOV-13
Selenium (Se)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Strontium (Sr)-Total		1.35	1.47		mg/kg wwt	8.5	50	29-NOV-13
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Thallium (Tl)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Thorium (Th)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Tin (Sn)-Total		0.097	0.094		mg/kg wwt	3.2	30	29-NOV-13
Uranium (U)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Vanadium (V)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Yttrium (Y)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
Zinc (Zn)-Total		1.17	1.02		mg/kg wwt	13	30	29-NOV-13
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	29-NOV-13
WG1796067-1 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	29-NOV-13
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2751987							
WG1796067-1 MB								
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Boron (B)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	29-NOV-13
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	29-NOV-13
WG1796067-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	29-NOV-13
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2751987							
WG1796067-2 MB								
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Boron (B)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	29-NOV-13
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	29-NOV-13
WG1796067-3 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	29-NOV-13
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2751987							
WG1796067-3	MB							
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Boron (B)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	29-NOV-13
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	29-NOV-13
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	29-NOV-13
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	29-NOV-13
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	29-NOV-13
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	29-NOV-13
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	29-NOV-13
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	29-NOV-13
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	29-NOV-13
Batch	R2752020							
WG1794878-4	CRM							
		VA-NIST-1566B						
Antimony (Sb)-Total			0.0072		mg/kg wwt		0.001-0.021	28-NOV-13
Arsenic (As)-Total			85.3		%		70-130	28-NOV-13
Barium (Ba)-Total			74.3		%		70-130	28-NOV-13
Boron (B)-Total			3.68		mg/kg wwt		3.5-5.5	28-NOV-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2752020							
WG1794878-4	CRM	VA-NIST-1566B						
Cadmium (Cd)-Total			91.4		%		70-130	28-NOV-13
Cobalt (Co)-Total			86.2		%		70-130	28-NOV-13
Copper (Cu)-Total			83.9		%		70-130	28-NOV-13
Iron (Fe)-Total			83.9		%		70-130	28-NOV-13
Lead (Pb)-Total			92.8		%		70-130	28-NOV-13
Manganese (Mn)-Total			83.8		%		70-130	28-NOV-13
Nickel (Ni)-Total			82.7		%		70-130	28-NOV-13
Rubidium (Rb)-Total			85.9		%		70-130	28-NOV-13
Selenium (Se)-Total			79.5		%		70-130	28-NOV-13
Strontium (Sr)-Total			81.8		%		70-130	28-NOV-13
Thorium (Th)-Total			73.3		%		70-130	28-NOV-13
Tin (Sn)-Total			0.022		mg/kg wwt		0-0.131	28-NOV-13
Vanadium (V)-Total			81.0		%		70-130	28-NOV-13
Zinc (Zn)-Total			91.2		%		70-130	28-NOV-13
WG1794878-5	CRM	VA-NIST-1547						
Aluminum (Al)-Total			85.7		%		70-130	28-NOV-13
Antimony (Sb)-Total			0.0168		mg/kg wwt		0.01-0.03	28-NOV-13
Arsenic (As)-Total			0.0492		mg/kg wwt		0.04-0.08	28-NOV-13
Barium (Ba)-Total			80.7		%		70-130	28-NOV-13
Boron (B)-Total			72.0		%		70-130	28-NOV-13
Cadmium (Cd)-Total			0.0175		mg/kg wwt		0.016-0.036	28-NOV-13
Cobalt (Co)-Total			0.0447		mg/kg wwt		0.04-0.08	28-NOV-13
Copper (Cu)-Total			77.1		%		70-130	28-NOV-13
Iron (Fe)-Total			76.8		%		70-130	28-NOV-13
Lead (Pb)-Total			79.3		%		70-130	28-NOV-13
Manganese (Mn)-Total			80.4		%		70-130	28-NOV-13
Molybdenum (Mo)-Total			0.0561		mg/kg wwt		0.04-0.08	28-NOV-13
Rubidium (Rb)-Total			82.1		%		70-130	28-NOV-13
Selenium (Se)-Total			0.093		mg/kg wwt		0.02-0.22	28-NOV-13
Strontium (Sr)-Total			86.4		%		70-130	28-NOV-13
Thorium (Th)-Total			72.9		%		70-130	28-NOV-13
Vanadium (V)-Total			71.7		%		70-130	28-NOV-13
Zinc (Zn)-Total			80.2		%		70-130	28-NOV-13
WG1794878-3	DUP	L1350062-8						
Aluminum (Al)-Total		<0.40	0.40	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA Tissue								
Batch	R2752020							
WG1794878-3 DUP		L1350062-8						
Antimony (Sb)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Arsenic (As)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Barium (Ba)-Total		0.916	0.864		mg/kg wwt	5.8	30	28-NOV-13
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Boron (B)-Total		0.66	0.64		mg/kg wwt	2.6	30	28-NOV-13
Cadmium (Cd)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Cesium (Cs)-Total		0.0400	0.0402		mg/kg wwt	0.5	30	28-NOV-13
Chromium (Cr)-Total		<0.010	<0.010	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Cobalt (Co)-Total		0.0133	0.0139		mg/kg wwt	4.6	30	28-NOV-13
Copper (Cu)-Total		1.05	1.07		mg/kg wwt	1.7	30	28-NOV-13
Gallium (Ga)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Iron (Fe)-Total		3.45	3.59		mg/kg wwt	4.1	30	28-NOV-13
Lead (Pb)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Lithium (Li)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Manganese (Mn)-Total		7.82	7.97		mg/kg wwt	1.8	30	28-NOV-13
Molybdenum (Mo)-Total		0.0432	0.0425		mg/kg wwt	1.8	30	28-NOV-13
Nickel (Ni)-Total		0.373	0.388		mg/kg wwt	3.9	30	28-NOV-13
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Rubidium (Rb)-Total		5.72	5.72		mg/kg wwt	0.0	30	28-NOV-13
Selenium (Se)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Strontium (Sr)-Total		1.53	1.59		mg/kg wwt	3.5	50	28-NOV-13
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Thallium (Tl)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Thorium (Th)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Tin (Sn)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Uranium (U)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Vanadium (V)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Yttrium (Y)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
Zinc (Zn)-Total		2.24	2.25		mg/kg wwt	0.2	30	28-NOV-13
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	28-NOV-13
WG1794878-1 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	28-NOV-13
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA	Tissue							
Batch	R2752020							
WG1794878-1 MB								
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Boron (B)-Total			<0.20		mg/kg wwt		0.2	28-NOV-13
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	28-NOV-13
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	28-NOV-13
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	28-NOV-13
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	28-NOV-13
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	28-NOV-13
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	28-NOV-13
WG1794878-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	28-NOV-13
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA								
	Tissue							
Batch	R2752020							
WG1794878-2	MB							
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Boron (B)-Total			<0.20		mg/kg wwt		0.2	28-NOV-13
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	28-NOV-13
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	28-NOV-13
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	28-NOV-13
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	28-NOV-13
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	28-NOV-13
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	28-NOV-13
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	28-NOV-13
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	28-NOV-13
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	28-NOV-13
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	28-NOV-13
Batch	R2753207							
WG1794878-5	CRM	VA-NIST-1547						
Chromium (Cr)-Total			70.4		%		70-130	29-NOV-13
MET-WET-ICP-VA								
	Tissue							



Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-ICP-VA								
	Tissue							
Batch	R2753151							
WG1796067-1	MB							
Calcium (Ca)-Total			<10		mg/kg wwt		10	29-NOV-13
Magnesium (Mg)-Total			<20		mg/kg wwt		20	29-NOV-13
Phosphorus (P)-Total			<100		mg/kg wwt		100	29-NOV-13
Potassium (K)-Total			<400		mg/kg wwt		400	29-NOV-13
Sodium (Na)-Total			<400		mg/kg wwt		400	29-NOV-13
WG1796067-2	MB							
Calcium (Ca)-Total			<10		mg/kg wwt		10	29-NOV-13
Magnesium (Mg)-Total			<20		mg/kg wwt		20	29-NOV-13
Phosphorus (P)-Total			<100		mg/kg wwt		100	29-NOV-13
Potassium (K)-Total			<400		mg/kg wwt		400	29-NOV-13
Sodium (Na)-Total			<400		mg/kg wwt		400	29-NOV-13
WG1796067-3	MB							
Calcium (Ca)-Total			<10		mg/kg wwt		10	29-NOV-13
Magnesium (Mg)-Total			<20		mg/kg wwt		20	29-NOV-13
Phosphorus (P)-Total			<100		mg/kg wwt		100	29-NOV-13
Potassium (K)-Total			<400		mg/kg wwt		400	29-NOV-13
Sodium (Na)-Total			<400		mg/kg wwt		400	29-NOV-13
Batch	R2753411							
WG1794878-4	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			93.1		%		70-130	02-DEC-13
Magnesium (Mg)-Total			94.9		%		70-130	02-DEC-13
Potassium (K)-Total			98.8		%		70-130	02-DEC-13
Sodium (Na)-Total			95.6		%		70-130	02-DEC-13
WG1794878-5	CRM	VA-NIST-1547						
Calcium (Ca)-Total			88.5		%		70-130	02-DEC-13
Magnesium (Mg)-Total			89.7		%		70-130	02-DEC-13
Phosphorus (P)-Total			91.2		%		70-130	02-DEC-13
Potassium (K)-Total			98.6		%		70-130	02-DEC-13
WG1794878-3	DUP	L1350062-8						
Calcium (Ca)-Total		275	268		mg/kg wwt	2.4	50	02-DEC-13
Magnesium (Mg)-Total		155	153		mg/kg wwt	1.2	30	02-DEC-13
Phosphorus (P)-Total		156	142		mg/kg wwt	9.8	30	02-DEC-13
Potassium (K)-Total		1200	1200		mg/kg wwt	0.1	30	02-DEC-13
Sodium (Na)-Total		<20	<20	RPD-NA	mg/kg wwt	N/A	30	02-DEC-13
WG1794878-1	MB							

Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-ICP-VA								
	Tissue							
Batch	R2753411							
WG1794878-1	MB							
Calcium (Ca)-Total			<0.50		mg/kg wwt		0.5	02-DEC-13
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	02-DEC-13
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	02-DEC-13
Potassium (K)-Total			<20		mg/kg wwt		20	02-DEC-13
Sodium (Na)-Total			<20		mg/kg wwt		20	02-DEC-13
WG1794878-2	MB							
Calcium (Ca)-Total			<0.50		mg/kg wwt		0.5	02-DEC-13
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	02-DEC-13
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	02-DEC-13
Potassium (K)-Total			<20		mg/kg wwt		20	02-DEC-13
Sodium (Na)-Total			<20		mg/kg wwt		20	02-DEC-13
Batch	R2754121							
WG1796067-5	CRM	VA-NRC-TORT3						
WG1796067-6	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			100.6		%		70-130	02-DEC-13
Magnesium (Mg)-Total			104.0		%		70-130	02-DEC-13
Potassium (K)-Total			103.7		%		70-130	02-DEC-13
Sodium (Na)-Total			99.8		%		70-130	02-DEC-13
WG1796067-4	DUP	L1350062-1						
Calcium (Ca)-Total		669	651		mg/kg wwt	2.8	50	02-DEC-13
Magnesium (Mg)-Total		115	100		mg/kg wwt	14	30	02-DEC-13
Phosphorus (P)-Total		230	200		mg/kg wwt	11	30	02-DEC-13
Potassium (K)-Total		1130	1060		mg/kg wwt	6.2	30	02-DEC-13
Sodium (Na)-Total		<400	<400	RPD-NA	mg/kg wwt	N/A	30	02-DEC-13
MOISTURE-TISS-VA								
	Tissue							
Batch	R2749263							
WG1795059-1	DUP	L1350062-3						
% Moisture		86.5	85.9		%	0.7	20	25-NOV-13

Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1350062

Report Date: 04-DEC-13

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Metals							
Mercury in Soil by CVAFS							
	11	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	12	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	13	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	14	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	15	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	16	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	17	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	18	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	19	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT
	20	19-AUG-13	01-OCT-13 15:49	28	43	days	EHT

Legend & Qualifier Definitions:

- EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
- EHTR: Exceeded ALS recommended hold time prior to sample receipt.
- EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
- EHT: Exceeded ALS recommended hold time prior to analysis.
- Rec. HT: ALS recommended hold time (see units).

Notes*:

Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1350062 were received on 20-AUG-13 09:30.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



L1350062-COFC

Request Form
58 9878

10-050130

Page 1 of 2

Environmental Division

Report To	Report Format / Distribution	Service Requested: (Rush subject to availability)
Company: <u>Goldier Associates</u>	Standard: <input checked="" type="checkbox"/> Other (specify):	Regular (Standard Turnaround Times)
Contact: <u>Audrey Wagenaar</u>	Select: PDF <input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> Digital <input type="checkbox"/> Fax	Priority, Date Req'd: _____ (Surcharges apply)
Address: <u>500 - 4260 Still Creek Dr</u>	Email 1: <u>awagenaar@golder.com</u>	Emergency (1 Business Day) - 100% Surcharge
<u>Burnaby, BC V5C 6C6</u>	Email 2: <u>lcash@golder.com</u>	For Emergency < 1 Day, ASAP or Weekend - Contact ALS
Phone: <u>604-296-4200</u> Fax: <u>604-298-5253</u>	Analysis Request	

Invoice To Same as Report? (circle) Yes or No (if No, provide details)	Client / Project Information	(Indicate Filtered or Preserved, F/P)										Number of Containers		
Copy of Invoice with Report? (circle) Yes or No	Job #: <u>11-1422-0046</u>													
Company:	PO / AFE: <u>Burnco Rock Products</u>													
Contact:	LSD:													
Address:	Quote #: <u>1350062</u>													
Phone:														
Fax:														
Lab Work Order # (lab use only)	<u>L1350062</u>	ALS Amber	Sampler:											
		Contact: <u>Springer</u>	<u>LC, MD</u>											

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type											Number of Containers			
	13-BRP-B-01	19-Aug-13		berry														
	13-BRP-B-02																	
	13-BRP-B-03																	
	13-BRP-B-04																	
	13-BRP-B-05																	
	13-BRP-B-06																	
	13-BRP-B-07																	
	13-BRP-B-08																	
	13-BRP-B-09																	
	13-BRP-B-07D																	

Special Instructions / Regulations / Hazardous Details
 Keep frozen, please place samples on hold, contact Audrey Wagenaar for instructions regarding analysis

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT/RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)				Observations:
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:		Yes / No ? If Yes add SIF
<u>[Signature]</u>	<u>Aug 20/13</u>		<u>Britt</u>	<u>Aug 20</u>	<u>9:30</u>	<u>1.0 °C</u>					



L1350062-COFC

Environmental Division

Report To	Report Format / Distribution	Service Requested: (Rush subject to availability)
Company: <u>Goldor Associates</u>	Standard: <input checked="" type="checkbox"/> <u>Standard</u> Other (specify):	Regular (Standard Turnaround Times))
Contact: <u>Audrey Wagenaar</u>	Select: PDF <input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> Digital <input type="checkbox"/> Fax	Priority, Date Req'd: _____ (Surcharges apply)
Address: <u>500 - 4260 Still Creek Dr</u>	Email 1: <u>awagenaar@goldor.com</u>	Emergency (1 Business Day) - 100% Surcharge
<u>Burnaby, BC V5C 6C6</u>	Email 2: <u>lcash@goldor.com</u>	For Emergency < 1 Day, ASAP or Weekend - Contact ALS
Phone: <u>604-296-4200</u> Fax: <u>604-298-5253</u>		Analysis Request

Invoice To Same as Report? (circle) <u>Yes</u> or No (if No, provide details)	Client / Project Information	(Indicate Filtered or Preserved, F/P)										Number of Containers																																																
Copy of Invoice with Report? (circle) Yes or <u>No</u>	Job #: <u>11-1422-0046</u>	<table border="1"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																																																										
Company:	PO / AFE: <u>Burnco Rock Products</u>																																																											
Contact:	LSD:																																																											
Address:																																																												
Phone:	Fax:	Quote #:	HOLD																																																									
Lab Work Order # (lab use only)	ALS Amber Contact: <u>Springer</u>	Sampler: <u>LC, MD</u>																																																										

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type														
13-BRP-S-01		19-Aug-13		soil	✓													2
13-BRP-S-02		↓		↓	✓													2
13-BRP-S-03		↓		↓	✓													2
13-BRP-S-04		↓		↓	✓													2
13-BRP-S-05		↓		↓	✓													2
13-BRP-S-06		↓		↓	✓													2
13-BRP-S-07		↓		↓	✓													2
13-BRP-S-08		↓		↓	✓													2
13-BRP-S-09		↓		↓	✓													2
13-BRP-S-07D		↓		↓	✓													2

Special Instructions / Regulations / Hazardous Details

please place samples on hold, contact Audrey Wagenaar for instructions regarding the analysis needed

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			Observations:
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Yes / No? If Yes add SIF
<u>LCash</u>	<u>Aug 20/13</u>		<u>Britt</u>	<u>Aug 20</u>	<u>9:30</u>	<u>3.5 °C</u>				



GOLDER ASSOCIATES LTD.
ATTN: Ann-Marie Norris
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6

Date Received: 05-DEC-13
Report Date: 27-FEB-14 10:01 (MT)
Version: FINAL

Client Phone: 604-298-6623

Certificate of Analysis

Lab Work Order #: L1400375
Project P.O. #: NOT SUBMITTED
Job Reference: 11-1422-0046/2220
C of C Numbers: 10-034377, 10-034384
Legal Site Desc:

Amber Springer
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-1	L1400375-2	L1400375-3	L1400375-4	L1400375-5
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-1 MUSCLE	CP CRAB-TS-2 MUSCLE	CP CRAB-TS-3 MUSCLE	CP CRAB-TS-4 MUSCLE	CP CRAB-TS-5 MUSCLE
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)		81.5	84.2	84.2	81.0	82.0
Metals	Aluminum (Al)-Total (mg/kg)		5.3	7.0	22.2	19.5	12.0
	Aluminum (Al)-Total (mg/kg wwt)		0.98	1.11	3.52	3.71	2.15
	Antimony (Sb)-Total (mg/kg)		<0.010	<0.010	0.014	<0.010	0.015
	Antimony (Sb)-Total (mg/kg wwt)		<0.0020	<0.0020	0.0023	<0.0020	0.0028
	Arsenic (As)-Total (mg/kg)		20.3	19.5	59.9	18.4	64.6
	Arsenic (As)-Total (mg/kg wwt)		3.76	3.10	9.48	3.50	11.6
	Barium (Ba)-Total (mg/kg)		0.079	0.132	0.299	0.374	0.265
	Barium (Ba)-Total (mg/kg wwt)		0.015	0.021	0.047	0.071	0.048
	Beryllium (Be)-Total (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Bismuth (Bi)-Total (mg/kg)		<0.010	<0.010	0.028	<0.010	0.035
	Bismuth (Bi)-Total (mg/kg wwt)		<0.0020	<0.0020	0.0044	<0.0020	0.0064
	Boron (B)-Total (mg/kg)		3.8	5.5	8.7	5.9	7.6
	Boron (B)-Total (mg/kg wwt)		0.71	0.88	1.38	1.12	1.37
	Cadmium (Cd)-Total (mg/kg)		0.111	0.114	0.088	0.045	0.080
	Cadmium (Cd)-Total (mg/kg wwt)		0.0205	0.0180	0.0139	0.0086	0.0144
	Calcium (Ca)-Total (mg/kg)		3460	5300	4310	4880	4240
	Calcium (Ca)-Total (mg/kg wwt)		642	840	682	927	764
	Cesium (Cs)-Total (mg/kg)		0.0180	0.0192	0.0277	0.0179	0.0177
	Cesium (Cs)-Total (mg/kg wwt)		0.0033	0.0030	0.0044	0.0034	0.0032
	Chromium (Cr)-Total (mg/kg)		0.079	0.086	<0.050	0.060	<0.050
	Chromium (Cr)-Total (mg/kg wwt)		0.015	0.014	<0.010	0.011	<0.010
	Cobalt (Co)-Total (mg/kg)		0.116	0.199	0.258	0.193	0.288
	Cobalt (Co)-Total (mg/kg wwt)		0.0215	0.0315	0.0408	0.0368	0.0518
	Copper (Cu)-Total (mg/kg)		28.0	34.3	69.8	43.8	68.5
	Copper (Cu)-Total (mg/kg wwt)		5.18	5.43	11.0	8.33	12.3
	Gallium (Ga)-Total (mg/kg)		<0.020	<0.020	<0.020	<0.020	<0.020
	Gallium (Ga)-Total (mg/kg wwt)		<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Iron (Fe)-Total (mg/kg)		18.4	22.9	45.4	26.4	27.2
	Iron (Fe)-Total (mg/kg wwt)		3.41	3.62	7.18	5.01	4.90
	Lead (Pb)-Total (mg/kg)		<0.020	0.023	0.039	0.025	0.021
	Lead (Pb)-Total (mg/kg wwt)		<0.0040	<0.0040	0.0062	0.0048	<0.0040
	Lithium (Li)-Total (mg/kg)		0.53	0.71	0.61	0.39	0.42
	Lithium (Li)-Total (mg/kg wwt)		0.098	0.112	0.096	0.073	0.076
	Magnesium (Mg)-Total (mg/kg)		2420	3430	3360	1980	2470
	Magnesium (Mg)-Total (mg/kg wwt)		448	543	532	376	445

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-6	L1400375-7	L1400375-8	L1400375-9	L1400375-10
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-6 MUSCLE	CP CRAB-TS-7 MUSCLE	MCNAB - CRAB- TS-1 MUSCLE	MCNAB - CRAB- TS-2 MUSCLE	MCNAB - CRAB- TS-3 MUSCLE
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)		82.9	81.8	80.8	82.8	86.9
Metals	Aluminum (Al)-Total (mg/kg)		10.0	23.2	8.1	10.5	14.4
	Aluminum (Al)-Total (mg/kg wwt)		1.71	4.23	1.55	1.80	1.88
	Antimony (Sb)-Total (mg/kg)		<0.010	<0.010	<0.010	0.010	<0.010
	Antimony (Sb)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Arsenic (As)-Total (mg/kg)		9.75	26.5	14.5	21.5	9.53
	Arsenic (As)-Total (mg/kg wwt)		1.66	4.84	2.79	3.71	1.25
	Barium (Ba)-Total (mg/kg)		0.136	0.209	0.110	0.177	0.379
	Barium (Ba)-Total (mg/kg wwt)		0.023	0.038	0.021	0.030	0.050
	Beryllium (Be)-Total (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Bismuth (Bi)-Total (mg/kg)		<0.010	0.011	<0.010	<0.010	<0.010
	Bismuth (Bi)-Total (mg/kg wwt)		<0.0020	0.0020	<0.0020	<0.0020	<0.0020
	Boron (B)-Total (mg/kg)		5.6	6.2	7.7	9.9	10.6
	Boron (B)-Total (mg/kg wwt)		0.96	1.13	1.47	1.70	1.40
	Cadmium (Cd)-Total (mg/kg)		0.060	0.072	0.051	0.228	0.092
	Cadmium (Cd)-Total (mg/kg wwt)		0.0101	0.0131	0.0097	0.0392	0.0121
	Calcium (Ca)-Total (mg/kg)		3780	2470	3410	5280	6210
	Calcium (Ca)-Total (mg/kg wwt)		645	450	655	908	815
	Cesium (Cs)-Total (mg/kg)		0.0189	0.0204	0.0197	0.0224	0.0235
	Cesium (Cs)-Total (mg/kg wwt)		0.0032	0.0037	0.0038	0.0039	0.0031
	Chromium (Cr)-Total (mg/kg)		0.071	<0.050	0.096	<0.050	<0.050
	Chromium (Cr)-Total (mg/kg wwt)		0.012	<0.010	0.018	<0.010	<0.010
	Cobalt (Co)-Total (mg/kg)		0.197	0.237	0.138	0.157	0.195
	Cobalt (Co)-Total (mg/kg wwt)		0.0337	0.0431	0.0266	0.0271	0.0257
	Copper (Cu)-Total (mg/kg)		53.1	68.6	52.8	50.4	67.6
	Copper (Cu)-Total (mg/kg wwt)		9.06	12.5	10.1	8.68	8.88
	Gallium (Ga)-Total (mg/kg)		0.040	<0.020	<0.020	<0.020	<0.020
	Gallium (Ga)-Total (mg/kg wwt)		0.0068	<0.0040	<0.0040	<0.0040	<0.0040
	Iron (Fe)-Total (mg/kg)		20.7	36.8	24.2	22.2	26.3
	Iron (Fe)-Total (mg/kg wwt)		3.53	6.71	4.64	3.81	3.45
	Lead (Pb)-Total (mg/kg)		0.026	<0.020	0.023	<0.020	0.030
	Lead (Pb)-Total (mg/kg wwt)		0.0045	<0.0040	0.0043	<0.0040	<0.0040
	Lithium (Li)-Total (mg/kg)		0.65	0.28	0.46	0.72	1.21
	Lithium (Li)-Total (mg/kg wwt)		0.111	0.051	0.088	0.124	0.158
	Magnesium (Mg)-Total (mg/kg)		2920	2180	2480	3360	5200
	Magnesium (Mg)-Total (mg/kg wwt)		498	398	476	578	682

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-11 TISSUE 05-DEC-13 MCNAB - CRAB- TS-4 MUSCLE	L1400375-12 TISSUE 05-DEC-13 MCNAB - CRAB- TS-5 MUSCLE	L1400375-13 TISSUE 05-DEC-13 MCNAB - CRAB- TS-6 MUSCLE	L1400375-14 TISSUE 05-DEC-13 MCNAB - CRAB- TS-7 MUSCLE	L1400375-16 TISSUE 05-DEC-13 MCNAB - CRAB- TS-9 MUSCLE
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	79.6	81.3	81.5	88.3	82.5	
Metals	Aluminum (Al)-Total (mg/kg)	6.9	5.9	12.6	17.3	21.3	
	Aluminum (Al)-Total (mg/kg wwt)	1.40	1.11	2.32	2.02	3.73	
	Antimony (Sb)-Total (mg/kg)	<0.010	<0.010	0.015	<0.010	0.019	
	Antimony (Sb)-Total (mg/kg wwt)	<0.0020	<0.0020	0.0028	<0.0020	0.0033	
	Arsenic (As)-Total (mg/kg)	14.4	14.9	44.1	15.1	69.6	
	Arsenic (As)-Total (mg/kg wwt)	2.93	2.80	8.15	1.77	12.2	
	Barium (Ba)-Total (mg/kg)	0.143	0.215	0.157	0.542	0.339	
	Barium (Ba)-Total (mg/kg wwt)	0.029	0.040	0.029	0.064	0.059	
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	0.010	<0.010	0.026	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	0.0046	
	Boron (B)-Total (mg/kg)	7.6	6.0	6.4	7.4	12.0	
	Boron (B)-Total (mg/kg wwt)	1.56	1.12	1.18	0.87	2.10	
	Cadmium (Cd)-Total (mg/kg)	0.123	0.183	0.124	0.444	0.050	
	Cadmium (Cd)-Total (mg/kg wwt)	0.0251	0.0343	0.0229	0.0521	0.0087	
	Calcium (Ca)-Total (mg/kg)	4850	5720	4650	16700	5120	
	Calcium (Ca)-Total (mg/kg wwt)	989	1070	859	1960	895	
	Cesium (Cs)-Total (mg/kg)	0.0196	0.0201	0.0222	0.0230	0.0236	
	Cesium (Cs)-Total (mg/kg wwt)	0.0040	0.0038	0.0041	0.0027	0.0041	
	Chromium (Cr)-Total (mg/kg)	<0.050	<0.050	<0.050	0.085	<0.050	
	Chromium (Cr)-Total (mg/kg wwt)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Cobalt (Co)-Total (mg/kg)	0.163	0.156	0.209	0.207	0.326	
	Cobalt (Co)-Total (mg/kg wwt)	0.0333	0.0293	0.0387	0.0243	0.0570	
	Copper (Cu)-Total (mg/kg)	41.0	40.5	72.6	42.6	60.3	
	Copper (Cu)-Total (mg/kg wwt)	8.37	7.57	13.4	4.99	10.5	
	Gallium (Ga)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Iron (Fe)-Total (mg/kg)	17.3	19.8	35.2	25.3	48.3	
	Iron (Fe)-Total (mg/kg wwt)	3.53	3.70	6.51	2.96	8.44	
	Lead (Pb)-Total (mg/kg)	<0.020	<0.020	0.022	0.031	0.033	
	Lead (Pb)-Total (mg/kg wwt)	<0.0040	<0.0040	0.0041	<0.0040	0.0057	
	Lithium (Li)-Total (mg/kg)	0.37	0.47	0.45	1.47	0.61	
	Lithium (Li)-Total (mg/kg wwt)	0.075	0.088	0.083	0.172	0.107	
	Magnesium (Mg)-Total (mg/kg)	2290	2330	2630	5710	3440	
	Magnesium (Mg)-Total (mg/kg wwt)	468	437	486	669	602	

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		Sample ID	L1400375-17	L1400375-18	L1400375-19	L1400375-20	L1400375-21
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	MCNAB - CRAB-TS-10 MUSCLE	CP CRAB-TS-1 ORGANS	CP CRAB-TS-2 ORGANS	CP CRAB-TS-3 ORGANS	CP CRAB-TS-4 ORGANS
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)		86.8	75.0	86.7	90.5	88.1
Metals	Aluminum (Al)-Total (mg/kg)		14.2	8.8	29.0	92.5	15.6
	Aluminum (Al)-Total (mg/kg wwt)		1.87	2.21	3.86	8.77	1.85
	Antimony (Sb)-Total (mg/kg)		0.012	<0.010	0.046	0.018	0.017
	Antimony (Sb)-Total (mg/kg wwt)		<0.0020	0.0024	0.0061	<0.0020	<0.0020
	Arsenic (As)-Total (mg/kg)		42.2	15.2	13.0	57.4	15.3
	Arsenic (As)-Total (mg/kg wwt)		5.56	3.81	1.72	5.45	1.82
	Barium (Ba)-Total (mg/kg)		0.398	0.188	0.969	1.14	1.21
	Barium (Ba)-Total (mg/kg wwt)		0.052	0.047	0.129	0.108	0.144
	Beryllium (Be)-Total (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Bismuth (Bi)-Total (mg/kg)		0.011	<0.010	0.012	0.015	<0.010
	Bismuth (Bi)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Boron (B)-Total (mg/kg)		9.0	4.5	7.9	15.5	7.4
	Boron (B)-Total (mg/kg wwt)		1.19	1.11	1.06	1.47	0.88
	Cadmium (Cd)-Total (mg/kg)		0.292	0.793	1.16	1.00	0.408
	Cadmium (Cd)-Total (mg/kg wwt)		0.0384	0.198	0.154	0.0952	0.0486
	Calcium (Ca)-Total (mg/kg)		8410	12000	21600	8640	12500
	Calcium (Ca)-Total (mg/kg wwt)		1110	3000	2870	819	1480
	Cesium (Cs)-Total (mg/kg)		0.0232	0.0139	0.0216	0.0329	0.0220
	Cesium (Cs)-Total (mg/kg wwt)		0.0031	0.0035	0.0029	0.0031	0.0026
	Chromium (Cr)-Total (mg/kg)		<0.050	0.073	0.797	0.108	0.128
	Chromium (Cr)-Total (mg/kg wwt)		<0.010	0.018	0.106	0.010	0.015
	Cobalt (Co)-Total (mg/kg)		0.316	0.257	0.551	0.902	0.468
	Cobalt (Co)-Total (mg/kg wwt)		0.0416	0.0644	0.0734	0.0855	0.0557
	Copper (Cu)-Total (mg/kg)		81.4	27.4	36.4	612	90.8
	Copper (Cu)-Total (mg/kg wwt)		10.7	6.86	4.85	58.1	10.8
	Gallium (Ga)-Total (mg/kg)		<0.020	<0.020	<0.020	0.025	<0.020
	Gallium (Ga)-Total (mg/kg wwt)		<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Iron (Fe)-Total (mg/kg)		31.7	76.8	280	205	94.2
	Iron (Fe)-Total (mg/kg wwt)		4.18	19.2	37.3	19.4	11.2
	Lead (Pb)-Total (mg/kg)		0.024	0.089	0.494	1.30	0.192
	Lead (Pb)-Total (mg/kg wwt)		<0.0040	0.0222	0.0658	0.123	0.0229
	Lithium (Li)-Total (mg/kg)		1.22	0.52	0.71	1.54	0.75
	Lithium (Li)-Total (mg/kg wwt)		0.161	0.130	0.095	0.146	0.089
	Magnesium (Mg)-Total (mg/kg)		5100	2980	6960	7750	4280
	Magnesium (Mg)-Total (mg/kg wwt)		672	745	927	735	509

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		Sample ID	L1400375-22	L1400375-23	L1400375-24	L1400375-25	L1400375-26
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-5 ORGANS	CP CRAB-TS-6 ORGANS	CP CRAB-TS-7 ORGANS	MCNAB - CRAB- TS-1 ORGANS	MCNAB - CRAB- TS-2 ORGANS
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)		88.9	91.3	86.6	90.9	84.7
Metals	Aluminum (Al)-Total (mg/kg)		126	38.6	18.8	7.3	17.5
	Aluminum (Al)-Total (mg/kg wwt)		13.9	3.35	2.51	0.67	2.68
	Antimony (Sb)-Total (mg/kg)		0.036	0.033	0.019	0.037	0.014
	Antimony (Sb)-Total (mg/kg wwt)		0.0040	0.0029	0.0026	0.0033	0.0021
	Arsenic (As)-Total (mg/kg)		57.1	12.2	23.5	18.2	12.8
	Arsenic (As)-Total (mg/kg wwt)		6.31	1.06	3.15	1.66	1.96
	Barium (Ba)-Total (mg/kg)		7.60	0.814	1.01	3.44	0.890
	Barium (Ba)-Total (mg/kg wwt)		0.840	0.071	0.135	0.314	0.136
	Beryllium (Be)-Total (mg/kg)		<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/kg wwt)		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Bismuth (Bi)-Total (mg/kg)		0.021	<0.010	<0.010	0.010	0.013
	Bismuth (Bi)-Total (mg/kg wwt)		0.0023	<0.0020	<0.0020	<0.0020	<0.0020
	Boron (B)-Total (mg/kg)		13.9	10.8	8.6	13.5	10.3
	Boron (B)-Total (mg/kg wwt)		1.54	0.93	1.16	1.23	1.57
	Cadmium (Cd)-Total (mg/kg)		0.931	0.830	0.851	0.893	1.44
	Cadmium (Cd)-Total (mg/kg wwt)		0.103	0.0720	0.114	0.0816	0.221
	Calcium (Ca)-Total (mg/kg)		32300	10200	13500	23600	22200
	Calcium (Ca)-Total (mg/kg wwt)		3570	889	1800	2160	3390
	Cesium (Cs)-Total (mg/kg)		0.0318	0.0545	0.0403	0.0442	0.0224
	Cesium (Cs)-Total (mg/kg wwt)		0.0035	0.0047	0.0054	0.0040	0.0034
	Chromium (Cr)-Total (mg/kg)		0.589	0.830	0.086	0.263	0.066
	Chromium (Cr)-Total (mg/kg wwt)		0.065	0.072	0.011	0.024	0.010
	Cobalt (Co)-Total (mg/kg)		0.960	1.02	0.799	0.467	0.271
	Cobalt (Co)-Total (mg/kg wwt)		0.106	0.0884	0.107	0.0427	0.0416
	Copper (Cu)-Total (mg/kg)		300	191	225	169	62.3
	Copper (Cu)-Total (mg/kg wwt)		33.1	16.6	30.1	15.4	9.55
	Gallium (Ga)-Total (mg/kg)		0.031	<0.020	<0.020	<0.020	<0.020
	Gallium (Ga)-Total (mg/kg wwt)		<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Iron (Fe)-Total (mg/kg)		172	142	129	281	77.8
	Iron (Fe)-Total (mg/kg wwt)		19.0	12.3	17.3	25.7	11.9
	Lead (Pb)-Total (mg/kg)		0.743	0.269	0.311	0.442	0.178
	Lead (Pb)-Total (mg/kg wwt)		0.0821	0.0233	0.0416	0.0404	0.0273
	Lithium (Li)-Total (mg/kg)		1.22	1.53	0.66	1.21	0.98
	Lithium (Li)-Total (mg/kg wwt)		0.134	0.133	0.089	0.111	0.151
	Magnesium (Mg)-Total (mg/kg)		7510	12400	6130	9150	6620
	Magnesium (Mg)-Total (mg/kg wwt)		830	1080	821	836	1010

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		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-27 TISSUE 05-DEC-13 MCNAB - CRAB- TS-3 ORGANS	L1400375-28 TISSUE 05-DEC-13 MCNAB - CRAB- TS-4 ORGANS	L1400375-29 TISSUE 05-DEC-13 MCNAB - CRAB- TS-5 ORGANS	L1400375-30 TISSUE 05-DEC-13 MCNAB - CRAB- TS-6 ORGANS	L1400375-31 TISSUE 05-DEC-13 MCNAB - CRAB- TS-7 ORGANS
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	86.4	79.4	81.8	84.4	88.4	
Metals	Aluminum (Al)-Total (mg/kg)	6.5	28.4	5.5	10.6	14.5	
	Aluminum (Al)-Total (mg/kg wwt)	0.89	5.85	0.99	1.66	1.68	
	Antimony (Sb)-Total (mg/kg)	<0.010	0.023	0.011	0.016	0.011	
	Antimony (Sb)-Total (mg/kg wwt)	<0.0020	0.0048	0.0020	0.0025	<0.0020	
	Arsenic (As)-Total (mg/kg)	7.97	14.6	14.6	31.2	13.8	
	Arsenic (As)-Total (mg/kg wwt)	1.08	3.01	2.66	4.87	1.60	
	Barium (Ba)-Total (mg/kg)	0.782	0.433	0.478	0.351	0.739	
	Barium (Ba)-Total (mg/kg wwt)	0.106	0.089	0.087	0.055	0.085	
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Boron (B)-Total (mg/kg)	8.8	6.2	5.1	6.4	7.8	
	Boron (B)-Total (mg/kg wwt)	1.20	1.28	0.93	1.00	0.90	
	Cadmium (Cd)-Total (mg/kg)	0.273	1.48	1.81	0.985	1.66	
	Cadmium (Cd)-Total (mg/kg wwt)	0.0371	0.304	0.328	0.154	0.193	
	Calcium (Ca)-Total (mg/kg)	20200	15600	13200	9630	20900	
	Calcium (Ca)-Total (mg/kg wwt)	2750	3220	2410	1510	2420	
	Cesium (Cs)-Total (mg/kg)	0.0171	0.0222	0.0187	0.0208	0.0206	
	Cesium (Cs)-Total (mg/kg wwt)	0.0023	0.0046	0.0034	0.0032	0.0024	
	Chromium (Cr)-Total (mg/kg)	<0.050	0.076	<0.050	0.058	0.086	
	Chromium (Cr)-Total (mg/kg wwt)	<0.010	0.016	<0.010	<0.010	<0.010	
	Cobalt (Co)-Total (mg/kg)	0.279	0.365	0.357	0.510	0.301	
	Cobalt (Co)-Total (mg/kg wwt)	0.0380	0.0751	0.0648	0.0797	0.0349	
	Copper (Cu)-Total (mg/kg)	90.0	86.4	74.3	230	57.2	
	Copper (Cu)-Total (mg/kg wwt)	12.2	17.8	13.5	35.9	6.62	
	Gallium (Ga)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Iron (Fe)-Total (mg/kg)	33.5	56.8	81.1	126	38.5	
	Iron (Fe)-Total (mg/kg wwt)	4.56	11.7	14.7	19.6	4.46	
	Lead (Pb)-Total (mg/kg)	0.209	0.207	0.053	0.147	0.090	
	Lead (Pb)-Total (mg/kg wwt)	0.0284	0.0426	0.0096	0.0230	0.0104	
	Lithium (Li)-Total (mg/kg)	1.28	0.51	0.62	0.77	1.48	
	Lithium (Li)-Total (mg/kg wwt)	0.175	0.105	0.113	0.121	0.172	
	Magnesium (Mg)-Total (mg/kg)	6540	3300	2880	3740	6760	
	Magnesium (Mg)-Total (mg/kg wwt)	889	679	523	584	783	

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Sample ID Description Sampled Date Sampled Time Client ID	L1400375-33 TISSUE 05-DEC-13 MCNAB - CRAB- TS-9 ORGANS	L1400375-34 TISSUE 05-DEC-13 MCNAB - CRAB- TS-10 ORGANS			
Grouping	Analyte				
TISSUE					
Physical Tests	% Moisture (%)	87.6	86.6		
Metals	Aluminum (Al)-Total (mg/kg)	5.9	10.5		
	Aluminum (Al)-Total (mg/kg wwt)	0.73	1.40		
	Antimony (Sb)-Total (mg/kg)	0.018	0.014		
	Antimony (Sb)-Total (mg/kg wwt)	0.0022	<0.0020		
	Arsenic (As)-Total (mg/kg)	57.5	24.9		
	Arsenic (As)-Total (mg/kg wwt)	7.12	3.33		
	Barium (Ba)-Total (mg/kg)	0.685	0.648		
	Barium (Ba)-Total (mg/kg wwt)	0.085	0.087		
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010		
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020		
	Bismuth (Bi)-Total (mg/kg)	0.018	<0.010		
	Bismuth (Bi)-Total (mg/kg wwt)	0.0022	<0.0020		
	Boron (B)-Total (mg/kg)	11.7	8.1		
	Boron (B)-Total (mg/kg wwt)	1.45	1.09		
	Cadmium (Cd)-Total (mg/kg)	0.406	0.820		
	Cadmium (Cd)-Total (mg/kg wwt)	0.0503	0.110		
	Calcium (Ca)-Total (mg/kg)	11100	22300		
	Calcium (Ca)-Total (mg/kg wwt)	1370	2980		
	Cesium (Cs)-Total (mg/kg)	0.0248	0.0149		
	Cesium (Cs)-Total (mg/kg wwt)	0.0031	0.0020		
	Chromium (Cr)-Total (mg/kg)	<0.050	0.112		
	Chromium (Cr)-Total (mg/kg wwt)	<0.010	0.015		
	Cobalt (Co)-Total (mg/kg)	0.729	0.478		
	Cobalt (Co)-Total (mg/kg wwt)	0.0902	0.0639		
	Copper (Cu)-Total (mg/kg)	271	137		
	Copper (Cu)-Total (mg/kg wwt)	33.5	18.3		
	Gallium (Ga)-Total (mg/kg)	<0.020	<0.020		
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040	<0.0040		
	Iron (Fe)-Total (mg/kg)	67.7	66.6		
	Iron (Fe)-Total (mg/kg wwt)	8.38	8.91		
	Lead (Pb)-Total (mg/kg)	0.114	0.179		
	Lead (Pb)-Total (mg/kg wwt)	0.0141	0.0240		
	Lithium (Li)-Total (mg/kg)	1.11	1.18		
	Lithium (Li)-Total (mg/kg wwt)	0.137	0.158		
	Magnesium (Mg)-Total (mg/kg)	5240	5290		
	Magnesium (Mg)-Total (mg/kg wwt)	649	707		

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-1	L1400375-2	L1400375-3	L1400375-4	L1400375-5
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-1 MUSCLE	CP CRAB-TS-2 MUSCLE	CP CRAB-TS-3 MUSCLE	CP CRAB-TS-4 MUSCLE	CP CRAB-TS-5 MUSCLE
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	0.498	0.703	0.776	1.03	0.999	
	Manganese (Mn)-Total (mg/kg wwt)	0.0923	0.111	0.123	0.195	0.180	
	Mercury (Hg)-Total (mg/kg)	0.183	0.188	0.951	0.286	1.65	
	Mercury (Hg)-Total (mg/kg wwt)	0.0340	0.0298	0.151	0.0544	0.296	
	Molybdenum (Mo)-Total (mg/kg)	0.066	0.152	0.078	0.078	0.064	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0122	0.0240	0.0124	0.0147	0.0116	
	Nickel (Ni)-Total (mg/kg)	0.090	0.092	0.159	0.061	0.085	
	Nickel (Ni)-Total (mg/kg wwt)	0.017	0.015	0.025	0.012	0.015	
	Phosphorus (P)-Total (mg/kg)	5600	5480	6310	6680	6250	
	Phosphorus (P)-Total (mg/kg wwt)	1040	868	999	1270	1120	
	Potassium (K)-Total (mg/kg)	13800	14500	16100	14100	14100	
	Potassium (K)-Total (mg/kg wwt)	2550	2300	2550	2670	2530	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	4.42	4.73	4.43	3.78	3.71	
	Rubidium (Rb)-Total (mg/kg wwt)	0.820	0.750	0.701	0.719	0.667	
	Selenium (Se)-Total (mg/kg)	1.56	1.88	2.06	1.74	2.37	
	Selenium (Se)-Total (mg/kg wwt)	0.288	0.298	0.326	0.331	0.427	
	Silver (Ag)-Total (mg/kg)	0.193	0.350	0.360	0.284	0.429	
	Silver (Ag)-Total (mg/kg wwt)	0.0357	0.0555	0.0569	0.0539	0.0772	
	Sodium (Na)-Total (mg/kg)	24300	35100	30400	20900	21100	
	Sodium (Na)-Total (mg/kg wwt)	4490	5560	4810	3980	3800	
	Strontium (Sr)-Total (mg/kg)	39.3	91.2	51.2	59.0	50.1	
	Strontium (Sr)-Total (mg/kg wwt)	7.28	14.5	8.10	11.2	9.01	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	<0.10	0.12	<0.10	<0.10	<0.10	
	Tin (Sn)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Uranium (U)-Total (mg/kg)	0.0043	0.0059	0.0531	0.0052	0.0030	
	Uranium (U)-Total (mg/kg wwt)	0.00080	0.00094	0.00840	0.00098	0.00054	
	Vanadium (V)-Total (mg/kg)	<0.10	0.11	<0.10	<0.10	<0.10	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Yttrium (Y)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	

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		Sample ID	L1400375-6	L1400375-7	L1400375-8	L1400375-9	L1400375-10
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-6 MUSCLE	CP CRAB-TS-7 MUSCLE	MCNAB - CRAB- TS-1 MUSCLE	MCNAB - CRAB- TS-2 MUSCLE	MCNAB - CRAB- TS-3 MUSCLE
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	0.621	0.660	0.690	0.858	1.02	
	Manganese (Mn)-Total (mg/kg wwt)	0.106	0.120	0.132	0.148	0.134	
	Mercury (Hg)-Total (mg/kg)	0.145	0.543	0.157	0.287	0.185	
	Mercury (Hg)-Total (mg/kg wwt)	0.0248	0.0988	0.0301	0.0493	0.0243	
	Molybdenum (Mo)-Total (mg/kg)	0.229	0.057	0.080	0.099	0.107	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0390	0.0104	0.0154	0.0170	0.0140	
	Nickel (Ni)-Total (mg/kg)	0.108	0.063	0.088	0.085	0.171	
	Nickel (Ni)-Total (mg/kg wwt)	0.018	0.011	0.017	0.015	0.022	
	Phosphorus (P)-Total (mg/kg)	5530	7560	5340	5070	5320	
	Phosphorus (P)-Total (mg/kg wwt)	943	1380	1020	873	698	
	Potassium (K)-Total (mg/kg)	13700	14700	13900	14500	14500	
	Potassium (K)-Total (mg/kg wwt)	2330	2670	2680	2490	1900	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	4.63	3.63	3.82	4.67	5.55	
	Rubidium (Rb)-Total (mg/kg wwt)	0.790	0.660	0.732	0.803	0.729	
	Selenium (Se)-Total (mg/kg)	1.59	1.81	1.48	2.19	1.91	
	Selenium (Se)-Total (mg/kg wwt)	0.271	0.330	0.284	0.377	0.251	
	Silver (Ag)-Total (mg/kg)	0.495	0.551	0.532	0.488	0.958	
	Silver (Ag)-Total (mg/kg wwt)	0.0843	0.100	0.102	0.0839	0.126	
	Sodium (Na)-Total (mg/kg)	29900	18400	23000	29800	49700	
	Sodium (Na)-Total (mg/kg wwt)	5090	3350	4410	5130	6520	
	Strontium (Sr)-Total (mg/kg)	48.6	23.6	38.5	90.1	162	
	Strontium (Sr)-Total (mg/kg wwt)	8.29	4.30	7.38	15.5	21.2	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	0.015	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.10	<0.10	<0.10	0.17	0.27	
	Tin (Sn)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	0.029	0.035	
	Uranium (U)-Total (mg/kg)	0.0033	0.0027	0.0032	0.0029	0.0034	
	Uranium (U)-Total (mg/kg wwt)	0.00055	0.00049	0.00062	0.00050	0.00045	
	Vanadium (V)-Total (mg/kg)	0.12	<0.10	<0.10	<0.10	<0.10	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Yttrium (Y)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-11 TISSUE 05-DEC-13 MCNAB - CRAB- TS-4 MUSCLE	L1400375-12 TISSUE 05-DEC-13 MCNAB - CRAB- TS-5 MUSCLE	L1400375-13 TISSUE 05-DEC-13 MCNAB - CRAB- TS-6 MUSCLE	L1400375-14 TISSUE 05-DEC-13 MCNAB - CRAB- TS-7 MUSCLE	L1400375-16 TISSUE 05-DEC-13 MCNAB - CRAB- TS-9 MUSCLE
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	0.572	0.882	2.02	1.31	16.2	
	Manganese (Mn)-Total (mg/kg wwt)	0.117	0.165	0.373	0.153	2.83	
	Mercury (Hg)-Total (mg/kg)	0.174	0.159	0.339	0.313	0.533	
	Mercury (Hg)-Total (mg/kg wwt)	0.0355	0.0297	0.0627	0.0367	0.0932	
	Molybdenum (Mo)-Total (mg/kg)	0.060	0.068	0.086	0.106	0.169	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0122	0.0127	0.0160	0.0124	0.0295	
	Nickel (Ni)-Total (mg/kg)	0.123	0.068	0.095	0.116	0.113	
	Nickel (Ni)-Total (mg/kg wwt)	0.025	0.013	0.017	0.014	0.020	
	Phosphorus (P)-Total (mg/kg)	4900	5590	5390	6140	5260	
	Phosphorus (P)-Total (mg/kg wwt)	1000	1050	996	719	919	
	Potassium (K)-Total (mg/kg)	13800	14600	14300	14800	14300	
	Potassium (K)-Total (mg/kg wwt)	2830	2740	2640	1730	2500	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	3.99	4.25	3.86	5.54	4.29	
	Rubidium (Rb)-Total (mg/kg wwt)	0.815	0.796	0.713	0.649	0.750	
	Selenium (Se)-Total (mg/kg)	1.62	1.68	1.48	1.96	2.38	
	Selenium (Se)-Total (mg/kg wwt)	0.331	0.314	0.273	0.229	0.415	
	Silver (Ag)-Total (mg/kg)	0.421	0.462	0.621	0.595	0.831	
	Silver (Ag)-Total (mg/kg wwt)	0.0860	0.0864	0.115	0.0697	0.145	
	Sodium (Na)-Total (mg/kg)	18400	23000	22700	73400	25300	
	Sodium (Na)-Total (mg/kg wwt)	3760	4300	4190	8600	4430	
	Strontium (Sr)-Total (mg/kg)	58.3	76.7	55.2	218	62.6	
	Strontium (Sr)-Total (mg/kg wwt)	11.9	14.4	10.2	25.5	11.0	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.13	0.12	<0.10	0.34	0.37	
	Tin (Sn)-Total (mg/kg wwt)	0.027	0.022	<0.020	0.040	0.065	
	Uranium (U)-Total (mg/kg)	0.0025	0.0027	0.0065	0.0084	0.0084	
	Uranium (U)-Total (mg/kg wwt)	0.00050	0.00051	0.00119	0.00098	0.00146	
	Vanadium (V)-Total (mg/kg)	<0.10	<0.10	<0.10	0.10	0.15	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	<0.020	<0.020	<0.020	0.025	
	Yttrium (Y)-Total (mg/kg)	<0.010	<0.010	0.011	<0.010	<0.010	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-17 TISSUE 05-DEC-13 MCNAB - CRAB- TS-10 MUSCLE	L1400375-18 TISSUE 05-DEC-13 CP CRAB-TS-1 ORGANS	L1400375-19 TISSUE 05-DEC-13 CP CRAB-TS-2 ORGANS	L1400375-20 TISSUE 05-DEC-13 CP CRAB-TS-3 ORGANS	L1400375-21 TISSUE 05-DEC-13 CP CRAB-TS-4 ORGANS
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	2.57	2.08	6.64	7.33	4.39	
	Manganese (Mn)-Total (mg/kg wwt)	0.338	0.520	0.883	0.695	0.523	
	Mercury (Hg)-Total (mg/kg)	0.374	0.0640	0.400	0.908	0.198	
	Mercury (Hg)-Total (mg/kg wwt)	0.0492	0.0160	0.0533	0.0861	0.0236	
	Molybdenum (Mo)-Total (mg/kg)	0.103	0.294	3.50	0.676	0.505	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0135	0.0735	0.466	0.0641	0.0601	
	Nickel (Ni)-Total (mg/kg)	0.125	0.200	0.415	0.280	0.147	
	Nickel (Ni)-Total (mg/kg wwt)	0.016	0.050	0.055	0.027	0.017	
	Phosphorus (P)-Total (mg/kg)	5320	4320	11700	10800	7210	
	Phosphorus (P)-Total (mg/kg wwt)	700	1080	1550	1020	858	
	Potassium (K)-Total (mg/kg)	14200	7200	7900	14100	10500	
	Potassium (K)-Total (mg/kg wwt)	1870	1800	1050	1330	1260	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	5.26	2.92	3.61	4.74	4.34	
	Rubidium (Rb)-Total (mg/kg wwt)	0.693	0.731	0.480	0.450	0.517	
	Selenium (Se)-Total (mg/kg)	2.17	2.60	4.64	5.89	2.85	
	Selenium (Se)-Total (mg/kg wwt)	0.286	0.649	0.618	0.559	0.340	
	Silver (Ag)-Total (mg/kg)	1.03	0.319	1.02	9.24	0.895	
	Silver (Ag)-Total (mg/kg wwt)	0.136	0.0799	0.136	0.877	0.107	
	Sodium (Na)-Total (mg/kg)	50500	22200	33900	59200	35400	
	Sodium (Na)-Total (mg/kg wwt)	6650	5550	4510	5610	4220	
	Strontium (Sr)-Total (mg/kg)	179	95.4	275	145	170	
	Strontium (Sr)-Total (mg/kg wwt)	23.5	23.9	36.6	13.7	20.3	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	0.029	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	0.0049	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	0.00066	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.19	0.23	0.67	0.88	0.41	
	Tin (Sn)-Total (mg/kg wwt)	0.026	0.058	0.089	0.084	0.049	
	Uranium (U)-Total (mg/kg)	0.0198	0.140	0.674	0.0784	0.142	
	Uranium (U)-Total (mg/kg wwt)	0.00261	0.0350	0.0898	0.00743	0.0169	
	Vanadium (V)-Total (mg/kg)	0.11	0.12	0.50	0.46	0.22	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	0.029	0.066	0.043	0.026	
	Yttrium (Y)-Total (mg/kg)	<0.010	0.012	0.111	0.045	0.013	

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		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-22 TISSUE 05-DEC-13 CP CRAB-TS-5 ORGANS	L1400375-23 TISSUE 05-DEC-13 CP CRAB-TS-6 ORGANS	L1400375-24 TISSUE 05-DEC-13 CP CRAB-TS-7 ORGANS	L1400375-25 TISSUE 05-DEC-13 MCNAB - CRAB- TS-1 ORGANS	L1400375-26 TISSUE 05-DEC-13 MCNAB - CRAB- TS-2 ORGANS
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	23.3	5.04	8.70	10.0	6.56	
	Manganese (Mn)-Total (mg/kg wwt)	2.57	0.437	1.16	0.915	1.01	
	Mercury (Hg)-Total (mg/kg)	1.06	0.289	0.387	0.315	0.307	
	Mercury (Hg)-Total (mg/kg wwt)	0.117	0.0250	0.0518	0.0288	0.0470	
	Molybdenum (Mo)-Total (mg/kg)	0.479	5.04	0.489	0.914	0.351	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0529	0.437	0.0654	0.0835	0.0537	
	Nickel (Ni)-Total (mg/kg)	0.726	0.720	0.178	0.278	0.185	
	Nickel (Ni)-Total (mg/kg wwt)	0.080	0.062	0.024	0.025	0.028	
	Phosphorus (P)-Total (mg/kg)	17700	14800	17200	15900	10300	
	Phosphorus (P)-Total (mg/kg wwt)	1960	1280	2300	1460	1580	
	Potassium (K)-Total (mg/kg)	14000	16300	14500	13900	12500	
	Potassium (K)-Total (mg/kg wwt)	1550	1420	1950	1270	1910	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	5.47	9.74	6.32	6.64	4.13	
	Rubidium (Rb)-Total (mg/kg wwt)	0.605	0.845	0.846	0.607	0.632	
	Selenium (Se)-Total (mg/kg)	4.81	4.60	5.74	4.10	3.94	
	Selenium (Se)-Total (mg/kg wwt)	0.532	0.399	0.769	0.375	0.603	
	Silver (Ag)-Total (mg/kg)	3.74	2.50	4.23	2.10	1.27	
	Silver (Ag)-Total (mg/kg wwt)	0.414	0.217	0.566	0.192	0.194	
	Sodium (Na)-Total (mg/kg)	49000	63900	39100	52300	40500	
	Sodium (Na)-Total (mg/kg wwt)	5420	5550	5240	4780	6200	
	Strontium (Sr)-Total (mg/kg)	579	153	236	457	337	
	Strontium (Sr)-Total (mg/kg wwt)	64.0	13.2	31.5	41.7	51.5	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	0.0023	0.0035	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	0.015	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.39	0.62	0.14	0.34	0.80	
	Tin (Sn)-Total (mg/kg wwt)	0.043	0.054	<0.020	0.031	0.122	
	Uranium (U)-Total (mg/kg)	0.232	0.251	0.150	0.264	0.158	
	Uranium (U)-Total (mg/kg wwt)	0.0256	0.0218	0.0201	0.0241	0.0243	
	Vanadium (V)-Total (mg/kg)	0.67	1.25	0.28	0.26	0.12	
	Vanadium (V)-Total (mg/kg wwt)	0.074	0.108	0.037	0.023	<0.020	
	Yttrium (Y)-Total (mg/kg)	0.098	0.038	0.027	0.014	0.023	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400375-27 TISSUE 05-DEC-13 MCNAB - CRAB- TS-3 ORGANS	L1400375-28 TISSUE 05-DEC-13 MCNAB - CRAB- TS-4 ORGANS	L1400375-29 TISSUE 05-DEC-13 MCNAB - CRAB- TS-5 ORGANS	L1400375-30 TISSUE 05-DEC-13 MCNAB - CRAB- TS-6 ORGANS	L1400375-31 TISSUE 05-DEC-13 MCNAB - CRAB- TS-7 ORGANS
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	2.46	3.15	4.34	12.4	3.75	
	Manganese (Mn)-Total (mg/kg wwt)	0.334	0.649	0.789	1.94	0.434	
	Mercury (Hg)-Total (mg/kg)	0.076	0.133	0.0879	0.250	0.177	
	Mercury (Hg)-Total (mg/kg wwt)	0.0103	0.0273	0.0160	0.0391	0.0205	
	Molybdenum (Mo)-Total (mg/kg)	0.221	0.325	0.251	0.290	0.284	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0301	0.0670	0.0457	0.0453	0.0329	
	Nickel (Ni)-Total (mg/kg)	0.180	0.156	0.115	0.112	0.145	
	Nickel (Ni)-Total (mg/kg wwt)	0.024	0.032	0.021	0.017	0.017	
	Phosphorus (P)-Total (mg/kg)	6240	5410	7210	6080	8280	
	Phosphorus (P)-Total (mg/kg wwt)	849	1110	1310	949	958	
	Potassium (K)-Total (mg/kg)	11700	11100	11600	11900	11800	
	Potassium (K)-Total (mg/kg wwt)	1590	2280	2100	1870	1360	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	3.96	4.04	3.98	3.81	4.70	
	Rubidium (Rb)-Total (mg/kg wwt)	0.539	0.832	0.724	0.596	0.544	
	Selenium (Se)-Total (mg/kg)	2.14	2.66	2.89	3.34	2.98	
	Selenium (Se)-Total (mg/kg wwt)	0.291	0.548	0.526	0.522	0.345	
	Silver (Ag)-Total (mg/kg)	1.06	1.11	1.60	2.45	0.714	
	Silver (Ag)-Total (mg/kg wwt)	0.144	0.229	0.290	0.384	0.0826	
	Sodium (Na)-Total (mg/kg)	55600	26100	29100	34100	63600	
	Sodium (Na)-Total (mg/kg wwt)	7560	5370	5280	5330	7360	
	Strontium (Sr)-Total (mg/kg)	375	156	163	119	268	
	Strontium (Sr)-Total (mg/kg wwt)	51.1	32.2	29.7	18.6	31.0	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Tin (Sn)-Total (mg/kg)	0.89	0.33	0.56	0.40	1.04	
	Tin (Sn)-Total (mg/kg wwt)	0.121	0.067	0.102	0.062	0.121	
	Uranium (U)-Total (mg/kg)	0.0437	0.113	0.0876	0.171	0.235	
	Uranium (U)-Total (mg/kg wwt)	0.00594	0.0232	0.0159	0.0268	0.0272	
	Vanadium (V)-Total (mg/kg)	<0.10	0.26	0.13	0.18	0.20	
	Vanadium (V)-Total (mg/kg wwt)	<0.020	0.054	0.024	0.028	0.023	
	Yttrium (Y)-Total (mg/kg)	0.012	0.019	0.011	0.012	0.038	

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1400375-33 TISSUE 05-DEC-13 MCNAB - CRAB- TS-9 ORGANS	L1400375-34 TISSUE 05-DEC-13 MCNAB - CRAB- TS-10 ORGANS		
Grouping	Analyte				
TISSUE					
Metals	Manganese (Mn)-Total (mg/kg)	28.4	5.13		
	Manganese (Mn)-Total (mg/kg wwt)	3.51	0.686		
	Mercury (Hg)-Total (mg/kg)	0.394	0.196		
	Mercury (Hg)-Total (mg/kg wwt)	0.0488	0.0262		
	Molybdenum (Mo)-Total (mg/kg)	0.279	0.228		
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0345	0.0305		
	Nickel (Ni)-Total (mg/kg)	0.177	0.216		
	Nickel (Ni)-Total (mg/kg wwt)	0.022	0.029		
	Phosphorus (P)-Total (mg/kg)	10500	5380		
	Phosphorus (P)-Total (mg/kg wwt)	1300	719		
	Potassium (K)-Total (mg/kg)	14900	10800		
	Potassium (K)-Total (mg/kg wwt)	1840	1440		
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010		
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020		
	Rubidium (Rb)-Total (mg/kg)	4.55	3.32		
	Rubidium (Rb)-Total (mg/kg wwt)	0.563	0.443		
	Selenium (Se)-Total (mg/kg)	4.21	2.80		
	Selenium (Se)-Total (mg/kg wwt)	0.521	0.374		
	Silver (Ag)-Total (mg/kg)	8.22	1.75		
	Silver (Ag)-Total (mg/kg wwt)	1.02	0.234		
	Sodium (Na)-Total (mg/kg)	46000	53800		
	Sodium (Na)-Total (mg/kg wwt)	5700	7200		
	Strontium (Sr)-Total (mg/kg)	167	285		
	Strontium (Sr)-Total (mg/kg wwt)	20.6	38.1		
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020		
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040		
	Thallium (Tl)-Total (mg/kg)	<0.0020	<0.0020		
	Thallium (Tl)-Total (mg/kg wwt)	<0.00040	<0.00040		
	Thorium (Th)-Total (mg/kg)	<0.010	<0.010		
	Thorium (Th)-Total (mg/kg wwt)	<0.0020	<0.0020		
	Tin (Sn)-Total (mg/kg)	0.89	0.81		
	Tin (Sn)-Total (mg/kg wwt)	0.111	0.108		
	Uranium (U)-Total (mg/kg)	0.148	0.316		
	Uranium (U)-Total (mg/kg wwt)	0.0183	0.0422		
	Vanadium (V)-Total (mg/kg)	0.20	0.22		
	Vanadium (V)-Total (mg/kg wwt)	0.025	0.029		
	Yttrium (Y)-Total (mg/kg)	0.013	0.021		

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	Description	Sampled Date	Sampled Time	Client ID	L1400375-1	L1400375-2	L1400375-3	L1400375-4	L1400375-5
					L1400375-1 TISSUE 05-DEC-13 CP CRAB-TS-1 MUSCLE	L1400375-2 TISSUE 05-DEC-13 CP CRAB-TS-2 MUSCLE	L1400375-3 TISSUE 05-DEC-13 CP CRAB-TS-3 MUSCLE	L1400375-4 TISSUE 05-DEC-13 CP CRAB-TS-4 MUSCLE	L1400375-5 TISSUE 05-DEC-13 CP CRAB-TS-5 MUSCLE
Grouping	Analyte								
TISSUE									
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Zinc (Zn)-Total (mg/kg)	141	167	188	150	169			
	Zinc (Zn)-Total (mg/kg wwt)	26.1	26.4	29.8	28.4	30.5			
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20			
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040			

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1400375-6 TISSUE 05-DEC-13 CP CRAB-TS-6 MUSCLE	L1400375-7 TISSUE 05-DEC-13 CP CRAB-TS-7 MUSCLE	L1400375-8 TISSUE 05-DEC-13 MCNAB - CRAB- TS-1 MUSCLE	L1400375-9 TISSUE 05-DEC-13 MCNAB - CRAB- TS-2 MUSCLE	L1400375-10 TISSUE 05-DEC-13 MCNAB - CRAB- TS-3 MUSCLE
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Zinc (Zn)-Total (mg/kg)	158	177	178	185	187
	Zinc (Zn)-Total (mg/kg wwt)	27.0	32.3	34.2	31.8	24.5
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1400375-11 TISSUE 05-DEC-13 MCNAB - CRAB- TS-4 MUSCLE	L1400375-12 TISSUE 05-DEC-13 MCNAB - CRAB- TS-5 MUSCLE	L1400375-13 TISSUE 05-DEC-13 MCNAB - CRAB- TS-6 MUSCLE	L1400375-14 TISSUE 05-DEC-13 MCNAB - CRAB- TS-7 MUSCLE	L1400375-16 TISSUE 05-DEC-13 MCNAB - CRAB- TS-9 MUSCLE
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	<0.0020	0.0020	<0.0020	<0.0020
	Zinc (Zn)-Total (mg/kg)	173	163	183	159	187
	Zinc (Zn)-Total (mg/kg wwt)	35.3	30.5	33.9	18.6	32.7
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1400375-17 TISSUE 05-DEC-13 MCNAB - CRAB- TS-10 MUSCLE	L1400375-18 TISSUE 05-DEC-13 CP CRAB-TS-1 ORGANS	L1400375-19 TISSUE 05-DEC-13 CP CRAB-TS-2 ORGANS	L1400375-20 TISSUE 05-DEC-13 CP CRAB-TS-3 ORGANS	L1400375-21 TISSUE 05-DEC-13 CP CRAB-TS-4 ORGANS	
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	0.0030	0.0148	0.0042	<0.0020
	Zinc (Zn)-Total (mg/kg)	164	40.5	81.8	109	69.0
	Zinc (Zn)-Total (mg/kg wwt)	21.6	10.1	10.9	10.3	8.21
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-22	L1400375-23	L1400375-24	L1400375-25	L1400375-26
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	CP CRAB-TS-5 ORGANS	CP CRAB-TS-6 ORGANS	CP CRAB-TS-7 ORGANS	MCNAB - CRAB- TS-1 ORGANS	MCNAB - CRAB- TS-2 ORGANS
Grouping	Analyte						
TISSUE							
Metals	Yttrium (Y)-Total (mg/kg wwt)		0.0108	0.0033	0.0036	<0.0020	0.0035
	Zinc (Zn)-Total (mg/kg)		96.9	106	174	99.3	64.6
	Zinc (Zn)-Total (mg/kg wwt)		10.7	9.23	23.2	9.08	9.89
	Zirconium (Zr)-Total (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)		<0.040	<0.040	<0.040	<0.040	<0.040

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-27	L1400375-28	L1400375-29	L1400375-30	L1400375-31
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	MCNAB - CRAB-TS-3 ORGANS	MCNAB - CRAB-TS-4 ORGANS	MCNAB - CRAB-TS-5 ORGANS	MCNAB - CRAB-TS-6 ORGANS	MCNAB - CRAB-TS-7 ORGANS
Grouping	Analyte						
TISSUE							
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	0.0039	<0.0020	<0.0020	0.0044	
	Zinc (Zn)-Total (mg/kg)	71.5	59.1	78.4	101	79.8	
	Zinc (Zn)-Total (mg/kg wwt)	9.72	12.2	14.3	15.7	9.24	
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20	
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	<0.040	

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400375-33	L1400375-34			
		Description	TISSUE	TISSUE			
		Sampled Date	05-DEC-13	05-DEC-13			
		Sampled Time					
		Client ID	MCNAB - CRAB-TS-9 ORGANS	MCNAB - CRAB-TS-10 ORGANS			
Grouping	Analyte						
TISSUE							
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020	0.0028				
	Zinc (Zn)-Total (mg/kg)	115	65.6				
	Zinc (Zn)-Total (mg/kg wwt)	14.2	8.77				
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20				
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AG-DRY-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
AG-WET-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
HG-DRY-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (DRY)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
HG-WET-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (WET)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
MET-DRY-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
MET-DRY-ICP-VA	Tissue	Metals in Tissue by ICPOES (DRY)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MET-WET-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
MET-WET-ICP-VA	Tissue	Metals in Tissue by ICPOES (WET)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MOISTURE-TISS-VA	Tissue	% Moisture in Tissues	ASTM D2974-00 Method A
This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-034377 10-034384

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1400375

Report Date: 27-FEB-14

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Client: GOLDER ASSOCIATES LTD.
 # 500 - 4260 Still Creek Drive
 Burnaby BC V5C 6C6
 Contact: Ann-Marie Norris

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AG-DRY-HRMS-VA		Tissue						
Batch R2794766								
WG1832176-5	CRM	VA-NIST-1566B						
Silver (Ag)-Total			92.8		%		70-130	19-FEB-14
WG1832192-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			101.3		%		70-130	19-FEB-14
WG1832176-3	DUP	L1400375-12						
Silver (Ag)-Total			0.462	0.501	mg/kg	8.2	30	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Silver (Ag)-Total			0.319	0.328	mg/kg	2.7	30	19-FEB-14
WG1832176-1	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
WG1832176-2	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
WG1832192-1	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
WG1832192-2	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
WG1832192-3	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Batch R2796489								
WG1835678-5	CRM	VA-NIST-1566B						
Silver (Ag)-Total			97.4		%		70-130	24-FEB-14
WG1835678-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			103.6		%		70-130	24-FEB-14
WG1835678-4	DUP	L1400375-33						
Silver (Ag)-Total			8.22	8.81	mg/kg	6.9	30	24-FEB-14
WG1835678-1	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	24-FEB-14
WG1835678-2	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	24-FEB-14
WG1835678-3	MB							
Silver (Ag)-Total			<0.0050		mg/kg		0.005	24-FEB-14
AG-WET-HRMS-VA		Tissue						
Batch R2794755								
WG1832176-5	CRM	VA-NIST-1566B						
Silver (Ag)-Total			92.8		%		70-130	19-FEB-14
WG1832192-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			101.3		%		70-130	19-FEB-14
WG1832176-3	DUP	L1400375-12						



Quality Control Report

Workorder: L1400375

Report Date: 27-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AG-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832176-3	DUP	L1400375-12						
Silver (Ag)-Total		0.0864	0.0938		mg/kg wwt	8.2	30	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Silver (Ag)-Total		0.0799	0.0821		mg/kg wwt	2.7	30	19-FEB-14
WG1832176-1	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
WG1832176-2	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
WG1832192-1	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
WG1832192-2	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
WG1832192-3	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Batch	R2796478							
WG1835678-5	CRM	VA-NIST-1566B						
Silver (Ag)-Total			97.4		%		70-130	24-FEB-14
WG1835678-6	CRM	VA-NIST-1566B						
Silver (Ag)-Total			103.6		%		70-130	24-FEB-14
WG1835678-4	DUP	L1400375-33						
Silver (Ag)-Total		1.02	1.09		mg/kg wwt	6.9	30	24-FEB-14
WG1835678-1	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
WG1835678-2	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
WG1835678-3	MB							
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
HG-DRY-CVAFS-VA		Tissue						
Batch	R2795126							
WG1832176-4	CRM	VA-NRC-TORT3						
Mercury (Hg)-Total			113.5		%		70-130	21-FEB-14
WG1832176-5	CRM	VA-NIST-1566B						
Mercury (Hg)-Total			125.6		%		70-130	21-FEB-14
WG1832176-3	DUP	L1400375-12						
Mercury (Hg)-Total		0.159	0.164		mg/kg	3.3	30	21-FEB-14
WG1832176-1	MB							
Mercury (Hg)-Total			<0.0050		mg/kg		0.005	21-FEB-14
WG1832176-2	MB							



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HG-WET-CVAFS-VA		Tissue						
Batch	R2797132							
WG1836206-2 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	25-FEB-14
WG1836206-3 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	25-FEB-14
MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832176-4 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			103.9		%		70-130	19-FEB-14
Cadmium (Cd)-Total			97.7		%		70-130	19-FEB-14
Chromium (Cr)-Total			85.0		%		70-130	19-FEB-14
Cobalt (Co)-Total			99.1		%		70-130	19-FEB-14
Copper (Cu)-Total			91.5		%		70-130	19-FEB-14
Iron (Fe)-Total			81.6		%		70-130	19-FEB-14
Lead (Pb)-Total			86.8		%		70-130	19-FEB-14
Manganese (Mn)-Total			90.1		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			97.5		%		70-130	19-FEB-14
Nickel (Ni)-Total			93.7		%		70-130	19-FEB-14
Selenium (Se)-Total			96.4		%		70-130	19-FEB-14
Strontium (Sr)-Total			94.0		%		70-130	19-FEB-14
Vanadium (V)-Total			94.5		%		70-130	19-FEB-14
Zinc (Zn)-Total			94.4		%		70-130	19-FEB-14
WG1832176-5 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.008		mg/kg		0.001-0.021	19-FEB-14
Arsenic (As)-Total			90.9		%		70-130	19-FEB-14
Barium (Ba)-Total			76.1		%		70-130	19-FEB-14
Boron (B)-Total			3.6		mg/kg		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			91.2		%		70-130	19-FEB-14
Cobalt (Co)-Total			92.0		%		70-130	19-FEB-14
Copper (Cu)-Total			91.0		%		70-130	19-FEB-14
Iron (Fe)-Total			89.8		%		70-130	19-FEB-14
Lead (Pb)-Total			89.6		%		70-130	19-FEB-14
Manganese (Mn)-Total			88.5		%		70-130	19-FEB-14
Nickel (Ni)-Total			91.1		%		70-130	19-FEB-14
Rubidium (Rb)-Total			87.9		%		70-130	19-FEB-14
Selenium (Se)-Total			96.8		%		70-130	19-FEB-14
Strontium (Sr)-Total			84.8		%		70-130	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2794766							
WG1832176-5 CRM		VA-NIST-1566B						
Thorium (Th)-Total			0.031		mg/kg		0.027-0.047	19-FEB-14
Tin (Sn)-Total			0.02		mg/kg		0-0.13	19-FEB-14
Uranium (U)-Total			91.5		%		70-130	19-FEB-14
Vanadium (V)-Total			83.2		%		70-130	19-FEB-14
Zinc (Zn)-Total			96.0		%		70-130	19-FEB-14
WG1832192-5 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			111.6		%		70-130	19-FEB-14
Cadmium (Cd)-Total			105.2		%		70-130	19-FEB-14
Chromium (Cr)-Total			96.4		%		70-130	19-FEB-14
Cobalt (Co)-Total			106.9		%		70-130	19-FEB-14
Copper (Cu)-Total			97.9		%		70-130	19-FEB-14
Iron (Fe)-Total			86.7		%		70-130	19-FEB-14
Lead (Pb)-Total			92.0		%		70-130	19-FEB-14
Manganese (Mn)-Total			96.4		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			100.0		%		70-130	19-FEB-14
Nickel (Ni)-Total			102.0		%		70-130	19-FEB-14
Selenium (Se)-Total			104.0		%		70-130	19-FEB-14
Strontium (Sr)-Total			99.2		%		70-130	19-FEB-14
Vanadium (V)-Total			101.9		%		70-130	19-FEB-14
Zinc (Zn)-Total			101.6		%		70-130	19-FEB-14
WG1832192-6 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.009		mg/kg		0.001-0.021	19-FEB-14
Arsenic (As)-Total			99.6		%		70-130	19-FEB-14
Barium (Ba)-Total			85.6		%		70-130	19-FEB-14
Boron (B)-Total			4.7		mg/kg		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			100.5		%		70-130	19-FEB-14
Cobalt (Co)-Total			99.8		%		70-130	19-FEB-14
Copper (Cu)-Total			100.4		%		70-130	19-FEB-14
Iron (Fe)-Total			95.6		%		70-130	19-FEB-14
Lead (Pb)-Total			97.5		%		70-130	19-FEB-14
Manganese (Mn)-Total			96.9		%		70-130	19-FEB-14
Nickel (Ni)-Total			95.1		%		70-130	19-FEB-14
Rubidium (Rb)-Total			95.1		%		70-130	19-FEB-14
Selenium (Se)-Total			108.8		%		70-130	19-FEB-14
Strontium (Sr)-Total			96.2		%		70-130	19-FEB-14



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MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832192-6	CRM	VA-NIST-1566B						
Thorium (Th)-Total			0.030		mg/kg		0.027-0.047	19-FEB-14
Tin (Sn)-Total			0.04		mg/kg		0-0.13	19-FEB-14
Uranium (U)-Total			97.8		%		70-130	19-FEB-14
Vanadium (V)-Total			92.8		%		70-130	19-FEB-14
Zinc (Zn)-Total			105.6		%		70-130	19-FEB-14
WG1832176-3	DUP	L1400375-12						
Aluminum (Al)-Total		5.9	6.4		mg/kg	7.8	30	19-FEB-14
Antimony (Sb)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Arsenic (As)-Total		14.9	15.8		mg/kg	5.3	30	19-FEB-14
Barium (Ba)-Total		0.215	0.130	J	mg/kg	0.085	0.1	19-FEB-14
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Boron (B)-Total		6.0	6.1		mg/kg	2.5	30	19-FEB-14
Cadmium (Cd)-Total		0.183	0.211		mg/kg	14	30	19-FEB-14
Cesium (Cs)-Total		0.0201	0.0209		mg/kg	3.9	30	19-FEB-14
Chromium (Cr)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	30	19-FEB-14
Cobalt (Co)-Total		0.156	0.173		mg/kg	10	30	19-FEB-14
Copper (Cu)-Total		40.5	44.1		mg/kg	8.5	30	19-FEB-14
Gallium (Ga)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Iron (Fe)-Total		19.8	22.6		mg/kg	14	30	19-FEB-14
Lead (Pb)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Lithium (Li)-Total		0.47	0.49		mg/kg	3.0	30	19-FEB-14
Manganese (Mn)-Total		0.882	0.869		mg/kg	1.5	30	19-FEB-14
Molybdenum (Mo)-Total		0.068	0.079		mg/kg	15	30	19-FEB-14
Nickel (Ni)-Total		0.068	0.053		mg/kg	24	30	19-FEB-14
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Rubidium (Rb)-Total		4.25	4.40		mg/kg	3.4	30	19-FEB-14
Selenium (Se)-Total		1.68	1.74		mg/kg	3.7	30	19-FEB-14
Strontium (Sr)-Total		76.7	61.4		mg/kg	22	50	19-FEB-14
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thallium (Tl)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Tin (Sn)-Total		0.12	0.18	J	mg/kg	0.06	0.2	19-FEB-14
Uranium (U)-Total		0.0027	0.0027		mg/kg	1.2	30	19-FEB-14



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MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832176-3	DUP	L1400375-12						
Vanadium (V)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	19-FEB-14
Yttrium (Y)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Zinc (Zn)-Total		163	164		mg/kg	0.4	30	19-FEB-14
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Aluminum (Al)-Total		8.8	9.7		mg/kg	9.3	30	19-FEB-14
Antimony (Sb)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Arsenic (As)-Total		15.2	16.3		mg/kg	6.9	30	19-FEB-14
Barium (Ba)-Total		0.188	0.202		mg/kg	7.1	30	19-FEB-14
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Boron (B)-Total		4.5	4.7		mg/kg	4.8	30	19-FEB-14
Cadmium (Cd)-Total		0.793	0.834		mg/kg	5.0	30	19-FEB-14
Cesium (Cs)-Total		0.0139	0.0137		mg/kg	1.5	30	19-FEB-14
Chromium (Cr)-Total		0.073	0.093		mg/kg	24	30	19-FEB-14
Cobalt (Co)-Total		0.257	0.261		mg/kg	1.3	30	19-FEB-14
Copper (Cu)-Total		27.4	27.9		mg/kg	1.7	30	19-FEB-14
Gallium (Ga)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Iron (Fe)-Total		76.8	78.6		mg/kg	2.3	30	19-FEB-14
Lead (Pb)-Total		0.089	0.106		mg/kg	17	30	19-FEB-14
Lithium (Li)-Total		0.52	0.52		mg/kg	0.8	30	19-FEB-14
Manganese (Mn)-Total		2.08	2.31		mg/kg	10	30	19-FEB-14
Molybdenum (Mo)-Total		0.294	0.285		mg/kg	3.1	30	19-FEB-14
Nickel (Ni)-Total		0.200	0.205		mg/kg	2.5	30	19-FEB-14
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Rubidium (Rb)-Total		2.92	2.98		mg/kg	1.8	30	19-FEB-14
Selenium (Se)-Total		2.60	2.77		mg/kg	6.3	30	19-FEB-14
Strontium (Sr)-Total		95.4	108		mg/kg	12	50	19-FEB-14
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thallium (Tl)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Tin (Sn)-Total		0.23	0.26		mg/kg	12	30	19-FEB-14
Uranium (U)-Total		0.140	0.158		mg/kg	12	30	19-FEB-14
Vanadium (V)-Total		0.12	0.12		mg/kg	2.6	30	19-FEB-14

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MET-DRY-HRMS-VA								
	Tissue							
Batch	R2794766							
WG1832192-4	DUP	L1400375-18						
Yttrium (Y)-Total		0.012	0.014		mg/kg	19	30	19-FEB-14
Zinc (Zn)-Total		40.5	40.9		mg/kg	1.0	30	19-FEB-14
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	19-FEB-14
WG1832176-1	MB							
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14

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MET-DRY-HRMS-VA	Tissue							
Batch	R2794766							
WG1832176-1 MB								
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
WG1832176-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14



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MET-DRY-HRMS-VA	Tissue							
Batch	R2794766							
WG1832176-2 MB								
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
WG1832192-1 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
WG1832192-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2794766							
WG1832192-2 MB								
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
WG1832192-3 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14



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MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832192-3	MB							
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
Batch	R2796465							
WG1832192-1	MB							
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14
WG1832192-2	MB							
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14
WG1832192-3	MB							
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14

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MET-DRY-ICP-VA		Tissue						
Batch	R2794457							
WG1832192-5	CRM	VA-NRC-TORT3						
WG1832192-6	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			105.5		%		70-130	19-FEB-14
Magnesium (Mg)-Total			108.0		%		70-130	19-FEB-14
Potassium (K)-Total			108.2		%		70-130	19-FEB-14
Sodium (Na)-Total			106.3		%		70-130	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Calcium (Ca)-Total		12000	14200		mg/kg	17	50	19-FEB-14
Magnesium (Mg)-Total		2980	3280		mg/kg	9.5	30	19-FEB-14
Phosphorus (P)-Total		4320	4470		mg/kg	3.5	30	19-FEB-14
Potassium (K)-Total		7200	7300		mg/kg	1.1	30	19-FEB-14
Sodium (Na)-Total		22200	21800		mg/kg	1.8	30	19-FEB-14
WG1832192-1	MB							
Calcium (Ca)-Total			<30		mg/kg		30	19-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	19-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	19-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	19-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	19-FEB-14
WG1832192-2	MB							
Calcium (Ca)-Total			<30		mg/kg		30	19-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	19-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	19-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	19-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	19-FEB-14
WG1832192-3	MB							
Calcium (Ca)-Total			<30		mg/kg		30	19-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	19-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	19-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	19-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	19-FEB-14
Batch	R2794786							
WG1832176-4	CRM	VA-NRC-TORT3						
WG1832176-5	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			100.1		%		70-130	20-FEB-14
Magnesium (Mg)-Total			103.3		%		70-130	20-FEB-14
Potassium (K)-Total			109.2		%		70-130	20-FEB-14

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MET-DRY-ICP-VA		Tissue						
Batch	R2794786							
WG1832176-5	CRM	VA-NIST-1566B						
Sodium (Na)-Total			100.6		%		70-130	20-FEB-14
WG1832176-3	DUP	L1400375-12						
Calcium (Ca)-Total		5720	4500		mg/kg	24	50	20-FEB-14
Magnesium (Mg)-Total		2330	2200		mg/kg	6.0	30	20-FEB-14
Phosphorus (P)-Total		5590	5180		mg/kg	7.6	30	20-FEB-14
Potassium (K)-Total		14600	13700		mg/kg	6.4	30	20-FEB-14
Sodium (Na)-Total		23000	22100		mg/kg	3.9	30	20-FEB-14
WG1832176-2	MB							
Calcium (Ca)-Total			<3.0		mg/kg		3	20-FEB-14
Magnesium (Mg)-Total			<5.0		mg/kg		5	20-FEB-14
Phosphorus (P)-Total			<20		mg/kg		20	20-FEB-14
Potassium (K)-Total			<100		mg/kg		100	20-FEB-14
Sodium (Na)-Total			<100		mg/kg		100	20-FEB-14
Batch	R2796038							
WG1832176-1	MB							
Calcium (Ca)-Total			<3.0		mg/kg		3	22-FEB-14
Magnesium (Mg)-Total			<5.0		mg/kg		5	22-FEB-14
Phosphorus (P)-Total			<20		mg/kg		20	22-FEB-14
Potassium (K)-Total			<100		mg/kg		100	22-FEB-14
Sodium (Na)-Total			<100		mg/kg		100	22-FEB-14
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832176-4	CRM	VA-NRC-TORT3						
Arsenic (As)-Total			103.9		%		70-130	19-FEB-14
Cadmium (Cd)-Total			97.7		%		70-130	19-FEB-14
Chromium (Cr)-Total			85.0		%		70-130	19-FEB-14
Cobalt (Co)-Total			99.1		%		70-130	19-FEB-14
Copper (Cu)-Total			91.5		%		70-130	19-FEB-14
Iron (Fe)-Total			89.9		%		70-130	19-FEB-14
Lead (Pb)-Total			86.8		%		70-130	19-FEB-14
Manganese (Mn)-Total			90.1		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			97.5		%		70-130	19-FEB-14
Nickel (Ni)-Total			93.7		%		70-130	19-FEB-14
Selenium (Se)-Total			96.4		%		70-130	19-FEB-14
Strontium (Sr)-Total			94.0		%		70-130	19-FEB-14

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MET-WET-HRMS-VA	Tissue							
Batch	R2794755							
WG1832176-4 CRM		VA-NRC-TORT3						
Vanadium (V)-Total			94.5		%		70-130	19-FEB-14
Zinc (Zn)-Total			94.4		%		70-130	19-FEB-14
WG1832176-5 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.0075		mg/kg wwt		0.001-0.021	19-FEB-14
Arsenic (As)-Total			90.9		%		70-130	19-FEB-14
Barium (Ba)-Total			76.1		%		70-130	19-FEB-14
Boron (B)-Total			3.64		mg/kg wwt		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			91.2		%		70-130	19-FEB-14
Cobalt (Co)-Total			92.0		%		70-130	19-FEB-14
Copper (Cu)-Total			91.0		%		70-130	19-FEB-14
Iron (Fe)-Total			89.8		%		70-130	19-FEB-14
Lead (Pb)-Total			89.6		%		70-130	19-FEB-14
Manganese (Mn)-Total			88.5		%		70-130	19-FEB-14
Nickel (Ni)-Total			91.1		%		70-130	19-FEB-14
Rubidium (Rb)-Total			87.9		%		70-130	19-FEB-14
Selenium (Se)-Total			96.8		%		70-130	19-FEB-14
Strontium (Sr)-Total			84.8		%		70-130	19-FEB-14
Thorium (Th)-Total			84.3		%		70-130	19-FEB-14
Tin (Sn)-Total			0.022		mg/kg wwt		0-0.131	19-FEB-14
Vanadium (V)-Total			83.2		%		70-130	19-FEB-14
Zinc (Zn)-Total			96.0		%		70-130	19-FEB-14
WG1832192-5 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			111.6		%		70-130	19-FEB-14
Cadmium (Cd)-Total			105.2		%		70-130	19-FEB-14
Chromium (Cr)-Total			96.4		%		70-130	19-FEB-14
Cobalt (Co)-Total			106.9		%		70-130	19-FEB-14
Copper (Cu)-Total			97.9		%		70-130	19-FEB-14
Iron (Fe)-Total			95.5		%		70-130	19-FEB-14
Lead (Pb)-Total			92.0		%		70-130	19-FEB-14
Manganese (Mn)-Total			96.4		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			100.0		%		70-130	19-FEB-14
Nickel (Ni)-Total			102.0		%		70-130	19-FEB-14
Selenium (Se)-Total			104.0		%		70-130	19-FEB-14
Strontium (Sr)-Total			99.2		%		70-130	19-FEB-14
Vanadium (V)-Total			101.9		%		70-130	19-FEB-14



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MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832192-5	CRM	VA-NRC-TORT3						
Zinc (Zn)-Total			101.6		%		70-130	19-FEB-14
WG1832192-6	CRM	VA-NIST-1566B						
Antimony (Sb)-Total			0.0089		mg/kg wwt		0.001-0.021	19-FEB-14
Arsenic (As)-Total			99.6		%		70-130	19-FEB-14
Barium (Ba)-Total			85.6		%		70-130	19-FEB-14
Boron (B)-Total			4.67		mg/kg wwt		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			100.5		%		70-130	19-FEB-14
Cobalt (Co)-Total			99.8		%		70-130	19-FEB-14
Copper (Cu)-Total			100.4		%		70-130	19-FEB-14
Iron (Fe)-Total			95.6		%		70-130	19-FEB-14
Lead (Pb)-Total			97.5		%		70-130	19-FEB-14
Manganese (Mn)-Total			96.9		%		70-130	19-FEB-14
Nickel (Ni)-Total			95.1		%		70-130	19-FEB-14
Rubidium (Rb)-Total			95.1		%		70-130	19-FEB-14
Selenium (Se)-Total			108.8		%		70-130	19-FEB-14
Strontium (Sr)-Total			96.2		%		70-130	19-FEB-14
Thorium (Th)-Total			81.1		%		70-130	19-FEB-14
Tin (Sn)-Total			0.044		mg/kg wwt		0-0.131	19-FEB-14
Vanadium (V)-Total			92.8		%		70-130	19-FEB-14
Zinc (Zn)-Total			105.6		%		70-130	19-FEB-14
WG1832176-3	DUP	L1400375-12						
Aluminum (Al)-Total		1.11	1.20		mg/kg wwt	7.8	30	19-FEB-14
Antimony (Sb)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Arsenic (As)-Total		2.80	2.95		mg/kg wwt	5.3	30	19-FEB-14
Barium (Ba)-Total		0.040	0.024	J	mg/kg wwt	0.016	0.02	19-FEB-14
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Boron (B)-Total		1.12	1.15		mg/kg wwt	2.5	30	19-FEB-14
Cadmium (Cd)-Total		0.0343	0.0395		mg/kg wwt	14	30	19-FEB-14
Cesium (Cs)-Total		0.0038	0.0039		mg/kg wwt	3.9	30	19-FEB-14
Chromium (Cr)-Total		<0.010	<0.010	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Cobalt (Co)-Total		0.0293	0.0323		mg/kg wwt	10	30	19-FEB-14
Copper (Cu)-Total		7.57	8.25		mg/kg wwt	8.5	30	19-FEB-14
Gallium (Ga)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Iron (Fe)-Total		3.70	4.24		mg/kg wwt	14	30	19-FEB-14

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MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832176-3	DUP	L1400375-12						
Lead (Pb)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Lithium (Li)-Total		0.088	0.091		mg/kg wwt	3.0	30	19-FEB-14
Manganese (Mn)-Total		0.165	0.163		mg/kg wwt	1.5	30	19-FEB-14
Molybdenum (Mo)-Total		0.0127	0.0147		mg/kg wwt	15	30	19-FEB-14
Nickel (Ni)-Total		0.013	0.010		mg/kg wwt	24	30	19-FEB-14
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Rubidium (Rb)-Total		0.796	0.824		mg/kg wwt	3.4	30	19-FEB-14
Selenium (Se)-Total		0.314	0.326		mg/kg wwt	3.7	30	19-FEB-14
Strontium (Sr)-Total		14.4	11.5		mg/kg wwt	22	50	19-FEB-14
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thallium (Tl)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Tin (Sn)-Total		0.022	0.034	J	mg/kg wwt	0.012	0.04	19-FEB-14
Uranium (U)-Total		0.00051	0.00050		mg/kg wwt	1.2	30	19-FEB-14
Vanadium (V)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Yttrium (Y)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Zinc (Zn)-Total		30.5	30.6		mg/kg wwt	0.4	30	19-FEB-14
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Aluminum (Al)-Total		2.21	2.43		mg/kg wwt	9.3	30	19-FEB-14
Antimony (Sb)-Total		0.0024	0.0024		mg/kg wwt	1.7	30	19-FEB-14
Arsenic (As)-Total		3.81	4.08		mg/kg wwt	6.9	30	19-FEB-14
Barium (Ba)-Total		0.047	0.051		mg/kg wwt	7.1	30	19-FEB-14
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Boron (B)-Total		1.11	1.17		mg/kg wwt	4.8	30	19-FEB-14
Cadmium (Cd)-Total		0.198	0.209		mg/kg wwt	5.0	30	19-FEB-14
Cesium (Cs)-Total		0.0035	0.0034		mg/kg wwt	1.5	30	19-FEB-14
Chromium (Cr)-Total		0.018	0.023		mg/kg wwt	24	30	19-FEB-14
Cobalt (Co)-Total		0.0644	0.0653		mg/kg wwt	1.3	30	19-FEB-14
Copper (Cu)-Total		6.86	6.98		mg/kg wwt	1.7	30	19-FEB-14
Gallium (Ga)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Iron (Fe)-Total		19.2	19.7		mg/kg wwt	2.3	30	19-FEB-14
Lead (Pb)-Total		0.0222	0.0264		mg/kg wwt	17	30	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832192-4	DUP	L1400375-18						
Lithium (Li)-Total		0.130	0.129		mg/kg wwt	0.8	30	19-FEB-14
Manganese (Mn)-Total		0.520	0.577		mg/kg wwt	10	30	19-FEB-14
Molybdenum (Mo)-Total		0.0735	0.0713		mg/kg wwt	3.1	30	19-FEB-14
Nickel (Ni)-Total		0.050	0.051		mg/kg wwt	2.5	30	19-FEB-14
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Rubidium (Rb)-Total		0.731	0.745		mg/kg wwt	1.8	30	19-FEB-14
Selenium (Se)-Total		0.649	0.692		mg/kg wwt	6.3	30	19-FEB-14
Strontium (Sr)-Total		23.9	27.0		mg/kg wwt	12	50	19-FEB-14
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thallium (Tl)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Tin (Sn)-Total		0.058	0.066		mg/kg wwt	12	30	19-FEB-14
Uranium (U)-Total		0.0350	0.0396		mg/kg wwt	12	30	19-FEB-14
Vanadium (V)-Total		0.029	0.030		mg/kg wwt	2.6	30	19-FEB-14
Yttrium (Y)-Total		0.0030	0.0036		mg/kg wwt	19	30	19-FEB-14
Zinc (Zn)-Total		10.1	10.2		mg/kg wwt	1.0	30	19-FEB-14
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
WG1832176-1		MB						
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA	Tissue							
Batch	R2794755							
WG1832176-1 MB								
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
WG1832176-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832176-2 MB								
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
WG1832192-1 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832192-1 MB								
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
WG1832192-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832192-2 MB								
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
WG1832192-3 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832192-3	MB							
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
Batch	R2796458							
WG1832192-1	MB							
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
WG1832192-2	MB							
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
WG1832192-3	MB							
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
MET-WET-ICP-VA		Tissue						
Batch	R2794484							
WG1832192-5	CRM	VA-NRC-TORT3						
WG1832192-6	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			105.5		%		70-130	19-FEB-14
Magnesium (Mg)-Total			108.0		%		70-130	19-FEB-14
Potassium (K)-Total			108.2		%		70-130	19-FEB-14
Sodium (Na)-Total			106.3		%		70-130	19-FEB-14
WG1832192-4	DUP	L1400375-18						
Calcium (Ca)-Total		3000	3550		mg/kg wwt	17	50	19-FEB-14
Magnesium (Mg)-Total		745	820		mg/kg wwt	9.5	30	19-FEB-14
Phosphorus (P)-Total		1080	1120		mg/kg wwt	3.5	30	19-FEB-14
Potassium (K)-Total		1800	1820		mg/kg wwt	1.1	30	19-FEB-14
Sodium (Na)-Total		5550	5450		mg/kg wwt	1.8	30	19-FEB-14
WG1832192-1	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	19-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	19-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	19-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-ICP-VA		Tissue						
Batch	R2794484							
WG1832192-1	MB							
Sodium (Na)-Total			<200		mg/kg wwt		200	19-FEB-14
WG1832192-2	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	19-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	19-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	19-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	19-FEB-14
Sodium (Na)-Total			<200		mg/kg wwt		200	19-FEB-14
WG1832192-3	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	19-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	19-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	19-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	19-FEB-14
Sodium (Na)-Total			<200		mg/kg wwt		200	19-FEB-14
Batch	R2794808							
WG1832176-4	CRM	VA-NRC-TORT3						
WG1832176-5	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			100.1		%		70-130	20-FEB-14
Magnesium (Mg)-Total			103.3		%		70-130	20-FEB-14
Potassium (K)-Total			109.2		%		70-130	20-FEB-14
Sodium (Na)-Total			100.6		%		70-130	20-FEB-14
WG1832176-3	DUP	L1400375-12						
Calcium (Ca)-Total		1070	841		mg/kg wwt	24	50	20-FEB-14
Magnesium (Mg)-Total		437	411		mg/kg wwt	6.0	30	20-FEB-14
Phosphorus (P)-Total		1050	969		mg/kg wwt	7.6	30	20-FEB-14
Potassium (K)-Total		2740	2570		mg/kg wwt	6.4	30	20-FEB-14
Sodium (Na)-Total		4300	4140		mg/kg wwt	3.9	30	20-FEB-14
WG1832176-2	MB							
Calcium (Ca)-Total			<0.50		mg/kg wwt		0.5	20-FEB-14
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	20-FEB-14
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	20-FEB-14
Potassium (K)-Total			<20		mg/kg wwt		20	20-FEB-14
Sodium (Na)-Total			<20		mg/kg wwt		20	20-FEB-14
Batch	R2796038							
WG1832176-1	MB							
Calcium (Ca)-Total			<0.50		mg/kg wwt		0.5	22-FEB-14



Quality Control Report

Workorder: L1400375

Report Date: 27-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-ICP-VA								
	Tissue							
Batch	R2796038							
WG1832176-1	MB							
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	22-FEB-14
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	22-FEB-14
Potassium (K)-Total			<20		mg/kg wwt		20	22-FEB-14
Sodium (Na)-Total			<20		mg/kg wwt		20	22-FEB-14
MOISTURE-TISS-VA								
	Tissue							
Batch	R2792160							
WG1832188-1	DUP	L1400375-14						
% Moisture		88.3	88.3		%	0.0	20	14-FEB-14
Batch	R2792768							
WG1832236-1	DUP	L1400375-21						
% Moisture		88.1	87.7		%	0.4	20	17-FEB-14

Quality Control Report

Workorder: L1400375

Report Date: 27-FEB-14

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Report To	Report Format / Distribution	Service Requested: (Rush subject to availability)
Company: <u>Golder Associates</u>	Standard: <input checked="" type="checkbox"/> Other (specify):	<input checked="" type="checkbox"/> Regular (Standard Turnaround Times))
Contact: <u>Ann Marie Norris</u>	Select: PDF <input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> Digital <input type="checkbox"/> Fax	Priority, Date Req'd: _____ (Surcharges apply)
Address: <u>#500-4260 Stillcreek Dr.</u>	Email 1: <u>anorris@golder.com</u>	Emergency (1 Business Day) - 100% Surcharge
Phone: _____ Fax: _____	Email 2: <u>awagenaar@golder.com</u>	For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Invoice To Same as Report? (circle) <input checked="" type="checkbox"/> Yes or No (if No, provide details)	Client / Project Information	Analysis Request (Indicate Filtered or Preserved, F/P)	
Copy of Invoice with Report? (circle) Yes or No	Job #: <u>11-1422-0046/2220</u>		
Company: _____	PO / AFE: _____		
Contact: _____	LSD: _____		
Address: _____	Quote #: _____		
Phone: _____ Fax: _____			

Lab Work Order # (lab use only)	ALS A	Sampler:
<u>L1400375</u>	Contact: <u>Sprague</u>	<u>AKW</u> <u>U'm</u>

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Metals (including silver)	Moisture Content									Number of Containers	
	CP-Crab-TS-1	05/12/13		Tissue*												
	CP-Crab-TS-2	↓		↓												
	CP-Crab-TS-3															
	CP-Crab-TS-4															
	CP-Crab-TS-5															
	CP-Crab-TS-6															
	CP-Crab-TS-7															
Short Holding Time Rush Processing																

Special Instructions / Regulations / Hazardous Details

~~Please hold all samples frozen. Contact Ann Marie Norris or Audrey Wagnaar for further instructions. Long term storage required - don't dispose. Report both wet and dry weight. Use high resolution. ALS to do dissection * please analyse both muscle & liver separately for each crab sample.~~

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations:
			<u>che</u>	<u>Dec 5</u>	<u>16:35</u>	<u>3.2/5.4 °C</u>				Yes / No ? If Yes add SIF

Crab



L1400375-COFC

Environmental Division

Report To	Report Format / Distribution	Service Requested: (Rush subject to availability)
Company: <u>Golder Associates</u>	Standard: <input checked="" type="checkbox"/> Other (specify):	<input checked="" type="checkbox"/> Regular (Standard Turnaround Times)
Contact: <u>Ann Marie Norms</u>	Select: PDF <input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> Digital <input type="checkbox"/> Fax	Priority, Date Req'd: _____ (Surcharges apply)
Address: <u>#500 4260 Stillcreek Dr.</u>	Email 1: <u>anorms@golder.com</u>	Emergency (1 Business Day) - 100% Surcharge
Phone: _____ Fax: _____	Email 2: <u>awagner@golder.com</u>	For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Invoice To	Client / Project Information	Analysis Request
Same as Report? (circle) <u>Yes</u> or No (if No, provide details)	Job #: <u>11-1422-0046/2220</u>	(Indicate Filtered or Preserved, F/P)
Copy of Invoice with Report? (circle) Yes or No	PO / AFE:	
Company:	LSD:	
Contact:	Quote #:	
Address:		
Phone: _____ Fax: _____		

Lab Work Order #: (lab use only)	ALS #	Contact: <u>Sanger</u>	Sampler: <u>AKJ/UM</u>
---	--------------	-------------------------------	-------------------------------

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Metals Including silver measured can lead															Number of Containers	
8	Mr. Nzb - Crab-TS-1	05/12/13		Tissue																	
9	" " -2																				
10	" " -3																				
	" " -4																				
	" " -5																				
	" " -6																				
	" " -7																				
	" " -8																				
	" " -9																				
	" " -10																				

Special Instructions / Regulations / Hazardous Details
 see pg 1 of 2 for instructions (LOC# 10-034384)

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.
 By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations:
			<u>[Signature]</u>	<u>Dec 5</u>	<u>16:35</u>	<u>3.2 5.4 °C</u>				Yes / No ? If Yes add SIF



GOLDER ASSOCIATES LTD.
ATTN: Ann-Marie Norris
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6

Date Received: 05-DEC-13
Report Date: 28-FEB-14 14:45 (MT)
Version: FINAL

Client Phone: 604-298-6623

Certificate of Analysis

Lab Work Order #: L1400380
Project P.O. #: NOT SUBMITTED
Job Reference: 11.1422.0046/2220
C of C Numbers: 10-034385, 10-034386
Legal Site Desc:

Amber Springer
Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

28-FEB-14 14:45 (MT)

Version: FINAL

		Sample ID Description Sampled Date Sampled Time Client ID	L1400380-1 TISSUE 05-DEC-13 CP MUSSEL-TS-1A	L1400380-2 TISSUE 05-DEC-13 CP MUSSEL-TS-1B	L1400380-3 TISSUE 05-DEC-13 CP MUSSEL-TS-2	L1400380-4 TISSUE 05-DEC-13 CP MUSSEL-TS-3	L1400380-5 TISSUE 05-DEC-13 CP MUSSEL-TS-4
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	82.5	51.4	81.7	79.4	81.0	
Metals	Aluminum (Al)-Total (mg/kg)	283	143	222	143	6080	
	Aluminum (Al)-Total (mg/kg wwt)	49.4	69.6	40.6	29.5	1160	
	Antimony (Sb)-Total (mg/kg)	0.014	<0.010	0.010	<0.010	<0.010	
	Antimony (Sb)-Total (mg/kg wwt)	0.0025	<0.0020	<0.0020	<0.0020	<0.0020	
	Arsenic (As)-Total (mg/kg)	6.97	2.90	9.64	7.54	4.44	
	Arsenic (As)-Total (mg/kg wwt)	1.22	1.41	1.76	1.55	0.846	
	Barium (Ba)-Total (mg/kg)	1.81	1.96	1.37	0.918	68.7	
	Barium (Ba)-Total (mg/kg wwt)	0.316	0.953	0.250	0.189	13.1	
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	0.100	
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	0.0191	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Boron (B)-Total (mg/kg)	20.2	7.6	22.1	18.6	21.7	
	Boron (B)-Total (mg/kg wwt)	3.53	3.67	4.03	3.82	4.13	
	Cadmium (Cd)-Total (mg/kg)	2.45	0.729	3.50	2.63	2.36	
	Cadmium (Cd)-Total (mg/kg wwt)	0.428	0.355	0.639	0.541	0.450	
	Calcium (Ca)-Total (mg/kg)	3270	6980	3880	3420	3460	
	Calcium (Ca)-Total (mg/kg wwt)	571	3400	709	704	659	
	Cesium (Cs)-Total (mg/kg)	0.0299	0.0243	0.0198	0.0194	1.78	
	Cesium (Cs)-Total (mg/kg wwt)	0.0052	0.0118	0.0036	0.0040	0.338	
	Chromium (Cr)-Total (mg/kg)	0.403	0.185	0.562	0.285	5.21	
	Chromium (Cr)-Total (mg/kg wwt)	0.070	0.090	0.103	0.059	0.993	
	Cobalt (Co)-Total (mg/kg)	0.374	0.160	0.551	0.313	4.65	
	Cobalt (Co)-Total (mg/kg wwt)	0.0654	0.0780	0.101	0.0644	0.886	
	Copper (Cu)-Total (mg/kg)	5.95	1.83	4.71	5.30	3.27	
	Copper (Cu)-Total (mg/kg wwt)	1.04	0.891	0.860	1.09	0.623	
	Gallium (Ga)-Total (mg/kg)	0.065	0.048	0.043	0.054	1.69	
	Gallium (Ga)-Total (mg/kg wwt)	0.0113	0.0234	0.0078	0.0110	0.321	
	Iron (Fe)-Total (mg/kg)	372	203	274	223	7380	
	Iron (Fe)-Total (mg/kg wwt)	65.1	98.7	49.9	45.8	1410	
	Lead (Pb)-Total (mg/kg)	0.434	0.107	0.339	0.168	0.322	
	Lead (Pb)-Total (mg/kg wwt)	0.0758	0.0518	0.0620	0.0345	0.0613	
	Lithium (Li)-Total (mg/kg)	0.94	0.43	0.73	0.51	7.39	
	Lithium (Li)-Total (mg/kg wwt)	0.164	0.208	0.134	0.106	1.41	
	Magnesium (Mg)-Total (mg/kg)	4850	1550	4590	5030	5900	
	Magnesium (Mg)-Total (mg/kg wwt)	848	754	838	1030	1120	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400380-6 TISSUE 05-DEC-13 CP MUSSEL-TS-5	L1400380-7 TISSUE 05-DEC-13 CP MUSSEL-TS-6	L1400380-8 TISSUE 05-DEC-13 CP MUSSEL-TS-7	L1400380-9 TISSUE 05-DEC-13 CP MUSSEL-TS-8	L1400380-12 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-1A
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	79.8	74.4	82.1	80.8	65.3	
Metals	Aluminum (Al)-Total (mg/kg)	198	341	468	195	327	
	Aluminum (Al)-Total (mg/kg wwt)	40.0	87.1	83.9	37.5	114	
	Antimony (Sb)-Total (mg/kg)	<0.010	<0.010	0.015	<0.010	0.017	
	Antimony (Sb)-Total (mg/kg wwt)	<0.0020	0.0021	0.0027	<0.0020	0.0059	
	Arsenic (As)-Total (mg/kg)	5.15	4.76	7.34	6.09	3.98	
	Arsenic (As)-Total (mg/kg wwt)	1.04	1.22	1.32	1.17	1.38	
	Barium (Ba)-Total (mg/kg)	1.00	1.73	2.11	1.39	2.16	
	Barium (Ba)-Total (mg/kg wwt)	0.202	0.443	0.379	0.268	0.750	
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Boron (B)-Total (mg/kg)	18.9	15.8	21.4	19.7	11.3	
	Boron (B)-Total (mg/kg wwt)	3.82	4.05	3.85	3.79	3.91	
	Cadmium (Cd)-Total (mg/kg)	1.94	1.53	2.22	1.96	1.16	
	Cadmium (Cd)-Total (mg/kg wwt)	0.392	0.390	0.399	0.376	0.405	
	Calcium (Ca)-Total (mg/kg)	2840	3010	3470	3100	2000	
	Calcium (Ca)-Total (mg/kg wwt)	573	768	622	596	693	
	Cesium (Cs)-Total (mg/kg)	0.0179	0.0323	0.0340	0.0242	0.0267	
	Cesium (Cs)-Total (mg/kg wwt)	0.0036	0.0082	0.0061	0.0047	0.0093	
	Chromium (Cr)-Total (mg/kg)	0.163	0.259	0.413	0.358	0.437	
	Chromium (Cr)-Total (mg/kg wwt)	0.033	0.066	0.074	0.069	0.152	
	Cobalt (Co)-Total (mg/kg)	0.251	0.241	0.427	0.428	0.247	
	Cobalt (Co)-Total (mg/kg wwt)	0.0507	0.0615	0.0767	0.0823	0.0859	
	Copper (Cu)-Total (mg/kg)	4.52	3.06	5.28	4.19	3.83	
	Copper (Cu)-Total (mg/kg wwt)	0.912	0.783	0.948	0.805	1.33	
	Gallium (Ga)-Total (mg/kg)	0.057	0.075	0.104	0.044	0.078	
	Gallium (Ga)-Total (mg/kg wwt)	0.0115	0.0191	0.0186	0.0085	0.0272	
	Iron (Fe)-Total (mg/kg)	228	250	472	291	345	
	Iron (Fe)-Total (mg/kg wwt)	45.9	63.8	84.7	56.0	120	
	Lead (Pb)-Total (mg/kg)	0.185	0.217	0.250	0.149	1.34	
	Lead (Pb)-Total (mg/kg wwt)	0.0372	0.0554	0.0449	0.0286	0.465	
	Lithium (Li)-Total (mg/kg)	0.62	0.84	0.81	0.54	0.40	
	Lithium (Li)-Total (mg/kg wwt)	0.126	0.215	0.146	0.103	0.139	
	Magnesium (Mg)-Total (mg/kg)	4280	3760	5010	4150	2250	
	Magnesium (Mg)-Total (mg/kg wwt)	862	961	900	798	780	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400380-13 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-1B	L1400380-17 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-5	L1400380-18 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-6	L1400380-19 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-7	L1400380-20 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-8
Grouping	Analyte						
TISSUE							
Physical Tests	% Moisture (%)	82.2	82.3	81.5	78.1	82.1	
Metals	Aluminum (Al)-Total (mg/kg)	795	119	490	87.9	332	
	Aluminum (Al)-Total (mg/kg wwt)	141	21.1	90.7	19.3	59.5	
	Antimony (Sb)-Total (mg/kg)	0.045	<0.010	0.015	<0.010	0.013	
	Antimony (Sb)-Total (mg/kg wwt)	0.0081	<0.0020	0.0028	<0.0020	0.0023	
	Arsenic (As)-Total (mg/kg)	7.21	7.26	7.02	5.68	7.40	
	Arsenic (As)-Total (mg/kg wwt)	1.28	1.29	1.30	1.24	1.32	
	Barium (Ba)-Total (mg/kg)	5.25	0.960	3.67	0.804	2.04	
	Barium (Ba)-Total (mg/kg wwt)	0.934	0.170	0.679	0.176	0.365	
	Beryllium (Be)-Total (mg/kg)	0.015	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Total (mg/kg wwt)	0.0026	<0.0020	<0.0020	<0.0020	<0.0020	
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Boron (B)-Total (mg/kg)	25.5	20.1	16.4	15.9	18.4	
	Boron (B)-Total (mg/kg wwt)	4.53	3.57	3.02	3.49	3.29	
	Cadmium (Cd)-Total (mg/kg)	2.34	1.73	2.13	1.38	2.51	
	Cadmium (Cd)-Total (mg/kg wwt)	0.416	0.307	0.393	0.304	0.449	
	Calcium (Ca)-Total (mg/kg)	4660	3460	3320	6930	4450	
	Calcium (Ca)-Total (mg/kg wwt)	829	614	615	1520	797	
	Cesium (Cs)-Total (mg/kg)	0.0672	0.0154	0.0424	0.0120	0.0280	
	Cesium (Cs)-Total (mg/kg wwt)	0.0120	0.0027	0.0078	0.0026	0.0050	
	Chromium (Cr)-Total (mg/kg)	1.28	0.312	0.712	0.176	0.656	
	Chromium (Cr)-Total (mg/kg wwt)	0.228	0.055	0.132	0.039	0.117	
	Cobalt (Co)-Total (mg/kg)	0.707	0.203	0.390	0.197	0.352	
	Cobalt (Co)-Total (mg/kg wwt)	0.126	0.0360	0.0721	0.0432	0.0630	
	Copper (Cu)-Total (mg/kg)	8.10	4.14	5.35	4.79	5.23	
	Copper (Cu)-Total (mg/kg wwt)	1.44	0.735	0.990	1.05	0.936	
	Gallium (Ga)-Total (mg/kg)	0.194	0.031	0.133	0.021	0.076	
	Gallium (Ga)-Total (mg/kg wwt)	0.0345	0.0055	0.0245	0.0047	0.0137	
	Iron (Fe)-Total (mg/kg)	938	214	646	154	429	
	Iron (Fe)-Total (mg/kg wwt)	167	38.0	119	33.8	76.8	
	Lead (Pb)-Total (mg/kg)	3.96	0.194	0.427	0.166	0.414	
	Lead (Pb)-Total (mg/kg wwt)	0.704	0.0344	0.0790	0.0365	0.0742	
	Lithium (Li)-Total (mg/kg)	0.99	0.45	0.69	0.30	0.76	
	Lithium (Li)-Total (mg/kg wwt)	0.176	0.079	0.128	0.066	0.136	
	Magnesium (Mg)-Total (mg/kg)	4770	4380	3920	3230	4510	
	Magnesium (Mg)-Total (mg/kg wwt)	848	777	726	709	808	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400380-21	L1400380-22		
		Description	TISSUE	TISSUE		
		Sampled Date	05-DEC-13	05-DEC-13		
		Sampled Time				
		Client ID	MCNAB-MUSSEL- TS-9	MCNAB-MUSSEL- TS-10		
Grouping	Analyte					
TISSUE						
Physical Tests	% Moisture (%)	82.7	76.3			
Metals	Aluminum (Al)-Total (mg/kg)	361	385			
	Aluminum (Al)-Total (mg/kg wwt)	62.4	91.4			
	Antimony (Sb)-Total (mg/kg)	0.016	0.013			
	Antimony (Sb)-Total (mg/kg wwt)	0.0028	0.0030			
	Arsenic (As)-Total (mg/kg)	6.83	4.08			
	Arsenic (As)-Total (mg/kg wwt)	1.18	0.969			
	Barium (Ba)-Total (mg/kg)	2.46	2.40			
	Barium (Ba)-Total (mg/kg wwt)	0.425	0.569			
	Beryllium (Be)-Total (mg/kg)	<0.010	<0.010			
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020	<0.0020			
	Bismuth (Bi)-Total (mg/kg)	<0.010	<0.010			
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020	<0.0020			
	Boron (B)-Total (mg/kg)	17.2	14.3			
	Boron (B)-Total (mg/kg wwt)	2.97	3.39			
	Cadmium (Cd)-Total (mg/kg)	2.16	1.25			
	Cadmium (Cd)-Total (mg/kg wwt)	0.373	0.297			
	Calcium (Ca)-Total (mg/kg)	3120	2170			
	Calcium (Ca)-Total (mg/kg wwt)	540	515			
	Cesium (Cs)-Total (mg/kg)	0.0314	0.0283			
	Cesium (Cs)-Total (mg/kg wwt)	0.0054	0.0067			
	Chromium (Cr)-Total (mg/kg)	0.562	0.337			
	Chromium (Cr)-Total (mg/kg wwt)	0.097	0.080			
	Cobalt (Co)-Total (mg/kg)	0.360	0.251			
	Cobalt (Co)-Total (mg/kg wwt)	0.0623	0.0596			
	Copper (Cu)-Total (mg/kg)	6.17	3.82			
	Copper (Cu)-Total (mg/kg wwt)	1.07	0.907			
	Gallium (Ga)-Total (mg/kg)	0.079	0.087			
	Gallium (Ga)-Total (mg/kg wwt)	0.0136	0.0206			
	Iron (Fe)-Total (mg/kg)	479	417			
	Iron (Fe)-Total (mg/kg wwt)	82.8	99.0			
	Lead (Pb)-Total (mg/kg)	0.372	0.310			
	Lead (Pb)-Total (mg/kg wwt)	0.0644	0.0736			
	Lithium (Li)-Total (mg/kg)	0.52	0.50			
	Lithium (Li)-Total (mg/kg wwt)	0.089	0.119			
	Magnesium (Mg)-Total (mg/kg)	3730	2820			
	Magnesium (Mg)-Total (mg/kg wwt)	645	670			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1400380-1 TISSUE 05-DEC-13 CP MUSSEL-TS-1A	L1400380-2 TISSUE 05-DEC-13 CP MUSSEL-TS-1B	L1400380-3 TISSUE 05-DEC-13 CP MUSSEL-TS-2	L1400380-4 TISSUE 05-DEC-13 CP MUSSEL-TS-3	L1400380-5 TISSUE 05-DEC-13 CP MUSSEL-TS-4
Grouping	Analyte					
TISSUE						
Metals	Manganese (Mn)-Total (mg/kg)	10.3	6.64	6.89	8.80	81.6
	Manganese (Mn)-Total (mg/kg wwt)	1.79	3.23	1.26	1.81	15.5
	Mercury (Hg)-Total (mg/kg)	0.0485	0.0145	0.0832	0.0504	0.0392
	Mercury (Hg)-Total (mg/kg wwt)	0.0085	0.0070	0.0152	0.0104	0.0075
	Molybdenum (Mo)-Total (mg/kg)	0.501	0.219	0.562	0.431	0.378
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0876	0.106	0.103	0.0887	0.0719
	Nickel (Ni)-Total (mg/kg)	0.808	0.283	0.779	0.833	4.47
	Nickel (Ni)-Total (mg/kg wwt)	0.141	0.138	0.142	0.171	0.851
	Phosphorus (P)-Total (mg/kg)	6000	2220	7670	6860	5190
	Phosphorus (P)-Total (mg/kg wwt)	1050	1080	1400	1410	988
	Potassium (K)-Total (mg/kg)	6900	2700	8300	6000	7200
	Potassium (K)-Total (mg/kg wwt)	1210	1330	1520	1240	1380
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Rubidium (Rb)-Total (mg/kg)	3.23	1.36	3.57	2.75	8.71
	Rubidium (Rb)-Total (mg/kg wwt)	0.564	0.659	0.651	0.565	1.66
	Selenium (Se)-Total (mg/kg)	1.87	0.89	2.08	2.21	1.45
	Selenium (Se)-Total (mg/kg wwt)	0.327	0.431	0.379	0.455	0.276
	Silver (Ag)-Total (mg/kg)	0.0296	0.0101	0.0416	0.0277	0.0125
	Silver (Ag)-Total (mg/kg wwt)	0.0052	0.0049	0.0076	0.0057	0.0024
	Sodium (Na)-Total (mg/kg)	32700	9800	26500	26000	30800
	Sodium (Na)-Total (mg/kg wwt)	5720	4750	4840	5350	5860
	Strontium (Sr)-Total (mg/kg)	38.7	62.7	41.6	33.9	44.1
	Strontium (Sr)-Total (mg/kg wwt)	6.76	30.5	7.59	6.98	8.40
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Thallium (Tl)-Total (mg/kg)	0.0093	0.0045	0.0033	0.0060	0.0510
	Thallium (Tl)-Total (mg/kg wwt)	0.00163	0.00218	0.00060	0.00123	0.00970
	Thorium (Th)-Total (mg/kg)	0.029	<0.010	0.025	0.020	0.187
	Thorium (Th)-Total (mg/kg wwt)	0.0050	0.0038	0.0045	0.0041	0.0357
	Tin (Sn)-Total (mg/kg)	0.50	<0.10	0.49	0.14	0.27
	Tin (Sn)-Total (mg/kg wwt)	0.088	0.035	0.089	0.028	0.052
	Uranium (U)-Total (mg/kg)	0.190	0.0651	0.318	0.154	0.184
	Uranium (U)-Total (mg/kg wwt)	0.0333	0.0316	0.0581	0.0317	0.0350
	Vanadium (V)-Total (mg/kg)	1.31	0.76	1.09	0.84	19.7
	Vanadium (V)-Total (mg/kg wwt)	0.229	0.371	0.198	0.172	3.76
	Yttrium (Y)-Total (mg/kg)	0.192	0.052	0.277	0.110	0.800

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

28-FEB-14 14:45 (MT)

Version: FINAL

Sample ID Description Sampled Date Sampled Time Client ID	L1400380-6 TISSUE 05-DEC-13 CP MUSSEL-TS-5	L1400380-7 TISSUE 05-DEC-13 CP MUSSEL-TS-6	L1400380-8 TISSUE 05-DEC-13 CP MUSSEL-TS-7	L1400380-9 TISSUE 05-DEC-13 CP MUSSEL-TS-8	L1400380-12 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-1A	
Grouping	Analyte					
TISSUE						
Metals	Manganese (Mn)-Total (mg/kg)	12.5	10.2	18.4	8.84	13.0
	Manganese (Mn)-Total (mg/kg wwt)	2.52	2.59	3.30	1.70	4.51
	Mercury (Hg)-Total (mg/kg)	0.0330	0.0281	0.0454	0.0345	0.0231
	Mercury (Hg)-Total (mg/kg wwt)	0.0066	0.0072	0.0082	0.0066	0.0080
	Molybdenum (Mo)-Total (mg/kg)	0.324	0.294	0.739	0.459	0.292
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0654	0.0752	0.133	0.0882	0.101
	Nickel (Ni)-Total (mg/kg)	0.566	0.495	1.12	0.780	0.680
	Nickel (Ni)-Total (mg/kg wwt)	0.114	0.126	0.202	0.150	0.236
	Phosphorus (P)-Total (mg/kg)	5140	4820	5940	7310	3540
	Phosphorus (P)-Total (mg/kg wwt)	1040	1230	1070	1410	1230
	Potassium (K)-Total (mg/kg)	6900	5300	6900	6800	4500
	Potassium (K)-Total (mg/kg wwt)	1390	1360	1240	1310	1580
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Rubidium (Rb)-Total (mg/kg)	3.12	2.55	3.27	2.93	2.08
	Rubidium (Rb)-Total (mg/kg wwt)	0.629	0.652	0.588	0.564	0.723
	Selenium (Se)-Total (mg/kg)	1.79	1.37	2.33	1.90	1.11
	Selenium (Se)-Total (mg/kg wwt)	0.362	0.349	0.419	0.365	0.387
	Silver (Ag)-Total (mg/kg)	0.0290	0.0264	0.0285	0.0266	0.0123
	Silver (Ag)-Total (mg/kg wwt)	0.0058	0.0067	0.0051	0.0051	0.0043
	Sodium (Na)-Total (mg/kg)	29400	23700	31800	28500	13900
	Sodium (Na)-Total (mg/kg wwt)	5930	6050	5710	5480	4850
	Strontium (Sr)-Total (mg/kg)	33.4	34.8	39.9	36.3	20.7
	Strontium (Sr)-Total (mg/kg wwt)	6.73	8.88	7.16	6.98	7.20
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
	Thallium (Tl)-Total (mg/kg)	0.0042	0.0036	0.0083	0.0053	0.0098
	Thallium (Tl)-Total (mg/kg wwt)	0.00084	0.00093	0.00148	0.00103	0.00342
	Thorium (Th)-Total (mg/kg)	0.014	0.015	0.032	0.012	0.041
	Thorium (Th)-Total (mg/kg wwt)	0.0028	0.0039	0.0057	0.0024	0.0142
	Tin (Sn)-Total (mg/kg)	0.30	0.24	0.35	0.29	0.23
	Tin (Sn)-Total (mg/kg wwt)	0.060	0.061	0.064	0.057	0.080
	Uranium (U)-Total (mg/kg)	0.0991	0.100	0.196	0.128	0.148
	Uranium (U)-Total (mg/kg wwt)	0.0200	0.0255	0.0352	0.0247	0.0515
Vanadium (V)-Total (mg/kg)	0.79	0.98	2.48	1.07	0.97	
Vanadium (V)-Total (mg/kg wwt)	0.160	0.249	0.446	0.206	0.336	
Yttrium (Y)-Total (mg/kg)	0.081	0.122	0.190	0.081	0.158	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID Description Sampled Date Sampled Time Client ID	L1400380-13 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-1B	L1400380-17 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-5	L1400380-18 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-6	L1400380-19 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-7	L1400380-20 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-8
Grouping	Analyte						
TISSUE							
Metals	Manganese (Mn)-Total (mg/kg)	32.7	11.2	18.3	10.2	15.8	
	Manganese (Mn)-Total (mg/kg wwt)	5.81	1.98	3.39	2.24	2.82	
	Mercury (Hg)-Total (mg/kg)	0.0597	0.0366	0.0403	0.0324	0.0491	
	Mercury (Hg)-Total (mg/kg wwt)	0.0106	0.0065	0.0074	0.0071	0.0088	
	Molybdenum (Mo)-Total (mg/kg)	1.85	0.383	0.387	0.345	0.542	
	Molybdenum (Mo)-Total (mg/kg wwt)	0.329	0.0679	0.0716	0.0757	0.0971	
	Nickel (Ni)-Total (mg/kg)	1.74	0.440	0.731	0.489	0.718	
	Nickel (Ni)-Total (mg/kg wwt)	0.309	0.078	0.135	0.107	0.129	
	Phosphorus (P)-Total (mg/kg)	6750	8540	7070	7880	6810	
	Phosphorus (P)-Total (mg/kg wwt)	1200	1520	1310	1730	1220	
	Potassium (K)-Total (mg/kg)	7900	7600	6800	6600	6200	
	Potassium (K)-Total (mg/kg wwt)	1400	1360	1260	1460	1100	
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010	<0.010	<0.010	<0.010	
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	
	Rubidium (Rb)-Total (mg/kg)	3.88	3.50	3.40	3.04	2.60	
	Rubidium (Rb)-Total (mg/kg wwt)	0.690	0.621	0.629	0.666	0.466	
	Selenium (Se)-Total (mg/kg)	1.99	2.04	1.88	2.01	1.81	
	Selenium (Se)-Total (mg/kg wwt)	0.353	0.361	0.348	0.441	0.325	
	Silver (Ag)-Total (mg/kg)	0.0239	0.0257	0.0218	0.0234	0.0189	
	Silver (Ag)-Total (mg/kg wwt)	0.0043	0.0046	0.0040	0.0051	0.0034	
	Sodium (Na)-Total (mg/kg)	28600	29000	23300	19500	27200	
	Sodium (Na)-Total (mg/kg wwt)	5090	5140	4310	4280	4860	
	Strontium (Sr)-Total (mg/kg)	48.2	33.6	35.7	38.3	41.0	
	Strontium (Sr)-Total (mg/kg wwt)	8.56	5.96	6.60	8.40	7.34	
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020	<0.020	<0.020	<0.020	
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040	
	Thallium (Tl)-Total (mg/kg)	0.0185	0.0051	0.0078	0.0076	0.0080	
	Thallium (Tl)-Total (mg/kg wwt)	0.00329	0.00090	0.00145	0.00167	0.00143	
	Thorium (Th)-Total (mg/kg)	0.103	0.017	0.057	0.012	0.041	
	Thorium (Th)-Total (mg/kg wwt)	0.0182	0.0031	0.0105	0.0026	0.0073	
	Tin (Sn)-Total (mg/kg)	0.25	0.36	0.38	0.19	0.31	
	Tin (Sn)-Total (mg/kg wwt)	0.044	0.064	0.071	0.042	0.055	
	Uranium (U)-Total (mg/kg)	0.702	0.118	0.188	0.105	0.183	
	Uranium (U)-Total (mg/kg wwt)	0.125	0.0210	0.0348	0.0231	0.0328	
	Vanadium (V)-Total (mg/kg)	3.93	0.70	2.01	0.43	1.18	
	Vanadium (V)-Total (mg/kg wwt)	0.699	0.124	0.372	0.094	0.212	
	Yttrium (Y)-Total (mg/kg)	0.430	0.094	0.271	0.076	0.216	

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1400380-21 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-9	L1400380-22 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-10		
Grouping	Analyte				
TISSUE					
Metals	Manganese (Mn)-Total (mg/kg)	15.7	12.0		
	Manganese (Mn)-Total (mg/kg wwt)	2.72	2.85		
	Mercury (Hg)-Total (mg/kg)	0.0480	0.0253		
	Mercury (Hg)-Total (mg/kg wwt)	0.0083	0.0060		
	Molybdenum (Mo)-Total (mg/kg)	0.443	0.288		
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0766	0.0683		
	Nickel (Ni)-Total (mg/kg)	0.726	0.550		
	Nickel (Ni)-Total (mg/kg wwt)	0.125	0.131		
	Phosphorus (P)-Total (mg/kg)	6920	4470		
	Phosphorus (P)-Total (mg/kg wwt)	1200	1060		
	Potassium (K)-Total (mg/kg)	6500	6300		
	Potassium (K)-Total (mg/kg wwt)	1120	1510		
	Rhenium (Re)-Total (mg/kg)	<0.010	<0.010		
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020	<0.0020		
	Rubidium (Rb)-Total (mg/kg)	2.96	2.91		
	Rubidium (Rb)-Total (mg/kg wwt)	0.511	0.691		
	Selenium (Se)-Total (mg/kg)	1.96	1.55		
	Selenium (Se)-Total (mg/kg wwt)	0.339	0.368		
	Silver (Ag)-Total (mg/kg)	0.0219	0.0190		
	Silver (Ag)-Total (mg/kg wwt)	0.0038	0.0045		
	Sodium (Na)-Total (mg/kg)	21100	19600		
	Sodium (Na)-Total (mg/kg wwt)	3640	4640		
	Strontium (Sr)-Total (mg/kg)	27.3	22.4		
	Strontium (Sr)-Total (mg/kg wwt)	4.71	5.31		
	Tellurium (Te)-Total (mg/kg)	<0.020	<0.020		
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040	<0.0040		
	Thallium (Tl)-Total (mg/kg)	0.0099	0.0087		
	Thallium (Tl)-Total (mg/kg wwt)	0.00172	0.00206		
	Thorium (Th)-Total (mg/kg)	0.051	0.044		
	Thorium (Th)-Total (mg/kg wwt)	0.0089	0.0105		
	Tin (Sn)-Total (mg/kg)	0.30	0.30		
	Tin (Sn)-Total (mg/kg wwt)	0.052	0.071		
	Uranium (U)-Total (mg/kg)	0.171	0.0996		
	Uranium (U)-Total (mg/kg wwt)	0.0295	0.0236		
	Vanadium (V)-Total (mg/kg)	1.35	1.24		
	Vanadium (V)-Total (mg/kg wwt)	0.233	0.294		
	Yttrium (Y)-Total (mg/kg)	0.231	0.178		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1400380-1 TISSUE 05-DEC-13 CP MUSSEL-TS-1A	L1400380-2 TISSUE 05-DEC-13 CP MUSSEL-TS-1B	L1400380-3 TISSUE 05-DEC-13 CP MUSSEL-TS-2	L1400380-4 TISSUE 05-DEC-13 CP MUSSEL-TS-3	L1400380-5 TISSUE 05-DEC-13 CP MUSSEL-TS-4	
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg ww)	0.0335	0.0252	0.0505	0.0227	0.152
	Zinc (Zn)-Total (mg/kg)	58.6	20.3	95.6	45.6	51.0
	Zinc (Zn)-Total (mg/kg ww)	10.2	9.89	17.5	9.39	9.71
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg ww)	<0.040	<0.040	<0.040	<0.040	<0.040

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1400380-6 TISSUE 05-DEC-13 CP MUSSEL-TS-5	L1400380-7 TISSUE 05-DEC-13 CP MUSSEL-TS-6	L1400380-8 TISSUE 05-DEC-13 CP MUSSEL-TS-7	L1400380-9 TISSUE 05-DEC-13 CP MUSSEL-TS-8	L1400380-12 TISSUE 05-DEC-13 MCNAB-MUSSEL- TS-1A
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	0.0163	0.0312	0.0340	0.0157	0.0550
	Zinc (Zn)-Total (mg/kg)	51.7	32.0	45.3	54.0	35.2
	Zinc (Zn)-Total (mg/kg wwt)	10.4	8.19	8.12	10.4	12.2
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040	<0.040	<0.040	0.041

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1400380-13	L1400380-17	L1400380-18	L1400380-19	L1400380-20
		Description	TISSUE	TISSUE	TISSUE	TISSUE	TISSUE
		Sampled Date	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13	05-DEC-13
		Sampled Time					
		Client ID	MCNAB-MUSSEL-TS-1B	MCNAB-MUSSEL-TS-5	MCNAB-MUSSEL-TS-6	MCNAB-MUSSEL-TS-7	MCNAB-MUSSEL-TS-8
Grouping	Analyte						
TISSUE							
Metals	Yttrium (Y)-Total (mg/kg wwt)		0.0765	0.0168	0.0502	0.0166	0.0387
	Zinc (Zn)-Total (mg/kg)		73.5	73.9	53.0	57.3	63.3
	Zinc (Zn)-Total (mg/kg wwt)		13.1	13.1	9.80	12.6	11.3
	Zirconium (Zr)-Total (mg/kg)		<0.20	<0.20	<0.20	<0.20	<0.20
	Zirconium (Zr)-Total (mg/kg wwt)		<0.040	<0.040	<0.040	<0.040	<0.040

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1400380-21	L1400380-22			
Description	TISSUE	TISSUE			
Sampled Date	05-DEC-13	05-DEC-13			
Sampled Time					
Client ID	MCNAB-MUSSEL-TS-9	MCNAB-MUSSEL-TS-10			
Grouping	Analyte				
TISSUE					
Metals	Yttrium (Y)-Total (mg/kg wwt)	0.0400	0.0424		
	Zinc (Zn)-Total (mg/kg)	64.4	47.4		
	Zinc (Zn)-Total (mg/kg wwt)	11.1	11.2		
	Zirconium (Zr)-Total (mg/kg)	<0.20	<0.20		
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040	<0.040		

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Aluminum (Al)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Barium (Ba)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cesium (Cs)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cobalt (Co)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Gallium (Ga)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Iron (Fe)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lithium (Li)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Manganese (Mn)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Nickel (Ni)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Thorium (Th)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Uranium (U)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Vanadium (V)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Yttrium (Y)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Aluminum (Al)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Barium (Ba)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cesium (Cs)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Chromium (Cr)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cobalt (Co)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Gallium (Ga)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Iron (Fe)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lead (Pb)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Lithium (Li)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Manganese (Mn)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Nickel (Ni)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Thorium (Th)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Uranium (U)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Vanadium (V)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9
Duplicate	Yttrium (Y)-Total	DUP-H	L1400380-1, -12, -13, -17, -18, -19, -2, -20, -21, -22, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
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Reference Information

DUP-H Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AG-DRY-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
AG-WET-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
HG-DRY-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (DRY)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
HG-WET-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (WET)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
MET-DRY-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
MET-DRY-ICP-VA	Tissue	Metals in Tissue by ICPOES (DRY)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MET-WET-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
MET-WET-ICP-VA	Tissue	Metals in Tissue by ICPOES (WET)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MOISTURE-TISS-VA	Tissue	% Moisture in Tissues	ASTM D2974-00 Method A
This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.			

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-034385	10-034386
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Reference Information

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1400380

Report Date: 28-FEB-14

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Client: GOLDER ASSOCIATES LTD.
 # 500 - 4260 Still Creek Drive
 Burnaby BC V5C 6C6
 Contact: Ann-Marie Norris

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AG-DRY-HRMS-VA		Tissue						
Batch	R2796465							
WG1832221-6 CRM		VA-NIST-1566B						
Silver (Ag)-Total			95.9		%		70-130	21-FEB-14
WG1832221-4 DUP		L1400380-6						
Silver (Ag)-Total		0.0290	0.0304		mg/kg	4.8	30	21-FEB-14
WG1832221-1 MB								
Silver (Ag)-Total			<0.0050		mg/kg		0.005	21-FEB-14
WG1832221-2 MB								
Silver (Ag)-Total			<0.0050		mg/kg		0.005	21-FEB-14
WG1832221-3 MB								
Silver (Ag)-Total			<0.0050		mg/kg		0.005	21-FEB-14
AG-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-6 CRM		VA-NIST-1566B						
Silver (Ag)-Total			95.9		%		70-130	21-FEB-14
WG1832221-4 DUP		L1400380-6						
Silver (Ag)-Total		0.0058	0.0061		mg/kg wwt	4.8	30	21-FEB-14
WG1832221-1 MB								
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
WG1832221-2 MB								
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
WG1832221-3 MB								
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
HG-DRY-CVAFS-VA		Tissue						
Batch	R2796441							
WG1832221-5 CRM		VA-NRC-TORT3						
Mercury (Hg)-Total			102.9		%		70-130	24-FEB-14
WG1832221-6 CRM		VA-NIST-1566B						
Mercury (Hg)-Total			101.5		%		70-130	24-FEB-14
WG1832221-4 DUP		L1400380-6						
Mercury (Hg)-Total		0.0330	0.0355		mg/kg	7.6	30	24-FEB-14
WG1832221-1 MB								
Mercury (Hg)-Total			<0.0050		mg/kg		0.005	24-FEB-14
WG1832221-2 MB								
Mercury (Hg)-Total			<0.0050		mg/kg		0.005	24-FEB-14
WG1832221-3 MB								
Mercury (Hg)-Total			<0.0050		mg/kg		0.005	24-FEB-14
HG-WET-CVAFS-VA		Tissue						

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-WET-CVAFS-VA		Tissue						
Batch	R2796437							
WG1832221-5 CRM		VA-NRC-TORT3						
Mercury (Hg)-Total			102.9		%		70-130	24-FEB-14
WG1832221-6 CRM		VA-NIST-1566B						
Mercury (Hg)-Total			101.5		%		70-130	24-FEB-14
WG1832221-4 DUP		L1400380-6						
Mercury (Hg)-Total		0.0066	0.0072		mg/kg wwt	7.6	30	24-FEB-14
WG1832221-1 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
WG1832221-2 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
WG1832221-3 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	24-FEB-14
MET-DRY-HRMS-VA		Tissue						
Batch	R2796465							
WG1832221-5 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			98.6		%		70-130	21-FEB-14
Cadmium (Cd)-Total			107.6		%		70-130	21-FEB-14
Chromium (Cr)-Total			72.6		%		70-130	21-FEB-14
Cobalt (Co)-Total			93.8		%		70-130	21-FEB-14
Copper (Cu)-Total			89.6		%		70-130	21-FEB-14
Iron (Fe)-Total			80.2		%		70-130	21-FEB-14
Lead (Pb)-Total			87.2		%		70-130	21-FEB-14
Manganese (Mn)-Total			93.4		%		70-130	21-FEB-14
Molybdenum (Mo)-Total			97.9		%		70-130	21-FEB-14
Nickel (Ni)-Total			87.7		%		70-130	21-FEB-14
Selenium (Se)-Total			92.6		%		70-130	21-FEB-14
Strontium (Sr)-Total			89.1		%		70-130	21-FEB-14
Vanadium (V)-Total			91.1		%		70-130	21-FEB-14
Zinc (Zn)-Total			90.5		%		70-130	21-FEB-14
WG1832221-6 CRM		VA-NIST-1566B						
Antimony (Sb)-Total			0.008		mg/kg		0.001-0.021	21-FEB-14
Arsenic (As)-Total			91.6		%		70-130	21-FEB-14
Barium (Ba)-Total			78.5		%		70-130	21-FEB-14
Boron (B)-Total			4.3		mg/kg		3.5-5.5	21-FEB-14
Cadmium (Cd)-Total			107.9		%		70-130	21-FEB-14
Cobalt (Co)-Total			93.0		%		70-130	21-FEB-14

Quality Control Report

Workorder: L1400380

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA		Tissue						
Batch	R2796465							
WG1832221-6	CRM	VA-NIST-1566B						
Copper (Cu)-Total			88.8		%		70-130	21-FEB-14
Iron (Fe)-Total			91.0		%		70-130	21-FEB-14
Lead (Pb)-Total			91.6		%		70-130	21-FEB-14
Manganese (Mn)-Total			102.1		%		70-130	21-FEB-14
Nickel (Ni)-Total			84.3		%		70-130	21-FEB-14
Rubidium (Rb)-Total			92.7		%		70-130	21-FEB-14
Selenium (Se)-Total			103.8		%		70-130	21-FEB-14
Strontium (Sr)-Total			80.2		%		70-130	21-FEB-14
Thorium (Th)-Total			0.033		mg/kg		0.027-0.047	21-FEB-14
Tin (Sn)-Total			0.02		mg/kg		0-0.13	21-FEB-14
Uranium (U)-Total			92.7		%		70-130	21-FEB-14
Vanadium (V)-Total			93.7		%		70-130	21-FEB-14
Zinc (Zn)-Total			86.7		%		70-130	21-FEB-14
WG1832221-4	DUP	L1400380-6						
Aluminum (Al)-Total		198	505	DUP-H	mg/kg	87	30	21-FEB-14
Antimony (Sb)-Total		<0.010	0.014	RPD-NA	mg/kg	N/A	30	21-FEB-14
Arsenic (As)-Total		5.15	5.94		mg/kg	14	30	21-FEB-14
Barium (Ba)-Total		1.00	3.05	DUP-H	mg/kg	101	30	21-FEB-14
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	21-FEB-14
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	21-FEB-14
Boron (B)-Total		18.9	20.4		mg/kg	7.5	30	21-FEB-14
Cadmium (Cd)-Total		1.94	1.97		mg/kg	1.4	30	21-FEB-14
Cesium (Cs)-Total		0.0179	0.0458	DUP-H	mg/kg	88	30	21-FEB-14
Chromium (Cr)-Total		0.163	0.750	DUP-H	mg/kg	129	30	21-FEB-14
Cobalt (Co)-Total		0.251	0.422	DUP-H	mg/kg	51	30	21-FEB-14
Copper (Cu)-Total		4.52	5.08		mg/kg	12	30	21-FEB-14
Gallium (Ga)-Total		0.057	0.140	DUP-H	mg/kg	0.083	0.04	21-FEB-14
Iron (Fe)-Total		228	758	DUP-H	mg/kg	108	30	21-FEB-14
Lead (Pb)-Total		0.185	0.406	DUP-H	mg/kg	75	30	21-FEB-14
Lithium (Li)-Total		0.62	1.05	DUP-H	mg/kg	51	30	21-FEB-14
Manganese (Mn)-Total		12.5	19.8	DUP-H	mg/kg	45	30	21-FEB-14
Molybdenum (Mo)-Total		0.324	0.419		mg/kg	26	30	21-FEB-14
Nickel (Ni)-Total		0.566	0.844	DUP-H	mg/kg	39	30	21-FEB-14
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	21-FEB-14



Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA								
	Tissue							
Batch	R2796465							
WG1832221-4	DUP	L1400380-6						
Rubidium (Rb)-Total		3.12	3.52		mg/kg	12	30	21-FEB-14
Selenium (Se)-Total		1.79	1.96		mg/kg	8.8	30	21-FEB-14
Strontium (Sr)-Total		33.4	37.9		mg/kg	13	50	21-FEB-14
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	21-FEB-14
Thallium (Tl)-Total		0.0042	0.0065	J	mg/kg	0.0023	0.004	21-FEB-14
Thorium (Th)-Total		0.014	0.042	DUP-H	mg/kg	0.028	0.02	21-FEB-14
Tin (Sn)-Total		0.30	0.37		mg/kg	20	30	21-FEB-14
Uranium (U)-Total		0.0991	0.148	DUP-H	mg/kg	39	30	21-FEB-14
Vanadium (V)-Total		0.79	2.65	DUP-H	mg/kg	108	30	21-FEB-14
Yttrium (Y)-Total		0.081	0.205	DUP-H	mg/kg	87	30	21-FEB-14
Zinc (Zn)-Total		51.7	60.0		mg/kg	15	30	21-FEB-14
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	21-FEB-14
WG1832221-1	MB							
Aluminum (Al)-Total			<2.0		mg/kg		2	21-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	21-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	21-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	21-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	21-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	21-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	21-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	21-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	21-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	21-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	21-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	21-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	21-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	21-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	21-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	21-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	21-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	21-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	21-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	21-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	21-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2796465							
WG1832221-1 MB								
Selenium (Se)-Total			<0.10		mg/kg		0.1	21-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	21-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	21-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	21-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	21-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	21-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	21-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	21-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	21-FEB-14
WG1832221-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	21-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	21-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	21-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	21-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	21-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	21-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	21-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	21-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	21-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	21-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	21-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	21-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	21-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	21-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	21-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	21-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	21-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	21-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	21-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	21-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	21-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	21-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2796465							
WG1832221-2 MB								
Strontium (Sr)-Total			<0.050		mg/kg		0.05	21-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	21-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	21-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	21-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	21-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	21-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	21-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	21-FEB-14
WG1832221-3 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	21-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	21-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	21-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	21-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	21-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	21-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	21-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	21-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	21-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	21-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	21-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	21-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	21-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	21-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	21-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	21-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	21-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	21-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	21-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	21-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	21-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	21-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	21-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA		Tissue						
Batch	R2796465							
WG1832221-3	MB							
Tellurium (Te)-Total			<0.020		mg/kg		0.02	21-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	21-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	21-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	21-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	21-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	21-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	21-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	21-FEB-14
MET-DRY-ICP-VA		Tissue						
Batch	R2795804							
WG1832221-5	CRM		VA-NRC-TORT3					
WG1832221-6	CRM		VA-NIST-1566B					
Calcium (Ca)-Total			96.1		%		70-130	21-FEB-14
Magnesium (Mg)-Total			100.9		%		70-130	21-FEB-14
Potassium (K)-Total			99.8		%		70-130	21-FEB-14
Sodium (Na)-Total			98.2		%		70-130	21-FEB-14
WG1832221-4	DUP		L1400380-6					
Calcium (Ca)-Total		2840	3380		mg/kg	17	50	21-FEB-14
Magnesium (Mg)-Total		4280	4780		mg/kg	11	30	21-FEB-14
Phosphorus (P)-Total		5140	6060		mg/kg	17	30	21-FEB-14
Potassium (K)-Total		6900	6900		mg/kg	1.1	30	21-FEB-14
Sodium (Na)-Total		29400	29800		mg/kg	1.4	30	21-FEB-14
WG1832221-1	MB							
Calcium (Ca)-Total			<30		mg/kg		30	21-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	21-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	21-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	21-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	21-FEB-14
WG1832221-2	MB							
Calcium (Ca)-Total			<30		mg/kg		30	21-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	21-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	21-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	21-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	21-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-ICP-VA		Tissue						
Batch	R2795804							
WG1832221-3	MB							
Calcium (Ca)-Total			<30		mg/kg		30	21-FEB-14
Magnesium (Mg)-Total			<50		mg/kg		50	21-FEB-14
Phosphorus (P)-Total			<200		mg/kg		200	21-FEB-14
Potassium (K)-Total			<1000		mg/kg		1000	21-FEB-14
Sodium (Na)-Total			<1000		mg/kg		1000	21-FEB-14
MET-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-5	CRM							
		VA-NRC-TORT3						
Arsenic (As)-Total			98.6		%		70-130	21-FEB-14
Cadmium (Cd)-Total			107.6		%		70-130	21-FEB-14
Chromium (Cr)-Total			72.6		%		70-130	21-FEB-14
Cobalt (Co)-Total			93.8		%		70-130	21-FEB-14
Copper (Cu)-Total			89.6		%		70-130	21-FEB-14
Iron (Fe)-Total			88.3		%		70-130	21-FEB-14
Lead (Pb)-Total			87.2		%		70-130	21-FEB-14
Manganese (Mn)-Total			93.4		%		70-130	21-FEB-14
Molybdenum (Mo)-Total			97.9		%		70-130	21-FEB-14
Nickel (Ni)-Total			87.7		%		70-130	21-FEB-14
Selenium (Se)-Total			92.6		%		70-130	21-FEB-14
Strontium (Sr)-Total			89.1		%		70-130	21-FEB-14
Vanadium (V)-Total			91.1		%		70-130	21-FEB-14
Zinc (Zn)-Total			90.5		%		70-130	21-FEB-14
WG1832221-6	CRM							
		VA-NIST-1566B						
Antimony (Sb)-Total			0.0081		mg/kg wwt		0.001-0.021	21-FEB-14
Arsenic (As)-Total			91.6		%		70-130	21-FEB-14
Barium (Ba)-Total			78.5		%		70-130	21-FEB-14
Boron (B)-Total			4.27		mg/kg wwt		3.5-5.5	21-FEB-14
Cadmium (Cd)-Total			107.9		%		70-130	21-FEB-14
Cobalt (Co)-Total			93.0		%		70-130	21-FEB-14
Copper (Cu)-Total			88.8		%		70-130	21-FEB-14
Iron (Fe)-Total			91.0		%		70-130	21-FEB-14
Lead (Pb)-Total			91.6		%		70-130	21-FEB-14
Manganese (Mn)-Total			102.1		%		70-130	21-FEB-14
Nickel (Ni)-Total			84.3		%		70-130	21-FEB-14

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MET-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-6	CRM	VA-NIST-1566B						
Rubidium (Rb)-Total			92.7		%		70-130	21-FEB-14
Selenium (Se)-Total			103.8		%		70-130	21-FEB-14
Strontium (Sr)-Total			80.2		%		70-130	21-FEB-14
Thorium (Th)-Total			89.8		%		70-130	21-FEB-14
Tin (Sn)-Total			0.019		mg/kg wwt		0-0.131	21-FEB-14
Vanadium (V)-Total			93.7		%		70-130	21-FEB-14
Zinc (Zn)-Total			86.7		%		70-130	21-FEB-14
WG1832221-4	DUP	L1400380-6						
Aluminum (Al)-Total		40.0	102	DUP-H	mg/kg wwt	87	30	21-FEB-14
Antimony (Sb)-Total		<0.0020	0.0028	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
Arsenic (As)-Total		1.04	1.20		mg/kg wwt	14	30	21-FEB-14
Barium (Ba)-Total		0.202	0.615	DUP-H	mg/kg wwt	101	30	21-FEB-14
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
Boron (B)-Total		3.82	4.11		mg/kg wwt	7.5	30	21-FEB-14
Cadmium (Cd)-Total		0.392	0.397		mg/kg wwt	1.4	30	21-FEB-14
Cesium (Cs)-Total		0.0036	0.0092	DUP-H	mg/kg wwt	88	30	21-FEB-14
Chromium (Cr)-Total		0.033	0.151	DUP-H	mg/kg wwt	129	30	21-FEB-14
Cobalt (Co)-Total		0.0507	0.0850	DUP-H	mg/kg wwt	51	30	21-FEB-14
Copper (Cu)-Total		0.912	1.02		mg/kg wwt	12	30	21-FEB-14
Gallium (Ga)-Total		0.0115	0.0282	DUP-H	mg/kg wwt	0.0167	0.008	21-FEB-14
Iron (Fe)-Total		45.9	153	DUP-H	mg/kg wwt	108	30	21-FEB-14
Lead (Pb)-Total		0.0372	0.0818	DUP-H	mg/kg wwt	75	30	21-FEB-14
Lithium (Li)-Total		0.126	0.212	DUP-H	mg/kg wwt	51	30	21-FEB-14
Manganese (Mn)-Total		2.52	3.99	DUP-H	mg/kg wwt	45	30	21-FEB-14
Molybdenum (Mo)-Total		0.0654	0.0846		mg/kg wwt	26	30	21-FEB-14
Nickel (Ni)-Total		0.114	0.170	DUP-H	mg/kg wwt	39	30	21-FEB-14
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
Rubidium (Rb)-Total		0.629	0.711		mg/kg wwt	12	30	21-FEB-14
Selenium (Se)-Total		0.362	0.395		mg/kg wwt	8.8	30	21-FEB-14
Strontium (Sr)-Total		6.73	7.65		mg/kg wwt	13	50	21-FEB-14
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
Thallium (Tl)-Total		0.00084	0.00131	J	mg/kg wwt	0.00047	0.0008	21-FEB-14
Thorium (Th)-Total		0.0028	0.0085	DUP-H	mg/kg wwt	0.0057	0.004	21-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA								
	Tissue							
Batch	R2796458							
WG1832221-4	DUP	L1400380-6						
Tin (Sn)-Total		0.060	0.074		mg/kg wwt	20	30	21-FEB-14
Uranium (U)-Total		0.0200	0.0298	DUP-H	mg/kg wwt	39	30	21-FEB-14
Vanadium (V)-Total		0.160	0.534	DUP-H	mg/kg wwt	108	30	21-FEB-14
Yttrium (Y)-Total		0.0163	0.0413	DUP-H	mg/kg wwt	87	30	21-FEB-14
Zinc (Zn)-Total		10.4	12.1		mg/kg wwt	15	30	21-FEB-14
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	21-FEB-14
WG1832221-1	MB							
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	21-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-1 MB								
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	21-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	21-FEB-14
WG1832221-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	21-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14



Quality Control Report

Workorder: L1400380

Report Date: 28-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-2 MB								
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	21-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	21-FEB-14
WG1832221-3 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	21-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	21-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	21-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	21-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	21-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	21-FEB-14

Quality Control Report

Workorder: L1400380

Report Date: 28-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2796458							
WG1832221-3	MB							
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	21-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	21-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	21-FEB-14
MET-WET-ICP-VA		Tissue						
Batch	R2795804							
WG1832221-5	CRM	VA-NRC-TORT3						
WG1832221-6	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			96.1		%		70-130	21-FEB-14
Magnesium (Mg)-Total			100.9		%		70-130	21-FEB-14
Potassium (K)-Total			99.8		%		70-130	21-FEB-14
Sodium (Na)-Total			98.2		%		70-130	21-FEB-14
WG1832221-4	DUP	L1400380-6						
Calcium (Ca)-Total		573	682		mg/kg wwt	17	50	21-FEB-14
Magnesium (Mg)-Total		862	964		mg/kg wwt	11	30	21-FEB-14
Phosphorus (P)-Total		1040	1220		mg/kg wwt	17	30	21-FEB-14
Potassium (K)-Total		1390	1400		mg/kg wwt	1.1	30	21-FEB-14
Sodium (Na)-Total		5930	6010		mg/kg wwt	1.4	30	21-FEB-14
WG1832221-1	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	21-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	21-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	21-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	21-FEB-14
Sodium (Na)-Total			<200		mg/kg wwt		200	21-FEB-14
WG1832221-2	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	21-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	21-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	21-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	21-FEB-14
Sodium (Na)-Total			<200		mg/kg wwt		200	21-FEB-14
WG1832221-3	MB							
Calcium (Ca)-Total			<5.0		mg/kg wwt		5	21-FEB-14
Magnesium (Mg)-Total			<10		mg/kg wwt		10	21-FEB-14
Phosphorus (P)-Total			<50		mg/kg wwt		50	21-FEB-14
Potassium (K)-Total			<200		mg/kg wwt		200	21-FEB-14
Sodium (Na)-Total			<200		mg/kg wwt		200	21-FEB-14



Quality Control Report

Workorder: L1400380

Report Date: 28-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-TISS-VA	Tissue							
Batch	R2794458							
WG1832220-1	DUP	L1400380-6						
% Moisture		79.8	80.9		%	1.3	20	17-FEB-14

Quality Control Report

Workorder: L1400380

Report Date: 28-FEB-14

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

Mussel

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES



Environmental Division

Chain of Custody / Analytical
Canada Toll Free: 1 800
www.alsglobal.ca



L1400380-COFC

10-034386

Page 2 of 2

Report To	Report Format / Distribution	Service Requested: (Rush subject to availability)
Company: <u>Golden Associates</u>	Standard: <input checked="" type="checkbox"/> Other (specify):	<input checked="" type="checkbox"/> Regular (Standard Turnaround Times)
Contact: <u>Ann Marie Norms</u>	Select: PDF <input checked="" type="checkbox"/> Excel <input checked="" type="checkbox"/> Digital <input type="checkbox"/> Fax <input type="checkbox"/>	Priority, Date Req'd: _____ (Surcharges apply)
Address: #500-4260 Silvercreek dr	Email 1: <u>anorms@golden.com</u>	Emergency (1 Business Day) - 100% Surcharge
	Email 2: <u>awagner@golden.com</u>	For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Phone: _____ Fax: _____	Analysis Request	
Invoice To Same as Report? (circle) <u>Yes</u> or No (if No, provide details)	(Indicate Filtered or Preserved, F/P)	
Copy of Invoice with Report? (circle) Yes or No		
Company: _____	Client / Project Information	
Contact: _____	Job #: <u>11422-0046/2220</u>	
Address: _____	PO / AFE: _____	
Phone: _____ Fax: _____	LSD: _____	
	Quote #: _____	

Lab Work Order # (lab use only)	<u>L1400380</u>	ALS Contact: <u>A Springer</u>	Sampler: <u>AKN/VM</u>
--	-----------------	---------------------------------------	-------------------------------

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type											Number of Containers			
12	McNab-Mussel-TS-1A	05/12/13		Tissue														
13	McNab-Mussel-TS-1B																	
14	McNab-Mussel-TS-2																	
15	McNab-Mussel-TS-3																	
16	McNab-Mussel-TS-4																	
17	McNab-Mussel-TS-5																	
18	McNab-Mussel-TS-6																	
19	McNab-Mussel-TS-7																	
20	McNab-Mussel-TS-8																	
21	McNab-Mussel-TS-9																	
22	McNab-Mussel-TS-10																	

Special Instructions / Regulations / Hazardous Details

See pg 1 of 2 for instructions.

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.
By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)			Observations: Yes / No ? If Yes add SIF	
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:		Time:
			<u>Elise</u>	<u>Dec 5</u>	<u>16:35</u>	<u>3.2/5.40C</u>				



GOLDER ASSOCIATES LTD.
ATTN: Ann-Marie Norris
500 - 4260 Still Creek Drive
Burnaby BC V5C 6C6

Date Received: 09-DEC-13
Report Date: 24-FEB-14 13:23 (MT)
Version: FINAL

Client Phone: 604-298-6623

Certificate of Analysis

Lab Work Order #: L1401240
Project P.O. #: NOT SUBMITTED
Job Reference: 11-1422-0046/2220
C of C Numbers: 10-371262
Legal Site Desc:

Amber Springer
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 8081 Lougheed Hwy, Suite 100, Burnaby, BC V5A 1W9 Canada | Phone: +1 604 253 4188 | Fax: +1 604 253 6700
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID				
	L1401240-1 TISSUE 09-DEC-13 16:10 ONCL				
Grouping	Analyte				
TISSUE					
Physical Tests	% Moisture (%)	76.2			
Metals	Aluminum (Al)-Total (mg/kg)	7.1			
	Aluminum (Al)-Total (mg/kg wwt)	1.68			
	Antimony (Sb)-Total (mg/kg)	0.020			
	Antimony (Sb)-Total (mg/kg wwt)	0.0047			
	Arsenic (As)-Total (mg/kg)	1.61			
	Arsenic (As)-Total (mg/kg wwt)	0.381			
	Barium (Ba)-Total (mg/kg)	0.244			
	Barium (Ba)-Total (mg/kg wwt)	0.058			
	Beryllium (Be)-Total (mg/kg)	<0.010			
	Beryllium (Be)-Total (mg/kg wwt)	<0.0020			
	Bismuth (Bi)-Total (mg/kg)	<0.010			
	Bismuth (Bi)-Total (mg/kg wwt)	<0.0020			
	Boron (B)-Total (mg/kg)	<1.0			
	Boron (B)-Total (mg/kg wwt)	<0.20			
	Cadmium (Cd)-Total (mg/kg)	0.035			
	Cadmium (Cd)-Total (mg/kg wwt)	0.0083			
	Calcium (Ca)-Total (mg/kg)	5300			
	Calcium (Ca)-Total (mg/kg wwt)	1260			
	Cesium (Cs)-Total (mg/kg)	0.0968			
	Cesium (Cs)-Total (mg/kg wwt)	0.0230			
	Chromium (Cr)-Total (mg/kg)	1.09			
	Chromium (Cr)-Total (mg/kg wwt)	0.259			
	Cobalt (Co)-Total (mg/kg)	0.047			
	Cobalt (Co)-Total (mg/kg wwt)	0.0112			
	Copper (Cu)-Total (mg/kg)	6.83			
	Copper (Cu)-Total (mg/kg wwt)	1.62			
	Gallium (Ga)-Total (mg/kg)	<0.020			
	Gallium (Ga)-Total (mg/kg wwt)	<0.0040			
	Iron (Fe)-Total (mg/kg)	63.1			
	Iron (Fe)-Total (mg/kg wwt)	15.0			
	Lead (Pb)-Total (mg/kg)	9.89			
	Lead (Pb)-Total (mg/kg wwt)	2.35			
	Lithium (Li)-Total (mg/kg)	<0.10			
	Lithium (Li)-Total (mg/kg wwt)	<0.020			
	Magnesium (Mg)-Total (mg/kg)	1530			
	Magnesium (Mg)-Total (mg/kg wwt)	364			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1401240-1				
Description	TISSUE				
Sampled Date	09-DEC-13				
Sampled Time	16:10				
Client ID	ONCL				
Grouping	Analyte				
TISSUE					
Metals	Manganese (Mn)-Total (mg/kg)	1.41			
	Manganese (Mn)-Total (mg/kg wwt)	0.335			
	Mercury (Hg)-Total (mg/kg)	0.418			
	Mercury (Hg)-Total (mg/kg wwt)	0.0994			
	Molybdenum (Mo)-Total (mg/kg)	0.074			
	Molybdenum (Mo)-Total (mg/kg wwt)	0.0175			
	Nickel (Ni)-Total (mg/kg)	0.407			
	Nickel (Ni)-Total (mg/kg wwt)	0.097			
	Phosphorus (P)-Total (mg/kg)	13400			
	Phosphorus (P)-Total (mg/kg wwt)	3190			
	Potassium (K)-Total (mg/kg)	16200			
	Potassium (K)-Total (mg/kg wwt)	3850			
	Rhenium (Re)-Total (mg/kg)	<0.010			
	Rhenium (Re)-Total (mg/kg wwt)	<0.0020			
	Rubidium (Rb)-Total (mg/kg)	6.42			
	Rubidium (Rb)-Total (mg/kg wwt)	1.53			
	Selenium (Se)-Total (mg/kg)	2.06			
	Selenium (Se)-Total (mg/kg wwt)	0.489			
	Silver (Ag)-Total (mg/kg)	0.0077			
	Silver (Ag)-Total (mg/kg wwt)	0.0018			
	Sodium (Na)-Total (mg/kg)	2140			
	Sodium (Na)-Total (mg/kg wwt)	509			
	Strontium (Sr)-Total (mg/kg)	19.4			
	Strontium (Sr)-Total (mg/kg wwt)	4.62			
	Tellurium (Te)-Total (mg/kg)	<0.020			
	Tellurium (Te)-Total (mg/kg wwt)	<0.0040			
	Thallium (Tl)-Total (mg/kg)	0.0026			
	Thallium (Tl)-Total (mg/kg wwt)	0.00062			
	Thorium (Th)-Total (mg/kg)	<0.010			
	Thorium (Th)-Total (mg/kg wwt)	<0.0020			
	Tin (Sn)-Total (mg/kg)	<0.10			
	Tin (Sn)-Total (mg/kg wwt)	<0.020			
	Uranium (U)-Total (mg/kg)	<0.0020			
	Uranium (U)-Total (mg/kg wwt)	<0.00040			
	Vanadium (V)-Total (mg/kg)	0.44			
	Vanadium (V)-Total (mg/kg wwt)	0.104			
	Yttrium (Y)-Total (mg/kg)	<0.010			

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID		L1401240-1				
Description		TISSUE				
Sampled Date		09-DEC-13				
Sampled Time		16:10				
Client ID		ONCL				
Grouping	Analyte					
TISSUE						
Metals	Yttrium (Y)-Total (mg/kg wwt)	<0.0020				
	Zinc (Zn)-Total (mg/kg)	145				
	Zinc (Zn)-Total (mg/kg wwt)	34.5				
	Zirconium (Zr)-Total (mg/kg)	<0.20				
	Zirconium (Zr)-Total (mg/kg wwt)	<0.040				

* Please refer to the Reference Information section for an explanation of any qualifiers detected.

Reference Information

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Calcium (Ca)-Total	B	L1401240-1
Method Blank	Calcium (Ca)-Total	B	L1401240-1
Method Blank	Mercury (Hg)-Total	B	L1401240-1
Method Blank	Mercury (Hg)-Total	B	L1401240-1
Duplicate	Antimony (Sb)-Total	DUP-H	L1401240-1
Duplicate	Lead (Pb)-Total	DUP-H	L1401240-1
Duplicate	Nickel (Ni)-Total	DUP-H	L1401240-1
Duplicate	Strontium (Sr)-Total	DUP-H	L1401240-1
Duplicate	Lead (Pb)-Total	DUP-H	L1401240-1
Duplicate	Nickel (Ni)-Total	DUP-H	L1401240-1
Duplicate	Strontium (Sr)-Total	DUP-H	L1401240-1
Duplicate	Calcium (Ca)-Total	DUP-H	L1401240-1
Duplicate	Calcium (Ca)-Total	DUP-H	L1401240-1

Qualifiers for Individual Parameters Listed:

Qualifier	Description
B	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
AG-DRY-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
AG-WET-HRMS-VA	Tissue	Ag in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
HG-DRY-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (DRY)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
HG-WET-CVAFS-VA	Tissue	Mercury in Tissue by CVAFS (WET)	EPA 200.3, EPA 245.7
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by atomic fluorescence spectrophotometry or atomic absorption spectrophotometry, adapted from US EPA Method 245.7. This digestion procedure was implemented on October 5, 2009.			
MET-DRY-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (DRY)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on dry weight basis.			
MET-DRY-ICP-VA	Tissue	Metals in Tissue by ICPOES (DRY)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MET-WET-HRMS-VA	Tissue	Metals in Tissue by HR-ICPMS (WET)	EPA 200.3/200.8
Trace metals in tissue are analyzed by high resolution inductively coupled plasma mass spectrometry (HR-ICPMS) modified from US EPA Method 200.8, (Revision 5.5). The sample preparation procedure is modified from US EPA 200.3. Analytical results are reported on wet weight basis.			
MET-WET-ICP-VA	Tissue	Metals in Tissue by ICPOES (WET)	EPA 200.3, EPA 6010B
This method is adapted from US EPA Method 200.3 "Sample Procedures for Spectrochemical Determination of Total Recoverable Elements in Biological Tissues" (1996). Tissue samples are homogenized and sub-sampled prior to hotblock digestion with nitric and hydrochloric acids, in combination with repeated additions of hydrogen peroxide. Analysis is by Inductively Coupled Plasma - Optical Emission Spectrophotometry, adapted from US EPA Method 6010B. This digestion procedure was implemented on October 5, 2009.			
MOISTURE-TISS-VA	Tissue	% Moisture in Tissues	ASTM D2974-00 Method A
This analysis is carried out gravimetrically by drying the sample at 105 C for a minimum of six hours.			

Reference Information

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

10-371262

GLOSSARY OF REPORT TERMS

Surrogate - A compound that is similar in behaviour to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

mg/kg - milligrams per kilogram based on dry weight of sample.

mg/kg wwt - milligrams per kilogram based on wet weight of sample.

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight of sample.

mg/L - milligrams per litre.

< - Less than.

D.L. - The reported Detection Limit, also known as the Limit of Reporting (LOR).

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.



Quality Control Report

Workorder: L1401240

Report Date: 24-FEB-14

Page 1 of 12

Client: GOLDER ASSOCIATES LTD.
 # 500 - 4260 Still Creek Drive
 Burnaby BC V5C 6C6

Contact: Ann-Marie Norris

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
AG-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832928-5 CRM		VA-NIST-1566B						
Silver (Ag)-Total			102.9		%		70-130	19-FEB-14
WG1832928-3 DUP		L1401240-1						
Silver (Ag)-Total		0.0077	0.0088		mg/kg	12	30	19-FEB-14
WG1832928-1 MB								
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
WG1832928-2 MB								
Silver (Ag)-Total			<0.0050		mg/kg		0.005	19-FEB-14
AG-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832928-5 CRM		VA-NIST-1566B						
Silver (Ag)-Total			102.9		%		70-130	19-FEB-14
WG1832928-3 DUP		L1401240-1						
Silver (Ag)-Total		0.0018	0.0021		mg/kg wwt	12	30	19-FEB-14
WG1832928-1 MB								
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
WG1832928-2 MB								
Silver (Ag)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
HG-DRY-CVAFS-VA		Tissue						
Batch	R2795126							
WG1832928-4 CRM		VA-NRC-TORT3						
Mercury (Hg)-Total			100.7		%		70-130	21-FEB-14
WG1832928-5 CRM		VA-NIST-1566B						
Mercury (Hg)-Total			122.2		%		70-130	21-FEB-14
WG1832928-3 DUP		L1401240-1						
Mercury (Hg)-Total		0.418	0.390		mg/kg	7.0	30	21-FEB-14
WG1832928-1 MB								
Mercury (Hg)-Total			<0.0050		mg/kg		0.005	21-FEB-14
WG1832928-2 MB								
Mercury (Hg)-Total			0.0059	B	mg/kg		0.005	21-FEB-14
HG-WET-CVAFS-VA		Tissue						
Batch	R2795125							
WG1832928-4 CRM		VA-NRC-TORT3						
Mercury (Hg)-Total			100.7		%		70-130	21-FEB-14
WG1832928-5 CRM		VA-NIST-1566B						
Mercury (Hg)-Total			122.2		%		70-130	21-FEB-14
WG1832928-3 DUP		L1401240-1						
Mercury (Hg)-Total		0.0994	0.0927		mg/kg wwt	7.0	30	21-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-WET-CVAFS-VA		Tissue						
Batch	R2795125							
WG1832928-1 MB								
Mercury (Hg)-Total			<0.0010		mg/kg wwt		0.001	21-FEB-14
WG1832928-2 MB								
Mercury (Hg)-Total			0.0012	B	mg/kg wwt		0.001	21-FEB-14
MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832928-4 CRM	VA-NRC-TORT3							
Arsenic (As)-Total			91.7		%		70-130	19-FEB-14
Cadmium (Cd)-Total			90.2		%		70-130	19-FEB-14
Chromium (Cr)-Total			84.0		%		70-130	19-FEB-14
Cobalt (Co)-Total			91.3		%		70-130	19-FEB-14
Copper (Cu)-Total			82.2		%		70-130	19-FEB-14
Iron (Fe)-Total			74.8		%		70-130	19-FEB-14
Lead (Pb)-Total			79.9		%		70-130	19-FEB-14
Manganese (Mn)-Total			80.6		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			85.0		%		70-130	19-FEB-14
Nickel (Ni)-Total			87.0		%		70-130	19-FEB-14
Selenium (Se)-Total			87.4		%		70-130	19-FEB-14
Strontium (Sr)-Total			82.7		%		70-130	19-FEB-14
Vanadium (V)-Total			85.5		%		70-130	19-FEB-14
Zinc (Zn)-Total			82.5		%		70-130	19-FEB-14
WG1832928-5 CRM	VA-NIST-1566B							
Antimony (Sb)-Total			0.010		mg/kg		0.001-0.021	19-FEB-14
Arsenic (As)-Total			97.6		%		70-130	19-FEB-14
Barium (Ba)-Total			89.8		%		70-130	19-FEB-14
Boron (B)-Total			4.3		mg/kg		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			106.1		%		70-130	19-FEB-14
Cobalt (Co)-Total			104.0		%		70-130	19-FEB-14
Copper (Cu)-Total			99.8		%		70-130	19-FEB-14
Iron (Fe)-Total			95.7		%		70-130	19-FEB-14
Lead (Pb)-Total			98.2		%		70-130	19-FEB-14
Manganese (Mn)-Total			98.8		%		70-130	19-FEB-14
Nickel (Ni)-Total			104.5		%		70-130	19-FEB-14
Rubidium (Rb)-Total			102.7		%		70-130	19-FEB-14
Selenium (Se)-Total			101.5		%		70-130	19-FEB-14
Strontium (Sr)-Total			90.9		%		70-130	19-FEB-14

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832928-5	CRM	VA-NIST-1566B						
Thorium (Th)-Total			0.031		mg/kg		0.027-0.047	19-FEB-14
Tin (Sn)-Total			0.02		mg/kg		0-0.13	19-FEB-14
Uranium (U)-Total			97.6		%		70-130	19-FEB-14
Vanadium (V)-Total			94.6		%		70-130	19-FEB-14
Zinc (Zn)-Total			104.5		%		70-130	19-FEB-14
WG1832928-3	DUP	L1401240-1						
Aluminum (Al)-Total		7.1	6.1		mg/kg	15	30	19-FEB-14
Antimony (Sb)-Total		0.020	0.038	J	mg/kg	0.018	0.02	19-FEB-14
Arsenic (As)-Total		1.61	1.45		mg/kg	10	30	19-FEB-14
Barium (Ba)-Total		0.244	0.160	J	mg/kg	0.084	0.1	19-FEB-14
Beryllium (Be)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Bismuth (Bi)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Boron (B)-Total		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	19-FEB-14
Cadmium (Cd)-Total		0.035	0.030		mg/kg	16	30	19-FEB-14
Cesium (Cs)-Total		0.0968	0.0835		mg/kg	15	30	19-FEB-14
Chromium (Cr)-Total		1.09	1.28		mg/kg	16	30	19-FEB-14
Cobalt (Co)-Total		0.047	0.049		mg/kg	3.0	30	19-FEB-14
Copper (Cu)-Total		6.83	6.73		mg/kg	1.4	30	19-FEB-14
Gallium (Ga)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Iron (Fe)-Total		63.1	53.8		mg/kg	16	30	19-FEB-14
Lead (Pb)-Total		9.89	16.1	DUP-H	mg/kg	48	30	19-FEB-14
Lithium (Li)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	19-FEB-14
Manganese (Mn)-Total		1.41	1.05		mg/kg	30	30	19-FEB-14
Molybdenum (Mo)-Total		0.074	0.093		mg/kg	24	30	19-FEB-14
Nickel (Ni)-Total		0.407	0.552	DUP-H	mg/kg	30	30	19-FEB-14
Rhenium (Re)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Rubidium (Rb)-Total		6.42	5.64		mg/kg	13	30	19-FEB-14
Selenium (Se)-Total		2.06	1.84		mg/kg	11	30	19-FEB-14
Strontium (Sr)-Total		19.4	10.5	DUP-H	mg/kg	60	50	19-FEB-14
Tellurium (Te)-Total		<0.020	<0.020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thallium (Tl)-Total		0.0026	<0.0020	RPD-NA	mg/kg	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Tin (Sn)-Total		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	19-FEB-14
Uranium (U)-Total		<0.0020	<0.0020	RPD-NA	mg/kg	N/A	30	19-FEB-14



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MET-DRY-HRMS-VA								
	Tissue							
Batch	R2794766							
WG1832928-3	DUP	L1401240-1						
Vanadium (V)-Total		0.44	0.58		mg/kg	27	30	19-FEB-14
Yttrium (Y)-Total		<0.010	<0.010	RPD-NA	mg/kg	N/A	30	19-FEB-14
Zinc (Zn)-Total		145	138		mg/kg	4.7	30	19-FEB-14
Zirconium (Zr)-Total		<0.20	<0.20	RPD-NA	mg/kg	N/A	30	19-FEB-14
WG1832928-1	MB							
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DRY-HRMS-VA	Tissue							
Batch	R2794766							
WG1832928-1 MB								
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
WG1832928-2 MB								
Aluminum (Al)-Total			<2.0		mg/kg		2	19-FEB-14
Antimony (Sb)-Total			<0.010		mg/kg		0.01	19-FEB-14
Arsenic (As)-Total			<0.020		mg/kg		0.02	19-FEB-14
Barium (Ba)-Total			<0.050		mg/kg		0.05	19-FEB-14
Beryllium (Be)-Total			<0.010		mg/kg		0.01	19-FEB-14
Bismuth (Bi)-Total			<0.010		mg/kg		0.01	19-FEB-14
Boron (B)-Total			<1.0		mg/kg		1	19-FEB-14
Cadmium (Cd)-Total			<0.010		mg/kg		0.01	19-FEB-14
Cesium (Cs)-Total			<0.0050		mg/kg		0.005	19-FEB-14
Chromium (Cr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Cobalt (Co)-Total			<0.020		mg/kg		0.02	19-FEB-14
Copper (Cu)-Total			<0.050		mg/kg		0.05	19-FEB-14
Gallium (Ga)-Total			<0.020		mg/kg		0.02	19-FEB-14
Iron (Fe)-Total			<1.0		mg/kg		1	19-FEB-14
Lead (Pb)-Total			<0.020		mg/kg		0.02	19-FEB-14
Lithium (Li)-Total			<0.10		mg/kg		0.1	19-FEB-14
Manganese (Mn)-Total			<0.020		mg/kg		0.02	19-FEB-14
Molybdenum (Mo)-Total			<0.020		mg/kg		0.02	19-FEB-14
Nickel (Ni)-Total			<0.050		mg/kg		0.05	19-FEB-14
Rhenium (Re)-Total			<0.010		mg/kg		0.01	19-FEB-14
Rubidium (Rb)-Total			<0.050		mg/kg		0.05	19-FEB-14
Selenium (Se)-Total			<0.10		mg/kg		0.1	19-FEB-14
Strontium (Sr)-Total			<0.050		mg/kg		0.05	19-FEB-14
Tellurium (Te)-Total			<0.020		mg/kg		0.02	19-FEB-14
Thallium (Tl)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Thorium (Th)-Total			<0.010		mg/kg		0.01	19-FEB-14
Tin (Sn)-Total			<0.10		mg/kg		0.1	19-FEB-14
Uranium (U)-Total			<0.0020		mg/kg		0.002	19-FEB-14
Vanadium (V)-Total			<0.10		mg/kg		0.1	19-FEB-14
Yttrium (Y)-Total			<0.010		mg/kg		0.01	19-FEB-14

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MET-DRY-HRMS-VA		Tissue						
Batch	R2794766							
WG1832928-2 MB								
Zinc (Zn)-Total			<0.50		mg/kg		0.5	19-FEB-14
Zirconium (Zr)-Total			<0.20		mg/kg		0.2	19-FEB-14
MET-DRY-ICP-VA		Tissue						
Batch	R2794786							
WG1832928-4 CRM		VA-NRC-TORT3						
WG1832928-5 CRM		VA-NIST-1566B						
Calcium (Ca)-Total			105.3		%		70-130	20-FEB-14
Magnesium (Mg)-Total			108.9		%		70-130	20-FEB-14
Potassium (K)-Total			113.9		%		70-130	20-FEB-14
Sodium (Na)-Total			103.9		%		70-130	20-FEB-14
WG1832928-3 DUP		L1401240-1						
Calcium (Ca)-Total		5300	2590	DUP-H	mg/kg	69	50	20-FEB-14
Magnesium (Mg)-Total		1530	1360		mg/kg	12	30	20-FEB-14
Phosphorus (P)-Total		13400	11500		mg/kg	15	30	20-FEB-14
Potassium (K)-Total		16200	15300		mg/kg	5.4	30	20-FEB-14
Sodium (Na)-Total		2140	2110		mg/kg	1.6	30	20-FEB-14
WG1832928-1 MB								
Calcium (Ca)-Total			10.2	B	mg/kg		3	20-FEB-14
Magnesium (Mg)-Total			<5.0		mg/kg		5	20-FEB-14
Phosphorus (P)-Total			<20		mg/kg		20	20-FEB-14
Potassium (K)-Total			<100		mg/kg		100	20-FEB-14
Sodium (Na)-Total			<100		mg/kg		100	20-FEB-14
WG1832928-2 MB								
Calcium (Ca)-Total			<3.0		mg/kg		3	20-FEB-14
Magnesium (Mg)-Total			<5.0		mg/kg		5	20-FEB-14
Phosphorus (P)-Total			<20		mg/kg		20	20-FEB-14
Potassium (K)-Total			<100		mg/kg		100	20-FEB-14
Sodium (Na)-Total			<100		mg/kg		100	20-FEB-14
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832928-4 CRM		VA-NRC-TORT3						
Arsenic (As)-Total			91.7		%		70-130	19-FEB-14
Cadmium (Cd)-Total			90.2		%		70-130	19-FEB-14
Chromium (Cr)-Total			84.0		%		70-130	19-FEB-14
Cobalt (Co)-Total			91.3		%		70-130	19-FEB-14



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MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832928-4	CRM	VA-NRC-TORT3						
Copper (Cu)-Total			82.2		%		70-130	19-FEB-14
Iron (Fe)-Total			82.3		%		70-130	19-FEB-14
Lead (Pb)-Total			79.9		%		70-130	19-FEB-14
Manganese (Mn)-Total			80.6		%		70-130	19-FEB-14
Molybdenum (Mo)-Total			85.0		%		70-130	19-FEB-14
Nickel (Ni)-Total			87.0		%		70-130	19-FEB-14
Selenium (Se)-Total			87.4		%		70-130	19-FEB-14
Strontium (Sr)-Total			82.7		%		70-130	19-FEB-14
Vanadium (V)-Total			85.5		%		70-130	19-FEB-14
Zinc (Zn)-Total			82.5		%		70-130	19-FEB-14
WG1832928-5	CRM	VA-NIST-1566B						
Antimony (Sb)-Total			0.0099		mg/kg wwt		0.001-0.021	19-FEB-14
Arsenic (As)-Total			97.6		%		70-130	19-FEB-14
Barium (Ba)-Total			89.8		%		70-130	19-FEB-14
Boron (B)-Total			4.34		mg/kg wwt		3.5-5.5	19-FEB-14
Cadmium (Cd)-Total			106.1		%		70-130	19-FEB-14
Cobalt (Co)-Total			104.0		%		70-130	19-FEB-14
Copper (Cu)-Total			99.8		%		70-130	19-FEB-14
Iron (Fe)-Total			95.7		%		70-130	19-FEB-14
Lead (Pb)-Total			98.2		%		70-130	19-FEB-14
Manganese (Mn)-Total			98.8		%		70-130	19-FEB-14
Nickel (Ni)-Total			104.5		%		70-130	19-FEB-14
Rubidium (Rb)-Total			102.7		%		70-130	19-FEB-14
Selenium (Se)-Total			101.5		%		70-130	19-FEB-14
Strontium (Sr)-Total			90.9		%		70-130	19-FEB-14
Thorium (Th)-Total			85.3		%		70-130	19-FEB-14
Tin (Sn)-Total			0.024		mg/kg wwt		0-0.131	19-FEB-14
Vanadium (V)-Total			94.6		%		70-130	19-FEB-14
Zinc (Zn)-Total			104.5		%		70-130	19-FEB-14
WG1832928-3	DUP	L1401240-1						
Aluminum (Al)-Total		1.68	1.44		mg/kg wwt	15	30	19-FEB-14
Antimony (Sb)-Total		0.0047	0.0091	DUP-H	mg/kg wwt	0.0044	0.004	19-FEB-14
Arsenic (As)-Total		0.381	0.344		mg/kg wwt	10	30	19-FEB-14
Barium (Ba)-Total		0.058	0.038	J	mg/kg wwt	0.020	0.02	19-FEB-14
Beryllium (Be)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14



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MET-WET-HRMS-VA								
	Tissue							
Batch	R2794755							
WG1832928-3	DUP	L1401240-1						
Bismuth (Bi)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Boron (B)-Total		<0.20	<0.20	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Cadmium (Cd)-Total		0.0083	0.0070		mg/kg wwt	16	30	19-FEB-14
Cesium (Cs)-Total		0.0230	0.0198		mg/kg wwt	15	30	19-FEB-14
Chromium (Cr)-Total		0.259	0.303		mg/kg wwt	16	30	19-FEB-14
Cobalt (Co)-Total		0.0112	0.0115		mg/kg wwt	3.0	30	19-FEB-14
Copper (Cu)-Total		1.62	1.60		mg/kg wwt	1.4	30	19-FEB-14
Gallium (Ga)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Iron (Fe)-Total		15.0	12.8		mg/kg wwt	16	30	19-FEB-14
Lead (Pb)-Total		2.35	3.83	DUP-H	mg/kg wwt	48	30	19-FEB-14
Lithium (Li)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Manganese (Mn)-Total		0.335	0.249		mg/kg wwt	30	30	19-FEB-14
Molybdenum (Mo)-Total		0.0175	0.0222		mg/kg wwt	24	30	19-FEB-14
Nickel (Ni)-Total		0.097	0.131	DUP-H	mg/kg wwt	30	30	19-FEB-14
Rhenium (Re)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Rubidium (Rb)-Total		1.53	1.34		mg/kg wwt	13	30	19-FEB-14
Selenium (Se)-Total		0.489	0.437		mg/kg wwt	11	30	19-FEB-14
Strontium (Sr)-Total		4.62	2.50	DUP-H	mg/kg wwt	60	50	19-FEB-14
Tellurium (Te)-Total		<0.0040	<0.0040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thallium (Tl)-Total		0.00062	<0.00040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Thorium (Th)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Tin (Sn)-Total		<0.020	<0.020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Uranium (U)-Total		<0.00040	<0.00040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Vanadium (V)-Total		0.104	0.137		mg/kg wwt	27	30	19-FEB-14
Yttrium (Y)-Total		<0.0020	<0.0020	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
Zinc (Zn)-Total		34.5	32.9		mg/kg wwt	4.7	30	19-FEB-14
Zirconium (Zr)-Total		<0.040	<0.040	RPD-NA	mg/kg wwt	N/A	30	19-FEB-14
WG1832928-1								
MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832928-1 MB								
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
WG1832928-2 MB								
Aluminum (Al)-Total			<0.40		mg/kg wwt		0.4	19-FEB-14
Antimony (Sb)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Arsenic (As)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Barium (Ba)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Beryllium (Be)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Bismuth (Bi)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Boron (B)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-HRMS-VA		Tissue						
Batch	R2794755							
WG1832928-2	MB							
Cadmium (Cd)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Cesium (Cs)-Total			<0.0010		mg/kg wwt		0.001	19-FEB-14
Chromium (Cr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Cobalt (Co)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Copper (Cu)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Gallium (Ga)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Iron (Fe)-Total			<0.20		mg/kg wwt		0.2	19-FEB-14
Lead (Pb)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Lithium (Li)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Manganese (Mn)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Molybdenum (Mo)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Nickel (Ni)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Rhenium (Re)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Rubidium (Rb)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Selenium (Se)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Strontium (Sr)-Total			<0.010		mg/kg wwt		0.01	19-FEB-14
Tellurium (Te)-Total			<0.0040		mg/kg wwt		0.004	19-FEB-14
Thallium (Tl)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Thorium (Th)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Tin (Sn)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Uranium (U)-Total			<0.00040		mg/kg wwt		0.0004	19-FEB-14
Vanadium (V)-Total			<0.020		mg/kg wwt		0.02	19-FEB-14
Yttrium (Y)-Total			<0.0020		mg/kg wwt		0.002	19-FEB-14
Zinc (Zn)-Total			<0.10		mg/kg wwt		0.1	19-FEB-14
Zirconium (Zr)-Total			<0.040		mg/kg wwt		0.04	19-FEB-14
MET-WET-ICP-VA		Tissue						
Batch	R2794808							
WG1832928-4	CRM	VA-NRC-TORT3						
WG1832928-5	CRM	VA-NIST-1566B						
Calcium (Ca)-Total			105.3		%		70-130	20-FEB-14
Magnesium (Mg)-Total			108.9		%		70-130	20-FEB-14
Potassium (K)-Total			113.9		%		70-130	20-FEB-14
Sodium (Na)-Total			103.9		%		70-130	20-FEB-14
WG1832928-3	DUP	L1401240-1						
Calcium (Ca)-Total		1260	616	DUP-H	mg/kg wwt	69	50	20-FEB-14



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-WET-ICP-VA								
	Tissue							
Batch	R2794808							
WG1832928-3	DUP	L1401240-1						
Magnesium (Mg)-Total		364	322		mg/kg wwt	12	30	20-FEB-14
Phosphorus (P)-Total		3190	2740		mg/kg wwt	15	30	20-FEB-14
Potassium (K)-Total		3850	3650		mg/kg wwt	5.4	30	20-FEB-14
Sodium (Na)-Total		509	501		mg/kg wwt	1.6	30	20-FEB-14
WG1832928-1	MB							
Calcium (Ca)-Total			2.04	B	mg/kg wwt		0.5	20-FEB-14
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	20-FEB-14
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	20-FEB-14
Potassium (K)-Total			<20		mg/kg wwt		20	20-FEB-14
Sodium (Na)-Total			<20		mg/kg wwt		20	20-FEB-14
WG1832928-2	MB							
Calcium (Ca)-Total			<0.50		mg/kg wwt		0.5	20-FEB-14
Magnesium (Mg)-Total			<1.0		mg/kg wwt		1	20-FEB-14
Phosphorus (P)-Total			<5.0		mg/kg wwt		5	20-FEB-14
Potassium (K)-Total			<20		mg/kg wwt		20	20-FEB-14
Sodium (Na)-Total			<20		mg/kg wwt		20	20-FEB-14

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. All associated sample results are at least 5 times greater than blank levels and are considered reliable.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

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