APPENDIX P

AQUATICS DST

NOTE TO READER
APPENDIX P

In April 2015, Treasury Metals submitted an Environmental Impact Statement (EIS) for the proposed Goliath Gold Project (the Project) to the Canadian Environmental Assessment Agency (the Agency) for consideration under the Canadian Environmental Assessment Act (CEAA), 2012. The Agency reviewed the submission and informed Treasury Metals that the requirements of the EIS Guidelines for the Project were met and that the Agency would begin its technical review of the submission. In June 2015, the Agency issued a series of information requests to Treasury Metals regarding the EIS and supporting appendices (referred to herein as the Round 1 information requests). The Round 1 information requests included questions from the Agency, other federal and provincial reviewers, and members of Indigenous communities, as well as interested stakeholders. As part of the Round 1 information request process, the Agency requested that Treasury Metals consolidate the responses to the information requests into a revised EIS for the Project.

Appendix P to the revised EIS (Aquatics DST) presents the results of sampling programs used to describe the baseline conditions of surface water quality, sediment quality and benthic invertebrates. The information presented in this appendix was used for describing the existing conditions for surface water quality (Section 5.8.1 of the revised EIS), baseline sediment quality (Section 5.8.2 of the revised EIS) and baseline benthic conditions (Section 5.8.3 of the revised EIS). Information from this study was also relied on in the assessment of effects of the Project on surface water quality (Section 6.8 of the revised EIS). No changes have been made to this appendix from the original EIS issued in April 2015.

As part of the process to revise the EIS, Treasury Metals has undertaken a review of the status for the various appendices. The status of each appendix to the revised EIS has been classified as one of the following:

- **Unchanged**: The appendix remains unchanged from the original EIS, and has been re-issued as part revised EIS.
- **Minor Changes:** The appendix remains relatively unchanged from the original EIS, and has been re-issued with relevant clarification.
- **Major Revisions**: The appendix has been substantially changed from the original EIS. A re-written appendix has been issued as part of the revised EIS.
- **Superseded:** The appendix is no longer required to support the EIS. The information in the original appendix has been replaced by information provided in a new appendix prepared to support the revised EIS.
- **New**: This is a new appendix prepared to support the revised EIS.

The following table provides a listing of the appendices to the revised EIS, along with a listing of the status of each appendix and their description.

List of Appendices to the Revised EIS		
Appendix	Status	Description
Appendix A	Major Revisions	Table of Concordance
Appendix B	Unchanged	Optimization Study
Appendix C	Unchanged	Mining Study
Appendix D	Major Revisions	Tailings Storage Facility
Appendix E	Minor Changes	Traffic Study
Appendix F	Major Revisions	Water Management Plan
Appendix G	Superseded	Environmental Baseline
Appendix H	Minor Changes	Acoustic Environment Study
Appendix I	Unchanged	Light Environment Study
Appendix J	Minor Changes	Air Quality Study
Appendix K	Minor Changes	Geochemistry
Appendix L	Superseded	Geochemical Modelling
Appendix M	Minor Changes	Hydrogeology
Appendix N	Unchanged	Surface Hydrology
Appendix O	Superseded	Hydrologic Modeling
Appendix P	Unchanged	Aquatics DST
Appendix Q	Major Revisions	Fisheries and Habitat
Appendix R	Major Revisions	Terrestrial
Appendix S	Major Revisions	Wetlands
Appendix T	Unchanged	Socio-Economic
Appendix U	Minor Changes	Heritage Resources
Appendix V	Major Revisions	Public Engagement
Appendix W	Unchanged	Screening Level Risk Assessment
Appendix X	Major Revisions	Alternatives Assessment Matrix
Appendix Y	Unchanged	EIS Guidelines
Appendix Z	Unchanged	TML Corporate Policies
Appendix AA	Major Revisions	List of Mineral Claims
Appendix BB	Unchanged	Preliminary Economic Assessment
Appendix CC	Unchanged	Mining, Dynamic And Dependable For Ontario's Future
Appendix DD	Major Revisions	Indigenous Engagement Report
Appendix EE	Unchanged	Country Foods Assessment
Appendix FF	Unchanged	Photo Record Of The Goliath Gold Project
Appendix GG	Minor Changes	TSF Failure Modelling
Appendix HH	Unchanged	Failure Modes And Effects Analysis
Appendix II	Major Revisions	Draft Fisheries Compensation Strategy and Plans
Appendix JJ	New	Water Report

List of Appendices to the Revised EIS		
Appendix	Status	Description
Appendix KK	New	Conceptual Closure Plan
Appendix LL	New	Impact Footprints and Effects

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Toronto, ON, M5X 1B1

GOLIATH GOLD PROJECT
AQUATIC
2012/2013 BASELINE STUDY REPORT

Final Report

DST File No.: OE-KN-018101

Date: March 2014

DST Consulting Engineers Inc.
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Tel.: (807) 345-3620 Fax: (807) 344-4738 E-mail: thunderbay@dstgroup.com

EXECUTIVE SUMMARY

Treasury Metals Inc. (TML) is a Canadian gold exploration and development company focused on its 100% owned high-grade Goliath Gold Project (the Project), situated in the Kenora/Dryden Mining District of northwestern Ontario. The Project is located adjacent to the village of Wabigoon, Ontario, approximately 20 km east of the city center of Dryden or 330 km west of the city of Thunder Bay.

The Goliath Gold Project is expected to require the completion of federal and provincial environmental assessments and permits prior to development. To support ongoing activities and project permitting TML retained DST Consulting Engineers Inc. (DST) in 2012 to gather environmental baseline data and submit environmental reports summarizing data collection efforts that occurred in 2012 and 2013.

For the 2012/2013 surface water quality baseline study, 15 sample locations were selected on two lakes and a number of creeks and streams within the study area. Lake sediment samples were collected concurrently with benthic invertebrate samples from two lakes and two streams. Samples were collected at Wabigoon Lake, the Wabigoon Lake Reference Site and Thunder Lake as well as Blackwater creek and an unnamed creek that runs along the former tree nursery. Sediment samples were collected during the autumn sampling event on October, 22 and 23, 2012. Three samples were collected from Wabigoon Lake, two samples from the Wabigoon Lake Reference Site and four samples from Thunder Lake. Six sediment samples were collected along the Blackwater creek and four samples along the unnamed creek.

Results from surface water sampling demonstrate that total iron concentrations were found to be higher than the Provincial Water Quality Objectives (PWQO) criterion at 14 of the 15 sampling sites. Concentrations of pH, total cobalt, total copper, total lead, total selenium, total silver, total vanadium and total zinc were found to be higher than the PWQO criteria in a number of samples throughout the study area. These results are similar to other surface water sampling programs throughout northwestern Ontario and are indicative of oligotrophic lakes in general.

Sediment samples were collected at two lakes and two streams within the potentially impacted areas of the Goliath Gold project, as well as at a reference location in Wabigoon Lake. Laboratory analyses showed total phosphorus was elevated in samples collected at the Wabigoon Lake Reference Site. Total phosphorus was elevated at one other sampling site in Wabigoon Lake, the furthest sampling site from the discharge point of the Blackwater Creek. One stream sampling location at the unnamed creek had concentrations of total phosphorus above the PSQG. Two metals were analyzed for sediment chemistry (mercury and zirconium), and mercury concentrations were all below the PSQG at all sampling sites.

Benthic invertebrate samples were collected from two lakes and two streams located within the Project area. In general, benthic invertebrate community were reflective of general conditions

found throughout northern Ontario. Lake samples were characterized by invertebrates which were resistant to poor water quality (Chironomidae) and fine grained substrates. Creek samples had more Ephemoptera, Plectoptera, Trichoptera (EPT) members which are a good indicator of clean, well oxygenated water (Hynes, 1970). Along the Blackwater Creek, samples collected upstream had lower EPT ratios compared to the sample collected downstream at the mouth of the Creek, indicating that water flow in the downstream areas is likely higher in dissolved oxygen.

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Appendix B Relative Percent Differences
Appendix C Limitations of the Report

1. INTRODUCTION

Treasury Metals Inc. (TML) is a Canadian gold exploration and development company focused on its 100% owned high-grade Goliath Gold Project (the Project), situated in the Kenora/Dryden Mining District of northwestern Ontario. The Project is located adjacent to the village of Wabigoon, Ontario, approximately 20 km east of the city center of Dryden or 330 km west of the city of Thunder Bay (Figure 1.1).

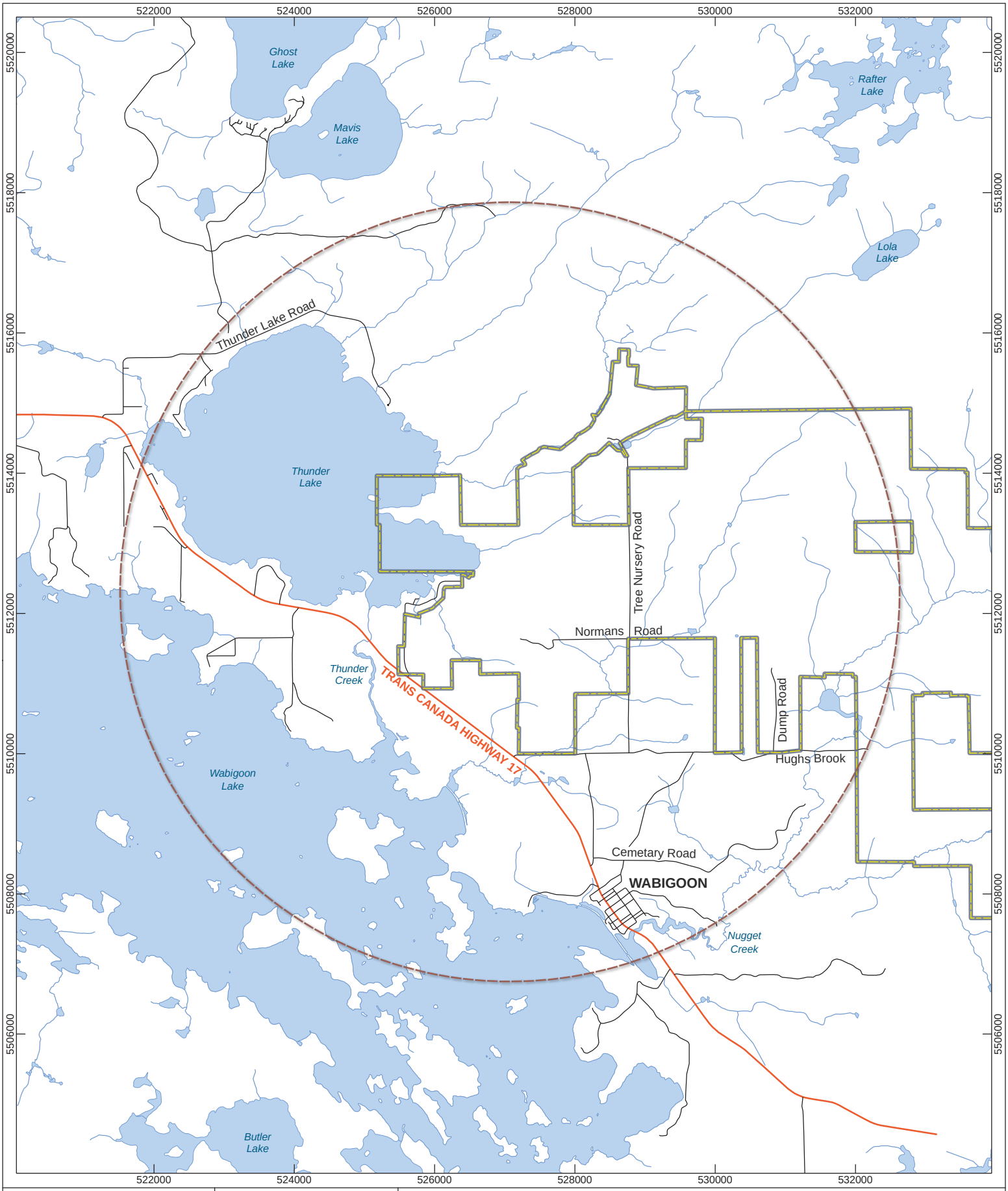
The Project Area consists largely of two historic properties, the “Thunder Lake Property”, previously owned by Teck-Corona and the “Laramide Property”, located partially within both the Hartman and Zealand townships. The properties have a total area of approximately 4,881 hectares, comprised of 4,064 hectares of 137 unpatented land claims and 19 patented land claims for the remainder. Treasury holds the entire project subject to specific royalties on 13 of the patented land parcels. The site can be readily accessed year round from Highway 17 and multiple public secondary roads that extend north from the highway, including Anderson Road, Maggrah Road and Tree Nursery Road.

The Project is expected to require the completion of federal and provincial environmental assessments and permits prior to development. To support ongoing drilling activities and project permitting, TML retained DST Consulting Engineers Inc. (DST) to gather baseline data and to submit environmental reports summarizing data collection efforts that occurred in 2012 and 2013.

The Baseline Assessment Studies include the following components:

- Surface Water Quality
- Sediment Quality
- Benthic Invertebrates Community
- Fisheries
- Wildlife
- Birds
- Wetlands and vegetation
- Hydrology

The following report presents the results of the 2012/2013 Aquatic Resources Baseline Study.



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

LOCATION OF GOLIATH GOLD PROJECT STUDY AREA

FIGURE: 1.1 | REV.01

SCALE: 70000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 18 FEB. 2014
CHECK: XX ADD DATE
REVIEW: XX ADD DATE

LEGEND

- Local Study Area
- Property Boundary
- Highway
- Local Road
- Waterbody
- Watercourse

N

0 500 1,000 1,500
Meters

REFERENCE
Data by Treasury Metals Inc. and DST Consulting
Projection: NAD83 UTM Zone 15N

TREASURY METALS INCORPORATED

DST consulting engineers

2. METHODOLOGY

The 2012 and 2013 Aquatic Resources Baseline Studies cover surface water quality, sediment quality and benthic invertebrates sampling. Surface water samples were collected by Treasury on a monthly basis in 2012 and on a quarterly basis in 2013. Samples were not able to be collected at some of the locations at certain times of the year for various reasons listed by Treasury Metals in the field notes provided. Monthly sampling was completed by Treasury in 2012 to evaluate changes in water chemistry and to provide a second year of monthly sampling. Monthly sampling was conducted to characterize the spatial and temporal variances of surface water at the Goliath Project. Two years of monthly sampling are considered to be sufficient to understand changes in water chemistry throughout the year. In 2013, surface water sampling was completed quarterly, which is a requirement of the Metal Mining Effluent Regulation (MMER) under the Environmental Effect Monitoring (EEM) program. The parameters and approach for sampling collection in the surface water and sediment quality programs were design to comply with the EEM program under the MMER. By designing a baseline monitoring program that complies with MMER, data collected during baseline monitoring can be compared to data collected during MMER cycles as the same protocols, sampling techniques and sample analysis have been used, providing a clear understanding of changes before and after the start of mining activities.

2.1 Surface Water

Surface water quality sampling began in November 2010 on a monthly basis with water samples being collected from Thunder and Wabigoon Lakes and four streams in the area of the Project. Since the onset of surface water sampling, locations have been added and removed as the project has progressed and a better understanding of the project footprint has been developed. In 2012, eight locations were added and three locations were discontinued from the sampling program. The eight added locations were included in the 2012 sampling event to provide information regarding upstream conditions in the Blackwater Creek as well as the creek that runs along the nursery. Two downstream locations along the two streams running at either side of the nursery were also added to provide any information of current water quality that may have been impacted by activities at the Nursery, it is understood that the nursery infrastructure may be used in the future by Treasury. One surface water station was added along Hoffstrom's bay tributary and at Hoffstrom's bay, these station were chosen as the stream is within the proposed mine footprint and the tributary drains into Hoffstrom's bay. Two sampling locations in lakes, one sample in Thunder Lake and one sample in Wabigoon Lake, these sampling locations were included to evaluate surface water quality in the lakes prior to any effluent is discharged by the mining operation, as it is expected that effluent will be discharge into one of these lakes. Surface water data collection is currently ongoing, with 2014 samples projected to be collected on a quarterly basis at the same locations used in 2013. There are currently 15 sampling sites within the Project Area (Figure 2.1).

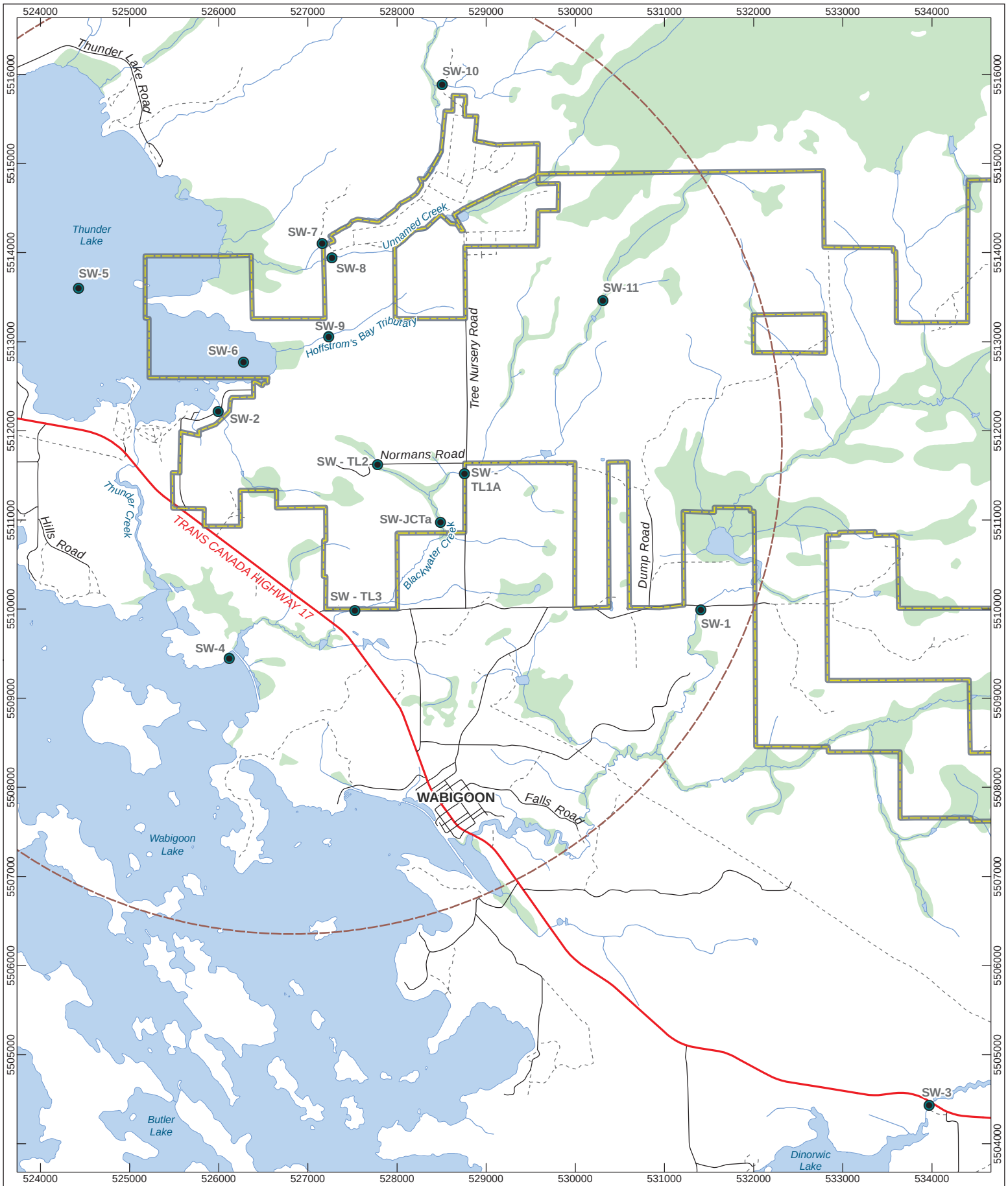
At each surface water sampling site, field measurements included: water and air temperature, pH, conductivity, total dissolved solids, dissolved oxygen, turbidity and oxidation reduction potential. At times, due to equipment malfunction, turbidity and oxidation reduction potential were collected in situ. Surface water parameters were taken in the field using a Hanna HI98130 multi-meter. Prior to field measurement collection, the instrument was rinsed with surface water to avoid cross-contamination between each sampling site.

Water quality samples were collected within 1 m of the lake surface. The samples were collected from a boat that was anchored from the bow and stern to prevent drifting from the site. During winter sampling events, a 6" ice auger was used to cut a hole in the ice at the same location as the ice free samples to gain access to the surface water. Winter samples were taken through the ice in the same locations as the ice free samples. Stream samples were collected from the bank while ensuring not to disturb the stream bottom material, to maintain sample integrity.

Surface water samples were collected directly into laboratory supplied containers. During the sampling procedure, bottles not requiring preservative were triple rinsed with collected surface water. Bottles requiring preservative were supplied by the laboratory with preservatives already present. Sample bottles were labelled with date, sample name and project name. All samples were immediately stored in a cooler with ice packs to maintain a temperature of approximately 4°C, and shipped to ALS Laboratory in Thunder Bay, Ontario, to be analysed.

Samples were analysed for physical and inorganic parameters, as well as total and dissolved metals. These parameters were chosen to evaluate general surface water chemistry, in addition information regarding dissolved metals can be correlated in the future with groundwater chemistry.

A list of analytical parameters and their associated laboratory detection limit is provided in Tables 2.1 and 2.2. The results of all surface water analyses were compared to the Provincial Water Quality Objectives (PWQO).



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

SURFACE WATER QUALITY SAMPLING LOCATIONS

FIGURE: 2.1 | REV.01

SCALE: 55000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 25 FEB. 2014
CHECK: XX ADD DATE
REVIEW: XX ADD DATE

LEGEND

- Surface Water Quality Sampling Location
- Local Study Area
- Property Boundary
- Waterbody
- Watercourse
- Arterial
- Expressway / Highway
- Local
- Resource / Recreation
- Wetland

N

0 500 1,000
Meters

REFERENCE

Data by Treasury Metals Inc. and DST Consuting Engineers
Projection: NAD83 UTM Zone 15N

TREASURY METALS INCORPORATED

DST consulting engineers

Table 2.1: Physical test, anion, nutrient and cyanide parameters and their associated method detection limits (MDL)

Analysis	Parameter	Laboratory Method	MDL	Units
Physical Tests	Conductivity	APHA 2510- B Electrode	3.0	µS/cm
	Hardness (as CaCO3)	Calculation	0.51	mg/L
	Total Suspended Solids	APHA 2540 D (modified)	2.0	mg/L
Anions and Nutrients	Acidity (as CaCO3)	APHA 2310	2.0	mg/L
	Alkalinity, Total (as CaCO3)	APHA 2320	5.0	mg/L CaCO3
	Ammonia, Total (as N)	APHA 4500-NH3 G (modified)	0.020	mg/L
	Chloride (Cl)	EPA 300.1 (modified)	0.10	mg/L
	Nitrate-N	EPA 300.1 (modified)	0.030	mg/L
	Nitrite-N	EPA 300.1 (modified)	0.020	mg/L
	Phosphorus, Total (P)	APHA 4500-P B, F, G (modified)	0.0050	mg/L
	Sulphate	EPA 300.1 (modified)	0.30	mg/L
Cyanides	Cyanide, Weak Acid Dissociable	APHA 4500-CN Cyanide (modified)	0.0020	mg/L
	Cyanide, Total	ISO 14403:2002 (modified)	0.0020	mg/L
	Cyanide, Free	ASTM D7237-10 (modified)	0.0050	mg/L

Table 2.2: Dissolved and total metals parameters and their associated method detection limits (MDL)

Analysis	Parameter		MDL	Units
Metals (Total and Dissolved)	Aluminum (Al)	APHA 3030B / EPA 6020A	0.0050	mg/L
	Antimony (Sb)	APHA 3030B / EPA 6020A	0.00060	mg/L
	Arsenic (As	APHA 3030B / EPA 6020A	0.0010	mg/L
	Barium (Ba)	APHA 3030B / EPA 6020A	0.010	mg/L
	Beryllium (Be)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Bismuth (Bi)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Boron (B)	APHA 3030B / EPA 6020A	0.050	mg/L
	Cadmium (Cd)	APHA 3030B / EPA 6020A	0.000017	mg/L
	Calcium (Ca)	APHA 3030B / EPA 6020A	0.20	mg/L
	Cesium (Ce)	APHA 3030B / EPA 6020A	0.00010	mg/L
	Chromium (Cr)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Cobalt (Co)	APHA 3030B / EPA 6020A	0.00050	mg/L
	Copper (Cu)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Iron (Fe)	APHA 3030B / EPA 6020A	0.020	mg/L
	Lead (Pb)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Lithium (Li)	APHA 3030B / EPA 6020A	0.050	mg/L
	Magnesium (Mg)	APHA 3030B / EPA 6020A	0.020	mg/L
	Manganese (Mn)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Mercury (Hg)	Modified from EPA 1631 E	0.00010	mg/L

	Molybdenum (Mo)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Nickel (Ni)	APHA 3030B / EPA 6020A	0.0020	mg/L
	Phosphorus (P)	APHA 3030B / EPA 6020A	0.50	mg/L
	Potassium (K)	APHA 3030B / EPA 6020A	0.50	mg/L
	Rubidium (Rb)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Selenium (Se)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Silicon (Si)	APHA 3030B / EPA 6020A	0.050	mg/L
	Silver (Ag)	APHA 3030B / EPA 6020A	0.00010	mg/L
	Sodium (Na)	APHA 3030B / EPA 6020A	0.10	mg/L
	Strontium (Sr)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Tellurium (Te)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Thallium (Tl)	APHA 3030B / EPA 6020A	0.00030	mg/L
	Tin (Sn)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Titanium (Ti)	APHA 3030B / EPA 6020A	0.0020	mg/L
	Tungsten (W)	APHA 3030B / EPA 6020A	0.010	mg/L
	Uranium (U)	APHA 3030B / EPA 6020A	0.0050	mg/L
	Vanadium (V)	APHA 3030B / EPA 6020A	0.0010	mg/L
	Zinc (Zn)	APHA 3030B / EPA 6020A	0.0030	mg/L
	Zirconium (Zr)	APHA 3030B / EPA 6020A	0.0010	mg/L

2.2 Sediment

Surface sediment samples were collected concurrently with benthic invertebrate samples from two lakes and two streams. Samples were collected at 5 locations including: Wabigoon Lake, Wabigoon Lake Reference Site, Thunder Lake, Blackwater creek and the unnamed creek that runs along the former tree nursery (Figure 2.2). Sediment samples were collected during October, 22 and 23, 2012. Three samples were collected from Wabigoon Lake, two samples from Wabigoon Lake Reference location, four samples from Thunder Lake, six samples from Blackwater creek and four samples from unnamed creek.

According to MMER, sediment samples should be collected from possibly impacted and reference areas for comparison reasons. It is understood that sediment characteristics between different areas may differ so much as to make comparisons not suitable. During baseline studies, reference areas were chosen to reflect conditions upstream the proposed mining footprint as clearly reflected in stream samples. In general, for lakes, reference samples are usually collected in lakes of similar size and chemical characteristics. No other lake similar to Wabigoon Lake exists in the area, therefor an effort was done to find a location located upgradient from the mouth of Blackwater creek and away from the influence of human settlements.

All sediment samples were collected using a Wildco Petite Ponar (Wildco 6", Model SCOOPS-08890). During lake sampling collection, the boat was anchored at the bow and stern to reduce movement. Stream samples were collected by wading in the stream and using a Wildco Petite Ponar. For sediment collection in streams the field technician stood downstream (facing upstream into the current) to prevent collecting washout sediments. Samples were collected by scooping the sample along the bottom of the surface water body in the upstream direction. Excess water was removed from the scoop prior to sample placement into laboratory supplied containers. Each sediment sample was placed in a clean (rinsed with lake water) glass dish and jarred in laboratory supplied clean glass jars with a Teflon lid. All samples were placed in a cooler, supplied with ice, and maintained at approximately 4˚C.

Sampling stations in lakes were approximately 250 m apart and were chosen to determine sediment characteristics in depositional areas within the lakes. The minimum number of samples to conduct statistical analysis as suggested in the MMER were collected to better define the area.

Sediment samples were collected by DST and Treasury, then submitted by Treasury to ALS Environmental for the analysis of grain size distribution (Table 2.3) and the parameters listed in Table 2.4.

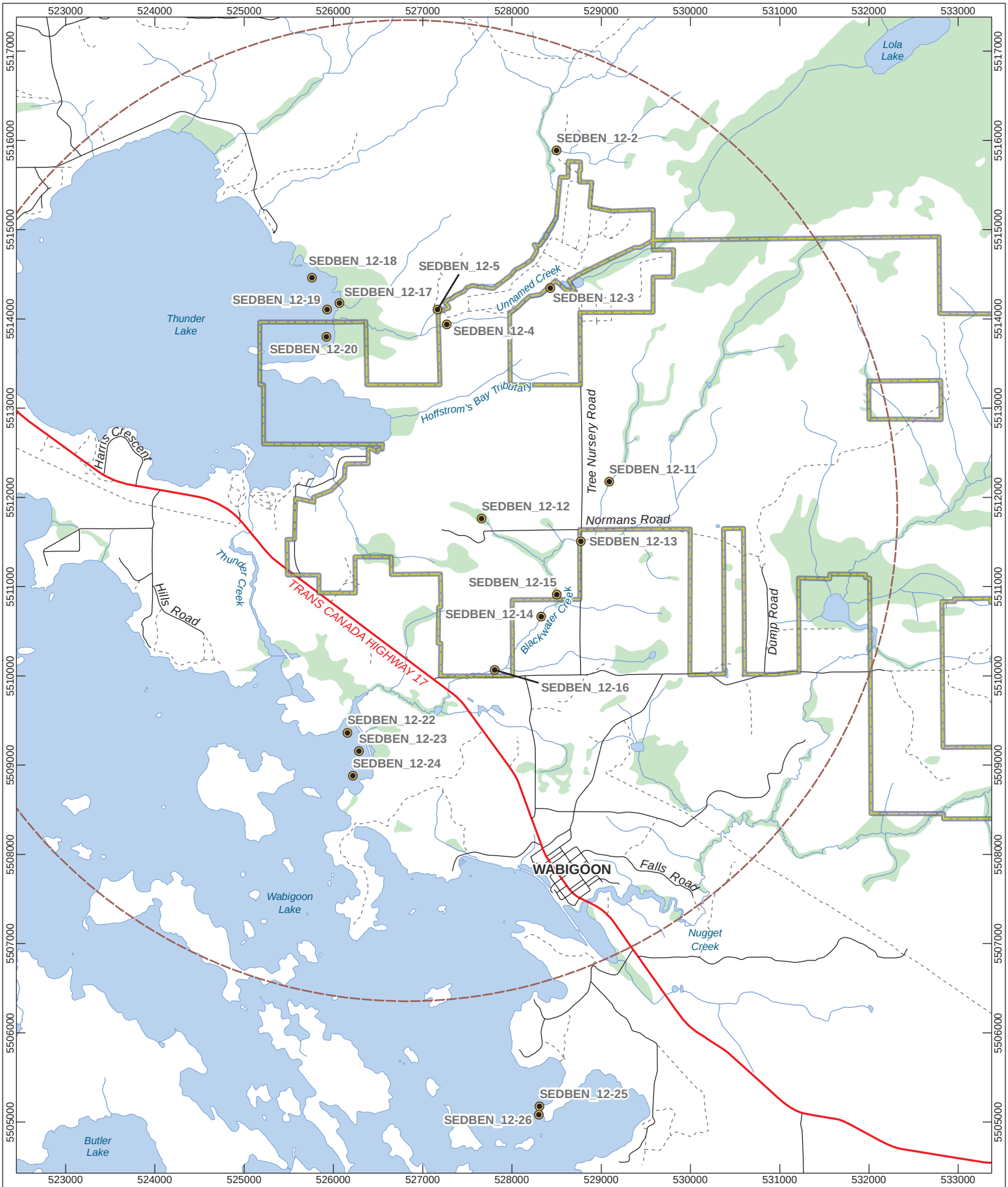
Table 2.3: Grain Size Distribution

Classification	Particle Size
Gravel	>2.0 mm
Sand	2.0 mm – 0.063 mm
Silt	0.063 mm – 4 µm
Clay	<4 µm

Table 2.4: Sediment quality analytical parameters and its associated method detection limits (MDL)

Analysis	Parameter	Method Reference	MDL	Units
Leachable Anions and Nutrients	Ammonia as N	EPA 350.1	5.0	mg/kg
	Bromide	EPA 300.0 (IC)	1.0	mg/kg
	Chloride	EPA 300.1	20	mg/kg
	Fluoride	EPA 300.1	1.0	mg/kg
	Nitrate-N	APHA 4500 NO3H-Colorimetry	1.0	mg/kg
	Nitrite-N	APHA 4500 NO3H-Colorimetry	1.0	mg/kg
	Total Kjeldahl Nitrogen	APHA 4500-N	200	mg/kg
	Sulphate	EPA 300.1	20	mg/kg
Anions and Nutrients	Total Phosphorus	APHA 4500-P B E	50	mg/kg
Saturated Paste Extractables	Nitrate + Nitrite-N	APHA 4500 NO3H-Colorimetry	1.0	mg/L
Metals	Mercury	EPA 7471	0.010	mg/kg
	Zirconium	EPA 200.2/6020A	5.0	mg/kg

Note: MDL – Method detection limit



GOLIATH GOLD PROJECT
DRYDEN, ONTARIO, CANADA

SEDIMENT QUALITY AND BENTHIC INVERTABRATE SAMPLING LOCATIONS

FIGURE: 2.1 | REV.02

SCALE: 55000

TREASURY METALS INC.

DESIGN: AT 06 FEB. 2014
GIS: AT 25 FEB. 2014
CHECK: XX ADD DATE
REVIEW: XX ADD DATE

LEGEND

- Sediment and Benthic Invertabrate Sampling Location
- Local Study Area
- Property Boundary
- Waterbody
- Arterial
- Expressway / Highway
- Local
- Resource / Recreation
- Wetland
- Watercourse

N

0 500 1,000
Meters

REFERENCE

Data by Treasury Metals Inc. and DST Consuting Engineers
Projection: NAD83 UTM Zone 15N

TREASURY METALS INCORPORATED

DST consulting engineers

2.3 Benthic Invertebrates

Benthic invertebrate community samples were collected from two lake and two stream locations within the Project study area. Benthic invertebrate community samples were collected between October 22 and October 23, 2012 at 19 locations. Samples were collected at Blackwater Creek, Wabigoon Lake, and at the mouth of Blackwater Creek. Sampling locations were placed within areas of potential impacts from proposed mine infrastructure (Figure 2.2). Samples were collected on Wabigoon Lake approximately 5 km south west of the Blackwater Creek mouth, this location was chosen to reflect background conditions for the samples collected near the Project at Wabigoon Lake. Samples for benthic invertebrate community were also collected throughout the creek located at either side of a former Tree Nursery which is located within the Project area. As per MMER guidelines, benthic invertebrate samples were collected at the same locations as sediment samples, to better correlate habitat with benthic invertebrate community characteristics.

During invertebrate sampling, the boat was anchored at the bow and stern to reduce movement. Three sampling locations were sampled at Wabigoon Lake, two sampling locations were sampled at the Wabigoon Reference Site, and four sampling locations were sampled at Thunder Lake. The samples were reduced in the field using a 500 mm mesh sieve to remove excess sediment and debris. Three ponar grab samples were reduced and placed into one laboratory supplied container. Samples were then preserved in 10% formalin and sent to ALS Environmental, a certified laboratory for benthic invertebrate identification.

Stream samples were collected following the methodology developed by the Ontario Benthos Biomonitoring Network (OBBN). The travelling kick and sweep method for wadeable habitats was followed. For this method, sampling occurred in two riffles and one pool. In each riffle and pool, the substrate was kicked to disturb the sediment and the collection of the dislodged materials was done by sweeping the net near the bottom of the creek. The substrate was kicked in a zigzagging pattern for 10 minutes. The collected sample was then reduced in the field to remove excess sediment and debris. The reduced sample was place in laboratory supplied containers and preserved with 10% formalin.

A number of parameters were determined for the benthic invertebrate samples including: taxon richness, relative abundance, percent Ephemeroptera, Plecoptera, Tricoptera (EPT), percent Diptera, Simpson's diversity index, and evenness.

2.4 Quality Assurance/Quality Control

2.4.1 Surface Water

On January 25-27, 2012 a DST representative trained Treasury in the collection and submission of surface water samples. Following this training, sampling was completed on a monthly basis by Treasury. DST did not have any control regarding the quality assurance/quality control measures taken during surface water sampling, collection or submission to the laboratory for analysis and therefore cannot comment on the specifics.

As per DST's recommendations, one blind field duplicate, one trip blank and one field blank during each sampling event were submitted to the laboratory as part of a quality assurance/quality control (QA/QC) program.

Once DST received the laboratory results, a comparison of the relative percent difference (RPD) between the sample and the field duplicate sample was completed using the following formula:

$$RPD = \frac{(\text{Sample Result} - \text{Duplicate Result})}{(\text{Sample Result} + \text{Duplicate Result}) / 2} \times 100$$

The RPD calculation is only applicable when the sample and field duplicate concentrations are greater than 5 times the laboratory reportable detection limit (Maxxam, 2012). Once calculated, the RPDs were compared to the applicable alert criteria for water, which is 25% for metals and general chemistry parameters. A discussion of the results of this QA/QC sampling and analysis is presented in Section 3.6 of this report.

As part of the QA/QC process, a laboratory supplied field blank and travel blank were included in all surface water sampling events. Field and travel blanks consisted of deionized water that was tested by the laboratory for purity, and transferred into laboratory supplied containers. These blanks were used to monitor the potential contamination of samples due to field practices, laboratory equipment, analytical methodology, or sample containers. Ideally, the analytical results obtained from these blanks will be "non-detect" at laboratory method detection limits, with the exception of pH and conductivity, which is inherent to even the most pure forms of water.

ALS Environmental utilizes laboratory duplicates, method blanks, blank spikes, and matrix spikes to monitor the accuracy, precision and reproducibility of the laboratory data (refer to laboratory Certificates of Analysis, Appendix A).

2.4.2 Benthic Invertebrate Community

Identification to Family level was completed by ALS, where possible. The QA/QC process for invertebrate identification involves periodic testing of Senior Taxonomists with voucher samples, and resampling by third parties.

2.5 Regulatory Information

The results of all surface water analyses were compared to the Ministry of Environment and Energy Ontario Provincial Water Quality Objectives (PWQO) for the protection of aquatic life and recreation in freshwater (February, 1999).

Sediment samples (metals) were compared to the Guidelines for the Ministry of the Environment (MOE), Protection and Management of Aquatic Sediment Quality in Ontario, August 1993. The guidelines have established three levels of effect – No Effect Level, Lowest Effect Level (LEL) and Severe Effect Level (SEL). The LEL and SEL are based on long-term effects which

contaminants may have on sediment dwelling organisms. The No Effect Level is based on levels of chemicals which are so low, no contaminants are passed through the food chain. Sediment samples which were submitted for analysis of anions and nutrients were not compared to Sediment Quality Guidelines as the leachable anions and nutrients requested by Treasury Personnel cannot be compared to those guidelines.

Environmental baseline studies, such as the one completed herein, establish background site conditions representative of the site at the time of sample collection. The criteria, guidelines and/or standards used in this report provide a frame of reference for a discussion of the sample results.

3. RESULTS

The results of the surface water, sediment, and benthic sampling program are presented below. The Laboratory Certificates of Analysis are located in Appendix A.

3.1 Surface Water Results

Analytical results from the 2012 and 2013 surface water sampling program are presented in Table 3.1 to 3.45. Tables 3.46 to 3.90 show quarterly results by sampling station, units of all parameters, with the exception of pH and Conductivity (umho/cm), are in mg/L. The vast majority of parameters were found to be within the accepted Provincial Water Quality Objectives (PWQO). The following parameters were above the PWQO values (in brackets) in 2012 or 2013 at various locations and times of the year: pH (between 6.5-8.5), Total iron (0.30mg/L), total cobalt (0.0009mg/L), total zinc (0.02mg/L), total vanadium (0.006mg/L), lead (0.001-0.005mg/L), silver (0.0001mg/L), and total copper (0.005mg/L).

- **SW1:** total iron was above PWQO in 11 of 16 sampling period; ranging from 0.333mg/L-1.71mg/L;
- **SW2:** total iron was above PWQO in 13 of 13 sampling periods ranging from 0.658mg/L–2.34mg/L; total cobalt criterion was exceeded in 1 of 13 sampling periods (0.00102mg/L);
- **SW3:** total iron was above PWQO in 4 of 14 sampling periods ranging from 0.323mg/L–1.23mg/L; total zinc criterion was exceeded in 1 of 14 sampling periods (0.0267mg/L);
- **SW4:** total iron was above PWQO in 8 of 10 sampling periods ranging from 0.440mg/L–0.788mg/L;
- **SW5:** no parameters were above PWQO standards for this sampling period;
- **SW6:** total iron was above PWQO in 1 of 9 sampling periods (0.734mg/L);
- **SW7:** pH was out of PWQO range in 1 of 14 sampling periods (6.24); total iron criterion was exceeded in 14 of 15 sampling periods ranging from 0.350mg/L–1.03mg/L; total zinc criterion was exceeded in 1 of 14 sampling periods (0.158mg/L);
- **SW8:** total iron was above PWQO in 16 of 16 sampling periods ranging from 0.474mg/L–2.18mg/L;
- **SW9:** total iron was above PWQO in 9 of 14 sampling periods ranging from 0.315mg/L–0.797mg/L; total zinc criterion was exceeded in 1 of 14 sampling periods (0.0267mg/L);
- **SW10:** total iron was above PWQO in 15 of 15 sampling periods ranging from 0.685mg/L–8.71mg/L; total cobalt exceeded PQWO in 1 of 15 sampling periods (0.00162 mg/L); total zinc criterion was exceeded in 1 of 14 sampling periods (0.0267mg/L); total vanadium criterion was exceeded in 1 of 15 sampling periods (0.0096mg/L);
- **SW11:** pH was above PWQO in 8 of 9 sampling periods ranging from 5.2pH - 6.46pH; total iron criterion was exceeded in 9 of 9 sampling periods ranging from 1.17mg/L–2.82mg/L; total cobalt criterion was exceeded in 1 of 9 sampling periods (0.0011mg/L); total zinc was exceeded in 1 of 9 sampling periods (0.051mg/L);

- **TL1A:** total iron was above PWQO in 14 of 16 sampling periods ranging from 0.353mg/L–10.40mg/L; total cobalt criterion was exceeded in 8 of 16 sampling periods ranging from 0.00216mg/L-0.00723mg/L;
- **TL2A:** total iron was above PWQO in 8 of 8 sampling periods ranging from 0.615mg/L–2.0mg/L; total cobalt criterion was exceeded in 2 of 8 sampling periods ranging from 0.00095mg/L-0.00103mg/L; total copper criterion was exceeded in 2 of 8 sampling periods ranging from 0.0074mg/L-0.0087mg/L; total lead criterion was exceeded in 2 of 8 sampling periods ranging from 0.0018mg/L-0.0043mg/L; total silver criterion was exceeded in 2 of 8 samples ranging from 0.00072mg/L-0.00083mg/L;
- **TL3:** total iron was above PWQO in 14 of 15 sampling periods ranging from 0.301mg/L–6.47mg/L; and,
- **JCTA:** total iron was above PWQO in 14 of 14 sampling periods ranging from 0.305mg/L–9.11mg/L; total cobalt criterion was exceeded in 4 of 14 sampling periods ranging from 0.0096mg/L-0.00314mg/L; total selenium exceeded PWQO in 1 of 14 sampling periods 1.1mg/L; total zinc criterion was exceeded in 1 of 14 sampling periods (0.024mg/L).

Table 3.1: Inorganics for SW1

Inorganics				2012											2013			
				Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	(Apr 4) Duplicate	April 26	May 15	June 21	July 19	Aug. 24	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		93.1	20.6	21.2	32.9	76.9	38.5	70.3	72.2	81	38.8	57.9	81	84.8	83	53.5	56.7
Conductivity	umho/cm	1		180	59	58.5	80.8	165	87.4	139	143	170	86.9	122	170	177	172	112	114
Dissolved Chloride (Cl)	mg/L	1		0.92	0.36	0.38	<0.030	1.39	0.14	0.32	0.33	0.49	0.76	<2.0	0.77	0.86	1.04	0.21	0.69
Dissolved Sulphate (SO4)	mg/L	1		3.63	1.96	1.97	2.07	1.41	0.58	0.94	1.03	1.44	1.72	<2.0	2.49	2.95	3.34	0.75	1.66
Hardness (CaCO3)	mg/L	1.0		90.5	24.9	25	38.3	86.7	43	77.9	75	66.5	42.4	60.8	68.2	98	86.8	60.5	57.4
Nitrate (N)	mg/L	0.1		0.044	0.169	0.132	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.10	<0.030	0.047	0.11	<0.030	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.05	<0.030	<0.020
pH	pH		6.5-8.5	6.87	7.08	7.11	7.41	7.86	7.02	7.26	7.45	7.59	7.09	7.16	7.29	7.26	7.55	7.32	7.69
Total Ammonia-N	mg/L	0.05		0.071	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.07	<0.02	<0.020	0.024
Total Phosphorus	mg/L	0.002	a	0.0060	0.0176	0.0172	0.0063	0.0809	0.0095	0.0096	0.008	0.012	0.0086	0.0061	0.0063	0.0069	0.02	0.0099	0.0099
Total Suspended Solids	mg/L	1		4.1	2.6	<2.0	3.3	84	3.9	<2.0	3	15.9	4	<2.0	6	<2.0	<10	2.3	29.2
Acidity (as CaCO3)	mg/L	2		6.4	4	3.6	2.8	6.4	4	6	3.6	4	4	5.4	7.8	9.8	<5	4	5
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<0.5	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0067	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.2: Dissolved metals for SW1

Dissolved Metals				2012												2013			
				Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	(Apr 4) Duplicate	April 26	May 15	June 21	July 19	Aug. 24	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		<0.0050	0.0583	0.0577	0.0178	0.0476	0.027	<0.0050	<0.0050	<0.0050	0.0183	0.0120	0.0073	0.0120	0.0540	0.0135	0.0108
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00029
Dissolved Barium (Ba)	mg/L	0.002		0.013	<0.010	<0.010	<0.010	0.014	<0.010	0.011	<0.010	0.010	<0.010	<0.010	0.011	0.0126	0.009	<0.010	0.008
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	0.000024	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	0.000011
Dissolved Calcium (Ca)	mg/L	0.2		29.4	7.35	7.41	11.6	23.9	13.5	24.8	24.0	21.0	13.4	19.3	21.9	29.7	28.1	18.9	18.2
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	0.0013	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	0.0001
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	0.002	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.00044
Dissolved Iron (Fe)	mg/L	0.1		0.280	0.134	0.130	0.055	0.182	0.228	0.113	0.113	0.037	0.150	0.155	0.233	0.333	0.210	0.232	0.137
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		4.17	1.59	1.58	2.28	6.58	2.32	3.90	3.65	3.38	2.19	3.07	3.31	4.13	4.03	3.26	2.89
Dissolved Manganese (Mn)	mg/L	0.002		0.271	0.0096	0.0100	0.0441	0.0514	0.0399	0.0471	0.0971	0.0905	0.0106	0.0513	0.315	0.1610	0.1260	0.0201	0.018
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000215
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	0.00032
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	-	<0.050	-	-	-	-	-	-	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		1.68	0.94	0.93	1.04	1.68	<1.0	0.67	0.73	1.03	0.95	1.04	1.28	1.60	1.67	0.53	1.05
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0013
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	-	3.6	-	-	-	-	-	-	6.8	6.72	-	5.01
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		2.43	1.07	1.14	1.46	2.49	1.23	1.77	1.83	1.74	1.45	1.79	1.90	2.34	2.26	1.59	1.61
Dissolved Strontium (Sr)	mg/L	0.001		0.0512	0.0132	0.0133	0.0203	0.0411	0.0260	0.0468	0.0452	0.0497	0.0226	0.0312	0.0411	0.0461	0.0550	0.0329	0.0325
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.00024
Dissolved Titanium (Ti)	mg/L	0.005		<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	<0.002	<0.0020	<0.00030
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	0.000051
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.00015
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	<0.0030	0.0062	0.0032	0.007	<0.0030	<0.0030	<0.0030	<0.0030	0.0046	<0.0030	<0.0030	<0.0030	<0.005	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.3: Total metals for SW1

Total Metals				2012												2013			
Parameter				Q1			Q2			Q3			Q4			Q1	Q2	Q3	Q4
	Units	MDL	PWQO	Jan. 25	March (Apr 4)	(Apr 4) Duplicate	April 26	May 15	June 21	July 19	Aug. 24	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.0864	0.107	0.113	0.0660	1.18	0.063	0.0259	0.0377	0.247	0.0404	0.087	0.0584	0.0120	0.0610	0.058	0.0484
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.0060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	<0.003	<0.0010	0.0003
Total Barium (Ba)	mg/L	0.002		0.014	<0.010	<0.010	<0.010	0.024	<0.010	0.011	0.010	0.015	<0.010	<0.10	0.012	0.0126	0.009	<0.010	0.009
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	0.00002	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	***<0.00017***	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		30.4	6.21	7.76	11.4	20.5	13.2	23.4	24.5	25.2	12.3	19.7	26.0	29.7	28.4	19.0	17.8
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	0.0028	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00050	<0.003	<0.0010	0.00018
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	0.00089	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	***<0.0050***	<0.00050	<0.00050	<0.0005	<0.00050	<0.00010
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	0.0034	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	<0.002	<0.0010	0.00035
Total Iron (Fe)	mg/L	0.1	0.3	1.24	0.234	0.205	0.248	1.71	0.490	0.405	0.236	0.545	0.308	0.450	0.622	0.333	0.580	0.472	0.263
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.00050	<0.001	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		4.16	1.43	1.74	2.28	6.1	2.16	3.57	3.61	4.06	1.98	3.04	3.67	4.13	4.14	3.12	2.55
Total Manganese (Mn)	mg/L	0.002		0.304	0.0105	0.0083	0.0515	0.0779	0.0597	0.0634	0.115	0.258	0.0123	0.053	0.350	0.1610	0.1380	0.062	0.022
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	0.000219
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	0.0029	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.0020	<0.0010	<0.003	<0.0020	0.00036
Total Phosphorus (P)	mg/L	0.05		-	-		-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Total Potassium (K)	mg/L	0.2		1.83	0.83	0.69	0.98	1.64	<1.0	0.61	0.71	0.92	0.89	<5.0	1.35	1.60	1.83	0.53	1.11
Total Rubidium (Rb)	mg/L	0.001		-	-		-	-	-	-	-	-	-	-	-	-	-	-	0.0014
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-		-	-	3.1	-	-	-	-	-	-	6.8	7.43	-	4.93
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		2.57	0.89	1.11	1.41	2.19	1.12	1.64	1.79	2.05	1.37	1.8	2.14	2.34	2.32	1.50	1.55
Total Strontium (Sr)	mg/L	0.001		0.0541	0.0117	0.0144	0.0204	0.039	0.0258	0.0479	0.0443	0.0415	0.0216	0.032	0.0436	0.0461	0.0500	0.035	0.0309
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	-	<0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0043	0.0033	0.0039	0.0028	0.05	0.0022	<0.0020	0.0022	0.0113	<0.0020	<0.020	0.0030	<0.0020	0.003	0.0026	0.0024
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	<0.0050	<0.0010	<0.001	<0.0050	0.000056
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	0.0029	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.00050	<0.002	<0.0010	0.00031
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	<0.0030	<0.0030	<0.0030	0.0082	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	***<0.030***	<0.0030	<0.0030	<0.005	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	0.001	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L
Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L
Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L
The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L
The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.4: Inorganics for SW2

Inorganics				2012									2013			
Parameter				Q1	Q2			Q3			Q4		Q1	Q2	Q3	Q4
	Units	MDL	PWQO	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Jan 29	April 17	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		50	58.2	46.1	58.4	63.6	66.8	64.7	63.3	67.8	74.8	83	54.9	55
Conductivity	umho/cm	1		139	135	103	132	128	134	138	139	141	152	186	113	112
Dissolved Chloride (Cl)	mg/L	1		4.58	2.16	0.24	1.95	0.24	<0.10	<0.10	2.2	<2.0	0.78	5.6	0.13	1.21
Dissolved Sulphate (SO4)	mg/L	1		5.33	2.70	1.57	0.58	0.74	0.76	0.83	1.02	<2.0	2.31	2.01	0.46	0.56
Hardness (CaCO3)	mg/L	1.0		56.5	67.6	51.1	67	76.4	75.7	69	66.6	73.9	93	95.9	61.4	58.5
Nitrate (N)	mg/L	0.1		0.122	<0.030	<0.030	0.031	0.078	0.039	<0.030	<0.030	<0.10	0.053	0.08	0.043	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	7.56	7.66	7.56	7.41	7.65	7.74	7.79	7.41	7.38	7.41	7.69	7.41	7.67
Total Ammonia-N	mg/L	0.05		<0.020	<0.020	<0.020	<0.020	0.028	<0.020	<0.020	<0.020	<0.020	0.066	<0.02	0.023	<0.020
Total Phosphorus	mg/L	0.002	a	0.083	0.0920	<0.0050	0.0984	0.0704	0.139	0.0466	0.0268	0.0223	0.0293	0.07	0.0472	0.0271
Total Suspended Solids	mg/L	1		5.9	59.8	19	92.7	45.2	34.9	26.5	17.2	10.8	10.1	<10	17.1	20.6
Acidity (as CaCO3)	mg/L	2		5.6	3.4	6.6	3	2.8	2.8	2.8	2.6	4.8	9.8	<5	2	5
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.73	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	<0.0020	<0.0020
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	0.006	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.5: Dissolved metals for SW2

Dissolved Metals				2012									2013			
				Q1	Q2			Q3			Q4		Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Jan 29	April 17	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.123	0.0484	0.0074	0.072	0.0416	0.0349	0.0285	0.0383	0.0527	0.1130	0.0830	0.0379	0.0740
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.0004
Dissolved Barium (Ba)	mg/L	0.002		<0.010	0.013	<0.010	0.013	<0.010	<0.010	<0.010	<0.010	0.013	0.014	0.015	<0.010	0.008
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	0.000025	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	0.00001
Dissolved Calcium (Ca)	mg/L	0.2		15.8	18.2	15.8	18.5	21.3	21.5	20.3	18.1	20.0	24.8	26.3	17.2	15.9
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	0.0004
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0006	<0.00050	0.00014
Dissolved Copper (Cu)	mg/L	0.001		0.0032	0.0023	<0.0010	0.0013	0.0010	<0.0010	<0.0010	<0.0010	0.0014	0.0017	0.002	0.0014	0.00114
Dissolved Iron (Fe)	mg/L	0.1		0.069	0.155	0.175	0.559	0.651	0.431	0.283	0.201	0.199	0.663	0.690	0.741	0.387
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	0.000083
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		4.15	5.39	2.81	5.12	5.63	5.38	4.48	5.21	5.82	6.43	7.34	4.47	4.55
Dissolved Manganese (Mn)	mg/L	0.002		0.0079	0.0539	0.172	0.0675	0.0559	0.0612	0.0266	0.0188	0.0186	0.0258	0.0580	0.0127	0.013
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000119
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0014	<0.003	<0.0020	0.00105
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	<0.050	-	-	-	-	-	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		1.56	1.92	1.08	1.1	0.74	0.54	0.57	1.50	1.26	<1.0	2.20	0.68	1.04
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	<0.0010
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	0.00
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	3.6	-	-	-	-	-	4.5	4.76	-	3.43
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		3.79	2.46	1.70	2.57	2.06	1.82	1.49	2.22	2.04	1.71	3.94	1.73	2.06
Dissolved Strontium (Sr)	mg/L	0.001		0.0287	0.0340	0.0278	0.0348	0.0355	0.0360	0.0281	0.0313	0.0351	0.0430	0.0480	0.0293	0.0295
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		0.0051	<0.0020	<0.0020	0.0027	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	0.0036	0.004	0.0029	0.00235
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	0.000083
Dissolved Vanadium (V)	mg/L	0.0005		0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0006	<0.002	<0.0010	0.00042
Dissolved Zinc (Zn)	mg/L	0.005		0.0086	0.0089	<0.0030	<0.0030	-	<0.0030	<0.0030	<0.0030	<0.0030	0.0076	0.011	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.6: Total metals for SW2

Total Metals				2012									2013			
				Q1	Q2			Q3			Q4		Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	March 4	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Jan 29	April 17	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.982	0.509	0.400	0.654	0.586	0.626	0.310	1.07	0.555	0.26	0.44	0.707	0.1470
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.0060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	<0.003	<0.0010	0.00056
Total Barium (Ba)	mg/L	0.002		0.015	0.021	0.012	0.025	0.014	0.013	<0.010	<0.10	0.017	0.0178	0.025	0.014	0.011
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	<0.050	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	0.000020	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	***<0.00017***	<0.000017	<0.000090	<0.0001	<0.000017	0.000011
Total Calcium (Ca)	mg/L	0.2		18.2	18.5	15.2	18.3	20.0	21.7	17.5	21.6	20.7	26.2	26.9	17.7	15.8
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		0.0016	0.0013	<0.0010	0.00158	0.0014	0.0015	<0.0010	<0.010	0.0012	0.00092	<0.003	0.0017	0.00059
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	0.00064	<0.00050	0.00102	0.00061	0.00053	<0.00050	***<0.0050***	<0.00050	<0.00050	<0.0005	0.00069	0.00024
Total Copper (Cu)	mg/L	0.001	0.005	0.0033	0.0035	<0.0010	0.0028	0.0016	0.0018	0.0010	***<0.010***	0.0025	0.0025	<0.002	0.0016	0.0014
Total Iron (Fe)	mg/L	0.1	0.3	0.716	0.933	0.841	1.77	2.03	1.91	0.914	1.63	1.01	1.24	0.71	2.34	0.658
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.00050	<0.001	<0.0010	0.00017
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.50	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		3.58	5.59	2.82	4.83	5.21	5.50	4.77	6.67	5.67	6.80	7.37	4.45	4.17
Total Manganese (Mn)	mg/L	0.002		0.0154	0.0965	0.230	0.157	0.0841	0.0644	0.0229	0.055	0.0395	0.038	0.229	0.0853	0.038
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	0.000098
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	0.0022	<0.0020	0.0023	0.0021	0.0021	<0.0020	<0.020	<0.0020	0.0016	<0.003	0.0022	0.00123
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	0.051	-	-	-
Total Potassium (K)	mg/L	0.2		1.44	1.93	1.07	1.0	0.76	0.64	0.53	<5.0	1.45	<1.0	2.19	0.79	1.15
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	0.0010
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	3.6	-	-	-	-	-	4.80	8.88	-	3.28
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		4.09	2.39	1.67	2.27	1.91	1.83	1.62	2.7	2.10	1.8	4.2	1.68	2.13
Total Strontium (Sr)	mg/L	0.001		0.0256	0.0357	0.0286	0.0366	0.0364	0.0366	0.0305	0.038	0.0377	0.052	0.072	0.0334	0.0284
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	-	<0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0306	0.0161	0.0175	0.0194	0.0247	0.0268	0.0139	0.047	0.0221	0.010	0.023	0.0329	0.0059
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	<0.0050	<0.0010	<0.001	<0.0050	0.000094
Total Vanadium (V)	mg/L	0.0005	0.006	0.0020	0.0019	<0.0010	0.0028	0.0021	0.0020	<0.0010	***<0.010***	0.0012	0.00108	<0.002	0.0023	0.0008
Total Zinc (Zn)	mg/L	0.005	0.02	0.0045	0.0073	<0.0030	0.0076	0.0046	0.0046	<0.0030	***<0.030***	0.0070	0.0076	0.019	0.0036	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L
Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L
Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L
The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L
The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.7: Inorganics for SW3

Inorganics				2012												2013	
Parameter				Q1		Q2				Q3			Q4			Q3	Q4
	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	May 15 Duplicate	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		115	34.1	43	53.4	53.2	40.7	58.6	65.4	60.5	51.2	49	57.9	41.5	44.9
Conductivity	umho/cm	1		225	111	147	182	182	127	175	191	187	450	139	163	120	124
Dissolved Chloride (Cl)	mg/L	1		6.4	7.65	13.8	16.9	17	9.19	17.4	17.5	16.4	12.4	9.2	10.9	9.52	9.41
Dissolved Sulphate (SO4)	mg/L	1		3.77	2.76	3.24	3.56	3.55	2.03	2.66	1.94	1.64	1.63	2.7	2.84	1.4	2.08
Hardness (CaCO3)	mg/L	1.0		115	38.4	53	67.6	67.6	49	69.9	76.2	71.4	53.2	55.2	55.8	48.8	48.6
Nitrate (N)	mg/L	0.1		0.059	0.115	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.10	<0.030	<0.030	0.045
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.09	7.53	7.47	7.71	7.62	6.98	7.26	7.41	7.45	7.27	7.22	7.03	6.76	7.51
Total Ammonia-N	mg/L	0.05		0.067	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.20	<0.020	<0.020	<0.020	<0.020	0.091
Total Phosphorus	mg/L	0.002	a	0.0118	0.0193	0.0152	0.0191	0.0071	0.0176	0.0153	0.0121	0.0145	0.016	0.0129	0.0182	0.0215	0.0112
Total Suspended Solids	mg/L	1		5.1	2.7	2.1	5.9	4.5	2.7	2.7	4.9	3.3	3.5	<2.0	2.3	3	3.4
Acidity (as CaCO3)	mg/L	2		6.8	3.4	3.4	2.8	2.4	4.8	4.2	5.4	2	3	4.8	9.8	4	4
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0060	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.8: Dissolved metals for SW3

Dissolved Metals				2012												2013	
				Q1		Q2				Q3			Q4			Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	May 15 Duplicate	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.0053	0.0318	0.0264	0.0130	0.0130	0.027	0.0114	0.0085	0.0061	0.0061	0.0149	0.0202	0.0282	0.0432
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0004
Dissolved Barium (Ba)	mg/L	0.002		0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	<0.010	0.010	<0.010	0.010
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		35.2	11.3	15.0	19.5	19.4	13.8	19.8	21.9	20.0	15.1	16.0	16.2	14.0	14.4
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00028
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	0.0012	0.0012	0.0011	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.0010	<0.0010	0.00051
Dissolved Iron (Fe)	mg/L	0.1		0.327	0.147	0.057	<0.020	0.048	0.146	0.073	0.129	0.050	0.022	0.134	0.420	0.195	0.153
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		6.54	2.45	3.79	4.60	4.66	3.42	4.95	5.21	5.24	3.75	3.68	3.71	3.33	3.07
Dissolved Manganese (Mn)	mg/L	0.002		0.125	0.0166	0.0061	0.0093	0.0104	0.0270	0.0231	0.0181	0.0160	0.0046	0.0461	0.214	0.0023	0.011
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	0.000038	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.000158
Dissolved Nickel (Ni)	mg/L	0.001		<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	0.00048
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	-	<0.050	-	-	-	-	-	-	-	-
Dissolved Potassium (K)	mg/L	0.2		1.73	0.93	1.16	1.33	1.33	<1.0	0.87	0.69	0.66	1.08	1.26	1.33	0.89	1.07
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0017
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	-	2.1	-	-	-	-	-	-	-	2.43
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		5.40	4.89	8.97	10.5	10.6	6.43	11.1	11.5	10.6	8.07	6.56	6.26	6.78	5.84
Dissolved Strontium (Sr)	mg/L	0.001		0.0645	0.0238	0.0333	0.0466	0.0464	0.0312	0.0512	0.0571	0.0493	0.0359	0.0334	0.0372	0.0312	0.0344
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-
Dissolved Titanium (Ti)	mg/L	0.005		<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	0.00015
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0007
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.000091
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0003
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	<0.0030	0.0030	0.0031	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0061	<0.0030	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.9: Total metals for SW3

Total Metals				2012												2013	
Parameter				Q1		Q2				Q3			Q4			Q3	Q4
	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	May 15 Duplicate	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.217	0.0779	0.156	0.0915	0.0901	0.065	0.0781	0.0369	0.0545	0.0293	0.0809	0.0718	0.0647	0.0545
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00048
Total Barium (Ba)	mg/L	0.002		0.017	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.010	<0.010	<0.010	<0.010	0.011	<0.010	0.010
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		35.5	11.8	15.2	18.8	17.5	13.8	19.1	21.8	20.3	13.0	17.0	18.6	14.1	14.8
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0003
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.0001
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	0.0010	0.0012	0.0013	0.0013	0.001	<0.0010	<0.0010	<0.0010	<0.0010	0.0013	0.0012	<0.0010	0.0008
Total Iron (Fe)	mg/L	0.1	0.3	1.23	0.233	0.271	0.212	0.193	0.296	0.362	0.252	0.170	0.072	0.323	0.711	0.638	0.195
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		6.62	2.10	3.84	3.79	4.28	3.22	4.62	5.15	4.90	3.14	3.65	3.96	3.18	3.00
Total Manganese (Mn)	mg/L	0.002		0.125	0.0189	0.0113	0.0167	0.0163	0.0362	0.0444	0.0270	0.0172	0.0059	0.0542	0.243	0.0845	0.013
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	0.000017	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.000153
Total Nickel (Ni)	mg/L	0.001	0.025	<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	0.00049
Total Potassium (K)	mg/L	0.2		1.88	0.76	1.18	1.13	1.19	<1.0	0.83	0.68	<0.50	1.00	1.33	1.35	0.89	1.13
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0019
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	-	1.9	-	-	-	-	-	-	-	2.32
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		7.61	4.99	8.82	9.03	9.79	6.01	10.7	11.3	10.6	6.99	6.57	6.76	6.39	5.70
Total Strontium (Sr)	mg/L	0.001		0.0660	0.0199	0.0347	0.0384	0.0445	0.0318	0.0517	0.0543	0.0510	0.0296	0.0375	0.0396	0.0324	0.0337
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0107	0.0028	0.0056	0.0041	0.0037	0.0020	0.0035	0.0023	0.0025	<0.0020	0.0028	0.0027	0.0025	0.0009
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.000095
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00043
Total Zinc (Zn)	mg/L	0.005	0.02	0.0040	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0267	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.10: Inorganics for SW4

Inorganics				2012								2013	
				Q1		Q2		Q3				Q1	Q3
Parameter	Units	MDL	PWQO	Jan. 26	26 Duplicate	May 16	June 21	July 19	Aug. 22	Sept. 18	18 Duplicate	Jan 29	July 24
Alkalinity (Total as CaCO3)	mg/L	1		54.8	54.9	45.3	43	42.7	44	45.2	45.1	7.6	41.6
Conductivity	umho/cm	1		120	118	114	108	100	105	108	108	113	99.4
Dissolved Chloride (Cl)	mg/L	1		3.68	3.71	3.12	3.17	3.23	3.18	3.18	3.24	4.13	3.25
Dissolved Sulphate (SO4)	mg/L	1		2.19	2.20	1.79	1.74	1.69	1.7	1.84	1.84	3.06	1.62
Hardness (CaCO3)	mg/L	1.0		54.9	57	50.1	42	46.6	45.6	48.1	49	60.0	44.4
Nitrate (N)	mg/L	0.1		<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.038	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.49	7.5	7.83	7.62	7.9	7.87	7.75	7.75	7.52	7.53
Total Ammonia-N	mg/L	0.05		0.027	0.026	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.023
Total Phosphorus	mg/L	0.002	a	0.0278	0.0284	0.0227	0.0273	0.0191	0.0207	0.0248	0.0245	0.0087	0.0194
Total Suspended Solids	mg/L	1		3.7	2.6	7.3	8.3	2.5	10.5	7	10.4	<2.0	7.5
Acidity (as CaCO3)	mg/L	2		2	2.6	2.2	2	3.4	2.2	2	2	7.6	3
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total	mg/L	0.002		<0.0020	0.0030	<0.0020	0.0030	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.11: Dissolved metals for SW4

Dissolved Metals				2012								2013	
				Q1		Q2		Q3				Q1	Q3
Parameter	Units	MDL	PWQO	Jan. 26	26 Duplicate	May 16	June 21	July 19	Aug. 22	Sept. 18	18 Duplicate	Jan 29	July 24
Dissolved Aluminum (Al)	mg/L	0.005		0.0147	0.0217	0.0088	0.011	0.0109	0.0094	0.0068	0.0076	<0.010	0.0309
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.00060
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0	<0.010
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017
Dissolved Calcium (Ca)	mg/L	0.2		16.8	17.4	15.4	13.2	14.2	14.2	14.5	14.7	15.5	13.6
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Copper (Cu)	mg/L	0.001		0.0017	0.0019	0.0015	0.0034	0.0015	0.0013	0.0014	0.0015	<0.0010	0.0044
Dissolved Iron (Fe)	mg/L	0.1		<0.020	<0.020	<0.020	<0.050	<0.020	<0.020	<0.020	<0.020	<0.050	<0.020
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.10	<0.050
Dissolved Magnesium (Mg)	mg/L	0.05		3.12	3.31	2.84	2.52	2.69	2.50	2.87	2.95	3.55	2.51
Dissolved Manganese (Mn)	mg/L	0.002		0.0022	0.0023	0.0011	0.0016	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	<0.050	-	-	-	-	<0.050	-
Dissolved Potassium (K)	mg/L	0.2		0.86	0.94	0.84	<1.0	0.79	0.72	0.73	0.75	1	0.86
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	-	-	-	-	1.2	-
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	1.2	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Sodium (Na)	mg/L	0.1		3.35	3.45	2.93	<0.00010	2.96	2.69	2.81	2.89	3.66	2.95
Dissolved Strontium (Sr)	mg/L	0.001		0.0291	0.0315	0.0255	2.51	0.0239	0.0232	0.0241	0.0244	0.0276	0.0225
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	0.0237	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0032
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs
Italisized Values have detection limits above the PWQO

Table 3.12: Total metals for SW4

Total Metals				2012								2013	
				Q1		Q2		Q3				Q1	Q3
Parameter	Units	MDL	PWQO	Jan. 26	Jan. 26 Duplicate	May 16	June 21	July 19	Aug. 22	Sept. 18	Sept. 18 Duplicate	Jan 29	July 24
Total Aluminum (Al)	mg/L	0.005		0.415	0.403	0.816	0.224	0.671	0.785	0.721	0.712	<0.010	0.751
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.00060
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Barium (Ba)	mg/L	0.002		0.012	0.011	0.013	0.010	0.011	0.012	0.011	0.011	0.009	0.013
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	0.000051	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017
Total Calcium (Ca)	mg/L	0.2		18.1	17.4	14.8	13.1	14.3	14.6	15.1	12.1	17.9	13.9
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	0.0015	<0.00050	<0.0010	0.0011	<0.0010	<0.0010	<0.00050	0.0012
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Copper (Cu)	mg/L	0.001	0.005	0.0026	0.0025	0.0043	0.0018	0.0019	0.0026	0.0019	0.0021	0.0015	0.0022
Total Iron (Fe)	mg/L	0.1	0.3	0.460	0.447	0.788	0.298	0.570	0.629	0.440	0.457	<0.050	0.692
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.10	<0.050
Total Magnesium (Mg)	mg/L	0.05		3.40	3.30	2.93	2.32	2.83	2.79	2.98	3.00	3.72	2.57
Total Manganese (Mn)	mg/L	0.002		0.0092	0.0122	0.0182	0.0127	0.0107	0.0148	0.0111	0.0121	<0.0010	0.0159
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	<0.050	-
Total Potassium (K)	mg/L	0.2		1.08	1.05	1.50	<1.0	0.93	0.99	0.80	0.83	1.20	0.95
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010
Total Silicon (Si)	mg/L	0.05		-	-	-	1.1	-	-	-	-	1.5	-
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Sodium (Na)	mg/L	0.1		3.51	3.49	3.50	2.42	3.01	2.82	3.07	3.10	3.98	2.82
Total Strontium (Sr)	mg/L	0.001		0.0320	0.0301	0.0271	0.0246	0.0272	0.0259	0.0218	0.0231	0.0340	0.0259
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Titanium (Ti)	mg/L	0.005		0.0141	0.0131	0.0277	0.0066	0.0206	0.0241	0.0216	0.0226	<0.0020	0.0278
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050
Total Vanadium (V)	mg/L	0.0005	0.006	0.0011	0.0011	0.0014	<0.0010	0.0011	0.0013	0.0010	0.0011	<0.00050	0.0014
Total Zinc (Zn)	mg/L	0.005	0.02	0.0031	<0.0030	0.0382	<0.0030	<0.0030	0.0038	<0.0030	0.0040	<0.0030	<0.0030
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	0.0021	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.13: Inorganics for SW5

Inorganics				2012					2013		
				Q1	Q2		Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	July 19	Aug. 22	Jan 29	July 24	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		50.5	45.8	44.3	43.4	45.2	49.1	46	48.3
Conductivity	umho/cm	1		117	120	115	107	111	122	113	113
Dissolved Chloride (Cl)	mg/L	1		4.8	4.22	4.14	4.12	4.05	4.75	4.18	4.22
Dissolved Sulphate (SO4)	mg/L	1		3.29	2.93	2.76	2.77	2.76	3.91	2.72	2.88
Hardness (CaCO3)	mg/L	1.0		53	51.6	48	49	46.1	59	5.04	47.8
Nitrate (N)	mg/L	0.1		0.044	<0.030	<0.030	<0.030	<0.030	0.55	<0.030	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.51	7.94	7.77	7.98	7.93	7.6	7.64	7.75
Total Ammonia-N	mg/L	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.02	<0.020
Total Phosphorus	mg/L	0.002	a	0.008	0.007	0.0071	0.0099	0.006	0.0077	0.0081	0.0063
Total Suspended Solids	mg/L	1		<2.0	<2.0	2.1	<2.0	<2.0	<2.0	<2.0	<2.0
Acidity (as CaCO3)	mg/L	2		2	2.2	2.2	2.2	2	7.2	3	4
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	0.0053	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.14: Dissolved metals for SW5

Dissolved Metals				2012					2013		
				Q1	Q2		Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	July 19	Aug. 22	Jan 29	July 24	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.010	<0.0050	0.0042
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00050	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0003
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	0.0076	<0.010	0.00787
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000090	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		15.6	15.2	13.9	14.4	13.7	15.8	14.9	14.0
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.00050	<0.0010	<0.00010
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		0.0011	0.0011	<0.0010	0.0011	<0.0010	0.0010	0.0011	0.00048
Dissolved Iron (Fe)	mg/L	0.1		<0.020	<0.020	<0.050	<0.020	<0.020	<0.050	<0.020	0.011
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	-	<0.050	<0.050	<0.10	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		3.43	3.29	3.19	3.19	2.87	3.65	3.19	3.11
Dissolved Manganese (Mn)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00059
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.000152
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	0.0004
Dissolved Phosphorus (P)	mg/L	0.05		-	-	<0.050	-	-	<0.050	-	-
Dissolved Potassium (K)	mg/L	0.2		1.09	1.09	<1.0	1.01	0.89	1.10	1.02	0.988
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	0.0016
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.00040	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	<1.0	-	-	1.2	-	1.57
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		3.74	3.47	3.33	3.44	3.14	3.83	3.50	3.16
Dissolved Strontium (Sr)	mg/L	0.001		0.0313	0.0280	0.0274	0.0265	0.0254	0.0309	0.0276	0.0286
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.00030
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.000028
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.00016
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	<0.0030	<0.0030	0.0035	<0.0030	0.0033	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0040	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.15: Total metals for SW5

Total Metals				2012					2013		
				Q1	Q2		Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	July 19	Aug. 22	Jan 29	July 24	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.0086	0.0234	0.023	0.0118	0.0118	0.0120	0.0159	0.014
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00050	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00033
Total Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	0.009	<0.010	0.00898
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000090	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		14.8	14.3	13.2	14.2	14.1	17.5	14.7	14.6
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.00050	<0.0010	0.00022
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010
Total Copper (Cu)	mg/L	0.001	0.005	0.0012	0.0011	<0.0010	0.0015	0.0011	0.0020	0.0012	0.00096
Total Iron (Fe)	mg/L	0.1	0.3	0.022	0.037	<0.050	0.123	<0.020	<0.050	0.022	0.028
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050		<0.050	<0.050	<0.10	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		3.15	3.16	2.62	3.07	2.97	3.69	3.04	2.89
Total Manganese (Mn)	mg/L	0.002		0.0017	0.0042	0.0026	0.0037	0.0030	0.0010	0.0045	0.0060
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.000167
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	0.00053
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	<0.050	-	-
Total Potassium (K)	mg/L	0.2		1.06	0.98	<1.0	0.99	0.95	1.20	1.02	1.06
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	0.0018
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.00040	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	<1.0	-	-	1.4	-	1.48
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		3.62	3.33	2.78	3.37	3.06	3.93	3.26	3.28
Total Strontium (Sr)	mg/L	0.001		0.0291	0.0278	0.0264	0.0279	0.0266	0.0342	0.0292	0.0285
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	<0.0010	<0.0010	-	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0005
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.000031
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.00035
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0041	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0040	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.16: Inorganics for SW6

Inorganics				2012						2013		
				Q1	Q2			Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	21 Duplicate	July 19	Aug. 22	Jan 29	July 24	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		51	45.8	44.3	44.3	44.5	45.1	50	46.4	48.6
Conductivity	umho/cm	1		118	120	115	115	108	111	118	113	112
Dissolved Chloride (Cl)	mg/L	1		4.85	4.15	4.20	4.22	4.16	4.30	3.64	4.37	4.21
Dissolved Sulphate (SO4)	mg/L	1		3.33	2.91	2.85	2.80	2.74	4.53	2.46	2.88	2.86
Hardness (CaCO3)	mg/L	1.0		52.8	51.6	48	47	47.1	46.1	63	56	47.5
Nitrate (N)	mg/L	0.1		0.046	<0.030	<0.030	<0.030	<0.030	<0.030	0.075	<0.030	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.54	7.97	7.76	7.75	7.97	7.9	7.56	7.68	7.78
Total Ammonia-N	mg/L	0.05		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.028
Total Phosphorus	mg/L	0.002	a	0.008	0.0522	0.0068	0.0071	0.0081	0.0077	0.0292	0.0075	0.0068
Total Suspended Solids	mg/L	1		<2.0	2.9	2.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Acidity (as CaCO3)	mg/L	2		2.4	2.2	4	3.4	2	2	6.2	2	3
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	0.0059	0.0049	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.17: Dissolved metals for SW6

Dissolved Metals				2012						2013		
				Q1	Q2			Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	21 Duplicate	July 19	Aug. 22	Jan 29	July 24	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		<0.0050	<0.0050	<0.010	<0.010	<0.0050	<0.0050	0.125	<0.0050	0.0041
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.0050	<0.0050	<0.00060	<0.00060	<0.00050	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00032
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	<0.010	0.0079
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000090	<0.000090	<0.000017	<0.000017	<0.000090	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		15.6	15.2	13.9	13.6	13.7	13.7	16.1	16.5	14.1
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.00050	<0.00050	<0.0010	<0.0010	<0.00050	<0.0010	<0.00010
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	0.0018	0.0011	0.0005
Dissolved Iron (Fe)	mg/L	0.1		<0.020	<0.020	<0.050	<0.050	<0.020	<0.020	0.127	<0.020	<0.010
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.000065
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050			<0.050	<0.050	<0.10	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		3.34	3.30	3.18	3.05	3.13	2.88	3.32	3.58	2.99
Dissolved Manganese (Mn)	mg/L	0.002		<0.0010	<0.0010	0.0025	0.0021	<0.0010	<0.0010	0.0038	<0.0010	0.0005
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.000156
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.0020	0.00037
Dissolved Phosphorus (P)	mg/L	0.05		-	-	<0.050	<0.050	-	-	<0.050	-	-
Dissolved Potassium (K)	mg/L	0.2		1.09	1.10	<1.0	<1.0	0.95	0.90	<1.0	1.17	1.00
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	0.0016
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.00040	<0.00040	<0.0010	<0.0010	<0.00040	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	<1.0	<1.0	-	-	<1.0	-	1.53
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		3.73	3.53	3.27	3.23	3.33	3.11	3.29	3.92	3.21
Dissolved Strontium (Sr)	mg/L	0.001		0.0313	0.0278	0.0274	0.0264	0.0254	0.0258	0.0271	0.0297	0.0294
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	-	<0.0010	<0.0010	-	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.00030
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.000029
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00062	<0.0010	0.00017
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0031	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0040	<0.0010	<0.0010	<0.0040	<0.0010	<0.0050

Notes:

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All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.18: Total metals for SW6

Total Metals				2012						2013		
				Q1	Q2			Q3		Q1	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	May 15	June 21	21 Duplicate	July 19	Aug. 22	Jan 29	July 24	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.0082	0.0261	0.024	0.021	0.0136	0.0149	0.8460	0.0237	0.017
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.0050	<0.0050	<0.00060	<0.00060	<0.00050	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00036
Total Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.0162	<0.010	0.00909
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000090	<0.000090	<0.000017	<0.000017	<0.000090	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		16.6	12.8	13.5	12.9	14.1	14.1	19.2	15.3	14.4
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.00050	<0.00050	<0.0010	<0.0010	0.00132	<0.0010	0.00014
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00010
Total Copper (Cu)	mg/L	0.001	0.005	0.0012	0.0012	0.0011	0.0010	<0.0010	0.0012	0.0036	0.0012	0.0010
Total Iron (Fe)	mg/L	0.1	0.3	0.021	0.036	<0.050	<0.050	<0.020	<0.020	0.734	0.036	0.027
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	-	-	<0.050	<0.050	<0.10	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		3.51	2.84	2.70	2.55	3.11	3.00	3.70	3.19	2.68
Total Manganese (Mn)	mg/L	0.002		0.0019	0.0039	0.0038	0.0037	0.0029	0.0033	0.0105	0.0053	0.0048
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	0.000165
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0012	<0.0020	0.00053
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	0.057	-	-
Total Potassium (K)	mg/L	0.2		1.16	0.95	<1.0	<1.0	0.98	0.97	1.20	1.06	1.01
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	0.0017
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.00040	<0.00040	<0.0010	<0.0010	<0.00040	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	<1.0	<1.0	-	-	2.4	-	1.44
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		3.80	3.08	2.85	2.70	3.35	3.13	3.75	3.43	3.15
Total Strontium (Sr)	mg/L	0.001		0.0321	0.0248	0.0276	0.0271	0.0279	0.0267	0.0345	0.0297	0.0275
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	-	<0.0010	<0.0010	-	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0269	<0.0020	0.0006
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0050	0.000029
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00152	<0.0010	0.00033
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	0.0050	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0040	<0.0010	<0.0010	<0.0040	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.19: Inorganics for SW7

Inorganics				2012											2013			
Parameter				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 28	April 18	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		8.3	37.6	49.7	62.5	50	40	59.7	95.4	25.5	43	63.2	66.6	50	74.3	44.9
Conductivity	umho/cm	1		23.6	87.9	109	135	107	90.3	130	189	64	102	151	151	117	149	99.4
Dissolved Chloride (Cl)	mg/L	1		0.23	0.16	0.16	0.17	<0.10	0.18	0.22	0.28	0.43	<2.0	0.57	0.7	0.57	<0.10	0.29
Dissolved Sulphate (SO4)	mg/L	1		2.47	1.06	1.31	1.61	0.39	3.44	4.91	1.14	2.82	4.5	7.28	8.35	5.62	0.56	3.86
Hardness (CaCO3)	mg/L	1.0		7.72	36.3	49.6	66.3	52	50.1	67.2	100	33	49.6	62.7	88	57.9	83.8	48.9
Nitrate (N)	mg/L	0.1		0.036	0.043	0.44	0.059	<0.030	0.112	0.12	0.084	0.138	0.32	0.457	0.533	0.44	0.051	0.201
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	6.24	7.64	7.73	7.95	7.61	7.47	7.68	7.86	7.13	7.39	7.52	7.58	7.59	7.58	7.77
Total Ammonia-N	mg/L	0.05		0.023	0.02	<0.020	0.03	<0.020	<0.020	<0.020	<0.020	<0.020	0.023	0.093	0.065	<0.02	<0.020	0.027
Total Phosphorus	mg/L	0.002	a	0.0101	0.0284	0.0081	0.0088	0.0156	0.0181	0.0187	<0.0050	0.0110	0.0107	0.0139	0.0106	0.070	0.0075	0.0128
Total Suspended Solids	mg/L	1		2.5	33	7.6	2.8	22.2	7.3	6.2	<2.0	5	3.4	<2.0	4.5	<10	<2.0	4.2
Acidity (as CaCO3)	mg/L	2		3.4	2.2	2.6	2.6	3	2.8	2.8	2.4	3.43	5	6.4	7	<5	2	4
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.0	<0.5	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0049	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.20: Dissolved metals for SW7

Dissolved Metals				2012												2013			
				Q1		Q2			Q3			Q4				Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18		Jan 28	April 18	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.155	0.0068	<0.0050	0.0054	<0.010	0.0822	0.0291	<0.0050	0.168	0.0810	0.0450		0.022	0.019	<0.0050	0.0851
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060		<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	0.0011	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.003	<0.0010	0.00069
Dissolved Barium (Ba)	mg/L	0.002		<0.010	0.012	0.013	0.015	0.017	<0.010	<0.010	0.021	<0.010	<0.010	0.011		0.0097	0.008	0.019	0.009
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		0.000021	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017		<0.000090	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		2.13	12.7	17.1	22.8	18.2	15.4	20.9	34.4	10.2	15.1	19.1		24.6	17.3	29.2	14.9
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-		-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00050	<0.003	<0.0010	0.00051
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050		<0.00050	<0.0005	<0.00050	0.00015
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	0.0010		<0.0010	<0.002	<0.0010	0.0004
Dissolved Iron (Fe)	mg/L	0.1		0.251	0.205	0.138	0.096	0.070	0.564	0.629	0.173	0.670	0.606	0.614		0.459	0.360	0.030	0.865
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00050	<0.001	<0.0010	0.000093
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050		<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		0.585	1.13	1.68	2.24	1.54	2.81	3.66	3.53	1.85	2.90	3.66		4.52	3.58	2.65	2.85
Dissolved Manganese (Mn)	mg/L	0.002		0.0082	0.0315	0.0530	0.0681	0.020	0.0138	0.0124	0.0719	0.0271	0.0336	0.0469		0.0317	0.0290	0.0212	0.0314
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010		<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00050	<0.002	<0.0010	0.00021
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0010	<0.003	<0.0020	0.00061
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	<0.050	-	-	-	-	-	-		<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		<0.50	0.54	0.54	0.72	<1.0	0.68	0.83	0.73	<0.50	0.59	0.94		<1.0	2.1	<0.50	0.66
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-		-	-	-	0.0014
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	4.2	-	-	-	-	-	-		6.5	4.83	-	6.04
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010		<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		1.64	0.71	1.00	1.39	0.83	1.47	1.74	1.61	1.12	1.49	1.87		1.95	1.52	1.32	1.39
Dissolved Strontium (Sr)	mg/L	0.001		0.0079	0.0172	0.0229	0.0323	0.0271	0.0305	0.0400	0.0513	0.0209	0.0283	0.0407		0.0400	0.0310	0.0444	0.0301
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030		<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		0.0039	<0.0020	<0.0020	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	0.0033	<0.0020	<0.0020		<0.0020	<0.002	<0.0020	0.00186
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0010	<0.002	<0.0050	0.000056
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.00050	<0.002	<0.0010	0.00063
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0033	<0.0030	0.0076	<0.0030	<0.0030	0.0035	<0.0030	0.0076	0.0050	0.0053		<0.0030	0.0070	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010		<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.21: Total metals for SW7

Total Metals				2012											2013			
Parameter				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 28	April 18	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.216	0.100	0.0334	0.0363	0.130	0.137	0.0728	<0.0050	0.213	0.148	0.103	0.057	0.109	0.0221	0.0995
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.0060	<0.0060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	0.0013	<0.0010	***<0.010***	***<0.010***	<0.0010	<0.0010	<0.003	<0.0010	0.00078
Total Barium (Ba)	mg/L	0.002		<0.010	0.012	0.014	0.016	0.018	<0.010	0.011	0.016	<0.10	<0.10	0.012	0.0137	0.008	0.021	0.009
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	***<0.50***	<0.050	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	***<0.00017***	***<0.00017***	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		2.15	10.7	17.7	21.2	18.4	15.1	21.3	33.3	11.0	16.3	22.2	27.0	26.5	30.1	15.2
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.003	<0.0010	0.00055
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	***<0.0050***	***<0.0050***	<0.00050	<0.00050	<0.0005	<0.00050	0.00016
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	***<0.010***	***<0.010***	0.0015	0.0015	<0.002	<0.0010	0.00075
Total Iron (Fe)	mg/L	0.1	0.3	0.390	0.586	0.392	0.350	0.509	0.809	1.02	0.180	***0.85***	***0.92***	0.901	0.939	0.620	0.441	1.030
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	<0.0010	<0.00050	<0.001	<0.0010	0.000085
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.50	<0.50	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		0.584	1.06	1.77	2.13	1.48	2.69	3.68	3.28	1.95	2.99	3.93	5.04	4.43	2.60	2.56
Total Manganese (Mn)	mg/L	0.002		0.0110	0.0767	0.0623	0.0727	0.0832	0.0226	0.0278	0.0747	0.032	0.039	0.0519	0.0405	0.0430	0.0844	0.0350
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	0.000208
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.020	<0.0020	<0.0010	<0.003	<0.0020	0.00063
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Total Potassium (K)	mg/L	0.2		<0.50	<0.50	0.56	0.67	<1.0	0.63	0.81	0.58	<5.0	<5.0	0.98	<1.0	2.16	<0.50	0.68
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0016
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.70	-	-	-	-	-	-	7.50	5.15	-	5.91
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	***<0.0010***	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		1.47	0.57	1.03	1.32	0.77	1.39	1.70	1.58	1.10	1.60	1.99	2.27	1.66	1.27	1.39
Total Strontium (Sr)	mg/L	0.001		0.0079	0.0166	0.0243	0.0304	0.0286	0.0299	0.0395	0.0510	0.021	0.029	0.0417	0.0486	0.0400	0.0478	0.0290
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	-	<0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	***<0.0030***	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0064	0.0055	<0.0020	<0.0020	0.0074	0.0052	0.0040	<0.0020	<0.020	<0.020	0.0042	0.0025	0.0030	<0.0020	0.00292
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	***<0.10***	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	***<0.050***	<0.0050	<0.0010	<0.001	<0.0050	0.000058
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	0.0012	<0.0010	***<0.010***	***<0.010***	<0.0010	0.0008	<0.002	<0.0010	0.0009
Total Zinc (Zn)	mg/L	0.005	0.02	0.0030	<0.0030	<0.0030	0.0039	<0.0030	<0.0030	<0.0030	<0.0030	***<0.030***	***<0.030***	0.0079	0.0034	0.158	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a]Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c]The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.22: Inorganics for SW8

Inorganics				2012											2013				
Parameter				Q1		Q2			Q3			Q4			Q1	Q2	Q3		Q4
	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 28	April 18	July 23	23 Duplicate	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		111	12.1	27.7	41.8	3.4	69.8	87.9	67.6	62.8	77.6	95.4	111	124	49.4	50.1	77.5
Conductivity	umho/cm	1		209	47.9	77.7	108	48.3	137	173	158	131	157	193	219	236	111	110	148
Dissolved Chloride (Cl)	mg/L	1		0.38	0.18	0.21	0.25	<0.10	0.13	0.2	0.38	0.41	<2.0	0.31	0.38	0.69	0.28	0.17	0.33
Dissolved Sulphate (SO4)	mg/L	1		3.49	3.13	4.87	5.81	1.42	0.5	0.74	7	0.86	<2.0	1.5	1.69	1.75	3.8	3.75	0.76
Hardness (CaCO3)	mg/L	1.0		114	18.3	36.8	51.4	27	75.6	92.5	73.8	61.6	75.4	81.6	130	123	57.7	58.5	73
Nitrate (N)	mg/L	0.1		0.29	0.103	0.188	0.168	0.046	0.037	0.1	0.205	0.059	0.11	0.156	0.177	0.16	0.099	0.095	0.053
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.05	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.62	6.84	7.42	7.68	6.97	7.82	7.92	7.85	7.61	7.76	7.8	7.66	7.98	7.27	7.3	7.9
Total Ammonia-N	mg/L	0.05		0.224	<0.020	<0.020	0.022	<0.020	<0.020	<0.020	<0.020	<0.020	0.074	0.154	0.27	0.38	0.021	<0.020	0.031
Total Phosphorus	mg/L	0.002	a	0.0354	0.0347	0.0114	0.0283	0.0203	0.0091	0.0398	0.0982	<0.0050	<0.0050	0.0059	<0.0050	0.02	0.0155	0.0154	<0.0050
Total Suspended Solids	mg/L	1		137	35.4	3.1	8.3	49.5	3.5	53.2	15.4	5.2	<2.0	2.5	4.4	<10	2.4	<2.0	3.6
Acidity (as CaCO3)	mg/L	2		3.4	3.6	2.4	2.2	3.4	2.2	2.8	2.8	3	3.8	5.6	6.8	<5	3	4	4
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<0.5	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0056	<0.0020	<0.0020	0.0059	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.23: Dissolved metals for SW8

Dissolved Metals				2012										2013				
				Q1		Q2			Q3			Q4			Q1	Q2	Q3		Q4
Parameter	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 28	April 18	July 23	July 23 Duplicate	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		<0.0050	0.164	0.0916	0.0597	0.272	<0.0050	<0.0050	0.0187	<0.0050	<0.0050	<0.0050	<0.010	0.005	0.0483	0.0501	0.0041
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	0.0012	0.0012	0.0003
Dissolved Barium (Ba)	mg/L	0.002		0.031	<0.010	<0.010	<0.010	<0.010	0.021	0.021	0.010	0.014	0.017	0.019	0.036	0.032	0.011	0.011	0.017
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		39.0	5.61	11.2	15.7	8.45	26.4	32.4	22.3	21.7	26.4	28.5	40.7	43.0	17.8	18.0	25.6
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	<0.0010	<0.00010
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	0.0014	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	0.0165	0.0011	<0.00010
Dissolved Iron (Fe)	mg/L	0.1		0.244	0.309	0.281	0.375	0.559	0.203	0.160	0.486	0.173	0.320	0.046	0.156	0.110	0.684	0.717	0.351
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		3.99	1.04	2.16	2.96	1.46	2.34	2.79	4.42	1.83	2.31	2.52	3.69	3.83	3.23	3.28	2.23
Dissolved Manganese (Mn)	mg/L	0.002		0.708	0.0147	0.0181	0.0205	0.0187	0.0517	0.0869	0.0278	0.0630	0.128	0.218	0.6750	0.7900	0.007	0.007	0.115
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	0.000013	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.0010	0.00007
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	<0.0020	0.0003
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	<0.050	-	-	-	-	-	-	<0.050	-	-	-	-
Dissolved Potassium (K)	mg/L	0.2		0.89	0.64	0.66	0.84	<1.0	<0.50	0.67	0.91	0.59	0.50	0.60	<1.0	0.98	0.79	0.80	0.63
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0014
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	3.7	-	-	-	-	-	-	5.2	5.22	-	-	4.15
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		2.07	0.87	1.26	1.60	0.93	1.18	1.40	1.83	1.03	1.25	1.32	1.89	1.86	1.59	1.61	1.12
Dissolved Strontium (Sr)	mg/L	0.001		0.0553	0.0115	0.0215	0.0298	0.0183	0.0404	0.0494	0.0412	0.0282	0.0329	0.0395	0.0524	<0.005	0.0343	0.0343	0.0371
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	0.0027	<0.0020	<0.0020	0.0035	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	0.0025	0.0025	<0.00030
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	<0.0050	0.00007
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	0.001	0.001	<0.00010
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0120	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0038	0.0042	<0.0030	0.0047	<0.005	0.0109	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.24: Total metals for SW8

Total Metals				2012											2013				
Parameter				Q1		Q2			Q3			Q4			Q1	Q2	Q3		Q4
	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 28	April 18	July 23	23 Duplicate	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.0786	0.316	0.160	0.0846	0.500	0.0342	0.0587	0.0632	<0.050	0.0148	0.0249	0.034	0.076	0.0978	0.1010	0.018
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.0060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.003	0.0014	0.0014	0.0004
Total Barium (Ba)	mg/L	0.002		0.035	<0.010	<0.010	<0.010	0.012	0.020	0.025	<0.010	<0.10	0.017	0.021	0.041	0.033	0.012	0.012	0.018
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	<0.050	<0.050	<0.010	<0.01	<0.050	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	***<0.00017***	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		40.5	5.76	10.7	14.5	9.06	25.3	32.4	19.0	22.4	28.2	33.7	45.5	43.4	18.9	19.5	26.30
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	0.00113	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	<0.0010	0.00011
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	***<0.0050***	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00050	<0.00010
Total Copper (Cu)	mg/L	0.001	0.005	0.0011	0.0013	<0.0010	0.0011	0.0021	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	0.0012	<0.002	0.0011	0.0011	0.0004
Total Iron (Fe)	mg/L	0.1	0.3	1.04	0.474	0.482	0.518	1.16	0.475	0.566	0.752	0.540	0.861	0.760	1.420	2.180	1.170	1.190	0.548
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<0.10	<0.005	<0.050	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		4.22	0.865	2.15	2.76	1.45	2.20	2.76	3.67	1.79	2.24	2.71	4.06	3.93	3.17	3.19	2.17
Total Manganese (Mn)	mg/L	0.002		0.816	0.0177	0.0211	0.0220	0.0495	0.0600	0.203	0.0261	0.073	0.140	0.249	0.8290	0.9210	0.0296	0.0305	0.1200
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.0010	0.000069
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	<0.0020	0.00037
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-
Total Potassium (K)	mg/L	0.2		0.97	<0.50	0.62	0.78	<1.0	<0.50	0.68	0.84	<5.0	0.52	0.62	<1.0	1.05	0.82	0.82	0.651
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0015
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.4	-	-	-	-	-	-	5.9	5.51	-	-	3.9
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		2.20	0.82	1.24	1.50	0.86	1.13	1.28	1.50	<1.0	1.25	1.44	2.10	2.17	1.55	1.54	1.25
Total Strontium (Sr)	mg/L	0.001		0.0576	0.0097	0.0215	0.0280	0.0207	0.0413	0.0484	0.0367	0.029	0.0358	0.0422	0.0627	0.0600	0.0375	0.0382	0.0376
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0043	0.0112	0.0062	0.0029	0.0122	<0.0020	0.0037	0.0034	<0.020	<0.0020	<0.0020	<0.0020	0.0040	0.0047	0.0049	0.0007
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	<0.010	<0.010	<0.010	<0.002	<0.010	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	<0.0050	<0.0050	<0.0010	<0.001	<0.0050	<0.0050	0.000072
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	0.0010	0.0023	<0.0010	<0.0010	<0.0010	***<0.010***	<0.0010	<0.0010	<0.00050	<0.002	0.0015	0.0015	0.0002
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	<0.0030	<0.0030	0.0035	0.0036	<0.0030	<0.0030	<0.0030	***<0.030***	<0.0030	<0.0030	<0.0030	<0.005	<0.0030	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.25: Inorganics for SW9

Inorganics				2012										2013		
Parameter				Q1		Q2			Q3			Q4			Q2	Q3	Q4
	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 28	Dec. 19	April 16	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		162	27	72	126	43.3	108	154	67.6	69.8	121	148	127	147	107
Conductivity	umho/cm	1		276	72	153	248	96.8	205	282	158	146	235	285	243	284	196
Dissolved Chloride (Cl)	mg/L	1		0.47	0.23	0.27	0.34	<0.10	0.27	0.36	0.38	0.56	<2.0	0.46	0.82	0.39	0.48
Dissolved Sulphate (SO4)	mg/L	1		0.77	1.73	1.32	0.88	<0.30	0.59	0.53	7	1.16	<2.0	0.39	0.79	0.65	0.6
Hardness (CaCO3)	mg/L	1.0		156	32.2	75.6	129	51	118	152	73.8	70.5	114	120	128	154	95.6
Nitrate (N)	mg/L	0.1		0.124	0.161	0.094	0.072	<0.030	0.057	0.082	0.205	0.137	<0.10	0.104	0.19	0.088	0.101
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	7.91	7.17	7.59	7.96	7.08	7.69	8.02	7.85	7.41	7.83	7.89	7.94	7.89	7.91
Total Ammonia-N	mg/L	0.05		0.035	<0.020	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.026	0.038	0.09	0.02	0.031
Total Phosphorus	mg/L	0.002	a	0.0081	0.0149	0.0081	0.0064	0.0089	0.0081	0.0103	0.0982	0.0111	0.0114	0.0108	0.02	0.0148	0.0062
Total Suspended Solids	mg/L	1		40.4	8	2	<2.0	2	<2.0	10.4	15.4	3.1	3.4	3.2	21	2	3.4
Acidity (as CaCO3)	mg/L	2		3	5.4	4.6	2.8	4.4	3.8	3.8	2.8	4.8	4.4	5	<5	3	3
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<0.5	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0059	<0.0020	<0.0020	0.0059	<0.0020	<0.0020	0.0059	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.26: Dissolved metals for SW9

Dissolved Metals				2012											2013		
				Q1		Q2			Q3			Q4			Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 28	Dec. 19	April 16	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		-	0.103	0.0461	0.0199	0.150	0.0254	0.0084	0.0187	0.0493	0.0243	0.0069	0.0140	0.0110	0.0257
Dissolved Antimony (Sb)	mg/L	0.0005		-	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00022
Dissolved Barium (Ba)	mg/L	0.002		-	<0.010	0.014	0.021	0.012	0.020	0.023	0.010	0.012	0.020	0.022	0.022	0.024	0.016
Dissolved Beryllium (Be)	mg/L	0.0005		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		-	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		-	9.24	23.1	40.5	14.7	36.2	47.9	22.3	21.0	35.0	37.6	39.5	48.3	29.1
Dissolved Cesium (Ce)	mg/L	0.0001			-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		-	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00022
Dissolved Cobalt (Co)	mg/L	0.0005		-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00010
Dissolved Copper (Cu)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Iron (Fe)	mg/L	0.1		-	0.187	<0.020	<0.020	0.211	0.108	0.031	0.486	0.223	0.258	0.073	0.090	<0.020	0.120
Dissolved Lead (Pb)	mg/L	0.0005		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		-	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		-	2.21	4.34	6.83	3.59	6.68	7.99	4.42	4.42	6.49	6.43	7.14	8.10	5.55
Dissolved Manganese (Mn)	mg/L	0.002		-	0.0140	0.0236	0.0488	0.0179	0.0837	0.110	0.0278	0.209	0.166	0.150	0.119	0.052	0.098
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.000172
Dissolved Nickel (Ni)	mg/L	0.001		-	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.003	<0.0020	0.00035
Dissolved Phosphorus (P)	mg/L	0.05			-	-	-	<0.050	-	-	-	-	-	-	-	-	-
Dissolved Potassium (K)	mg/L	0.2		-	1.26	1.57	2.08	<1.0	1.49	1.77	0.91	1.21	1.50	1.61	1.88	1.71	1.30
Dissolved Rubidium (Rb)	mg/L	0.001			-	-	-	-	-	-	-	-	-	-	-	-	0.00
Dissolved Selenium (Se)	mg/L	0.002		-	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	5.2	-	-	-	-	-	-	6.35	-	6.61
Dissolved Silver (Ag)	mg/L	0.0001		-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		-	1.44	2.46	3.55	1.72	3.10	3.80	1.83	2.34	3.30	3.00	3.51	3.71	2.84
Dissolved Strontium (Sr)	mg/L	0.001		-	0.0180	0.0387	0.0672	0.0330	0.0633	0.0789	0.0412	0.0374	0.0556	0.0629	0.0570	0.0771	0.0523
Dissolved Tellurium (Te)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		-	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		-	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	0.00048
Dissolved Tungsten (W)	mg/L	0.001		-	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	0.000049
Dissolved Vanadium (V)	mg/L	0.0005		-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.00021
Dissolved Zinc (Zn)	mg/L	0.005		-	0.0062	<0.0030	<0.0030	0.0042	0.0045	0.0034	<0.0030	0.0048	<0.0030	<0.0030	<0.005	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		-	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.27: Total metals for SW9

Total Metals				2012											2013		
Parameter				Q1		Q2			Q3			Q4			Q2	Q3	Q4
	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 28	Dec. 19	April 16	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.399	0.141	0.0639	0.0353	0.142	0.0648	0.187	0.0632	0.0586	0.0913	0.0563	0.4180	0.4660	0.0420
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00027
Total Barium (Ba)	mg/L	0.002		0.029	<0.010	0.014	0.023	0.011	0.019	0.028	<0.010	0.012	0.021	0.025	0.031	0.033	0.018
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.02	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		49.4	9.61	22.9	39.6	14.8	35.5	49.6	19.0	21.5	38.6	45.0	40.4	47.1	30.2
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	0.0011	0.0003
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.00010
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0023	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.00078
Total Iron (Fe)	mg/L	0.1	0.3	0.797	0.315	0.122	0.137	0.316	0.242	0.482	0.752	0.414	0.476	0.296	0.730	0.686	0.267
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	0.000051
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		7.82	1.87	4.54	6.77	3.28	6.51	8.20	3.67	4.43	6.45	7.06	7.47	8.00	5.13
Total Manganese (Mn)	mg/L	0.002		0.189	0.0294	0.0283	0.0572	0.0261	0.0639	0.336	0.0261	0.0940	0.220	0.192	0.214	0.280	0.132
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.000158
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.003	<0.0020	0.00092
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Potassium (K)	mg/L	0.2		1.98	1.04	1.56	1.98	<1.0	1.45	1.90	0.84	1.26	1.62	1.69	2.17	1.82	1.39
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0018
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	4.3	-	-	-	-	-	-	8.06	-	6.22
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	0.000028
Total Sodium (Na)	mg/L	0.1		3.96	1.44	2.51	3.54	1.57	3.06	3.64	1.50	2.30	3.25	3.38	3.68	3.60	2.80
Total Strontium (Sr)	mg/L	0.001		0.0771	0.0162	0.0396	0.0671	0.0329	0.0651	0.0778	0.0367	0.0392	0.0615	0.0687	0.0650	0.0817	0.0514
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0198	0.0038	<0.0020	<0.0020	0.0029	0.0023	0.0097	0.0034	<0.0020	0.0041	0.0026	0.0210	0.0226	0.0015
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.001	<0.0050	0.000052
Total Vanadium (V)	mg/L	0.0005	0.006	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	0.0012	0.00038
Total Zinc (Zn)	mg/L	0.005	0.02	0.0039	<0.0030	<0.0030	<0.0030	0.0035	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.018	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.28: Inorganics for SW10

Inorganics				2012												2013			
				Q1		Q2			Q3			Q4				Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18		Jan 29	April 18	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		74.1	14.8	36.2	57.2	18.4	37.1	67.4	73.1	41	61	69.8		75.2	74	56.7	51
Conductivity	umho/cm	1		144	50	91	131	47.5	79.8	134	154	90	128	144		150	150	118	103
Dissolved Chloride (Cl)	mg/L	1		0.23	0.24	0.2	0.21	<0.10	0.18	0.27	0.27	0.4	<2.0	0.24		0.38	0.5	0.18	0.29
Dissolved Sulphate (SO4)	mg/L	1		2.84	3.88	3.56	2.87	0.83	1	1.75	1.88	1.93	<2.0	2.17		2.56	2.87	1.49	1.44
Hardness (CaCO3)	mg/L	1.0		72.9	21.5	43.5	62.8	27	45.3	70.9	69.1	43.9	60	58.3		86	79.3	61.1	49.1
Nitrate (N)	mg/L	0.1		0.057	0.078	0.056	0.064	<0.030	0.047	0.071	0.051	0.06	<0.10	0.053		0.066	0.12	0.045	0.058
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020		<0.020	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	7.55	6.94	7.52	7.83	6.75	7.31	7.54	7.68	7.33	7.53	7.61		7.58	7.72	7.38	7.57
Total Ammonia-N	mg/L	0.05		0.037	<0.020	<0.020	<0.020	<0.020	<0.020	0.022	0.021	0.027	0.036	0.044		0.034	<0.02	0.039	0.047
Total Phosphorus	mg/L	0.002	a	0.0979	0.0211	0.0051	0.0057	0.0111	0.0106	0.0908	0.0055	0.0142	0.0062	0.0057		<0.0050	0.03	0.0066	0.0118
Total Suspended Solids	mg/L	1		58.6	16.1	<2.0	<2.0	31.5	<2.0	403	54.4	4.8	<2.0	<2.0		<2.0	<10	<2.0	17
Acidity (as CaCO3)	mg/L	2		2.6	3.8	3	2.4	4.2	3	3.6	2.8	5	3.6	6.4		8.2	<5	5	5
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0		<2.0	0.94	<2.0	<2.09
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0058	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020		<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050	<0.002	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.29: Dissolved metals for SW10

Dissolved Metals				2012											2013			
				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 18	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.0101	0.147	0.0600	0.0283	0.331	0.136	0.0256	0.0126	0.0900	0.0346	0.0128	0.0150	0.0210	0.0368	0.0637
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00054
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	0.011	0.012	0.012	0.013	0.011	<0.010	0.011	0.011	0.0116	0.011	0.012	0.011
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		23.7	6.86	14.0	20.3	08.81	14.6	23.1	22.1	14.1	19.2	18.7	26.2	25.6	19.7	15.9
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		0.0013	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	0.00059
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	0.0003
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Iron (Fe)	mg/L	0.1		0.421	0.544	0.488	0.728	0.964	1.15	1.62	0.715	1.15	0.739	0.451	0.50	0.54	0.749	1.36
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	0.000089
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		3.35	1.06	2.11	2.95	1.28	2.13	3.21	3.37	2.13	2.90	2.82	3.77	3.73	2.86	2.27
Dissolved Manganese (Mn)	mg/L	0.002		0.130	0.0249	0.0406	0.0528	0.0237	0.0502	0.0961	0.0872	0.108	0.153	0.128	0.144	0.089	0.008	0.149
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000234
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	0.00033
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	<0.050	-	-	-	-	-	-	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		0.71	0.55	0.58	0.78	<1.0	<0.50	0.73	0.66	<0.50	0.59	0.64	<1.0	0.8	0.57	0.57
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0014
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	4.6	-	-	-	-	-	-	7.2	6.68	-	7.27
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		1.97	1.01	1.46	1.83	1.00	1.40	1.93	1.80	1.45	1.73	1.56	2.01	1.98	1.75	1.55
Dissolved Strontium (Sr)	mg/L	0.001		0.0372	0.0133	0.0233	0.0335	0.0194	0.0275	0.0392	0.0364	0.0241	0.0306	0.0319	0.0375	0.0350	0.0342	0.0290
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	0.0023	<0.0020	<0.0020	0.0038	0.0025	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	0.00129
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	0.000023
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00064	<0.002	<0.0010	0.00075
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0066	0.0045	<0.0030	0.0037	<0.0030	<0.0030	<0.0030	0.0052	0.0045	<0.0030	<0.0030	0.0110	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.30: Total metals for SW10

Total Metals				2012											2013			
				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 26	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 18	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.144	0.189	0.0688	0.0378	0.335	0.155	1.77	0.0431	0.104	0.0563	0.0221	0.030	0.032	0.0718	0.1050
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00061
Total Barium (Ba)	mg/L	0.002		0.012	<0.010	<0.010	0.011	0.012	0.012	0.033	0.012	<0.010	0.011	0.011	0.0182	0.01	0.013	0.013
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	0.000057	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		25.0	7.50	13.8	19.3	09.1	14.4	25.2	20.3	14.5	20.7	22.4	28.1	25.7	21.3	15.6
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	0.00083	<0.0010	0.0048	<0.0010	<0.0010	<0.0010	<0.0010	0.00062	<0.003	<0.0010	0.00068
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00162	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	0.00035
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0028	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.002	<0.0010	0.00028
Total Iron (Fe)	mg/L	0.1	0.3	1.97	0.862	0.685	0.790	1.330	1.61	8.71	1.23	1.54	1.28	0.854	1.13	0.94	1.52	1.720
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	0.000087
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		3.60	0.905	2.19	2.84	1.24	2.04	3.68	3.03	2.13	2.83	3.04	3.91	3.88	2.73	2.35
Total Manganese (Mn)	mg/L	0.002		0.164	0.0302	0.0413	0.0463	0.0300	0.0507	0.261	0.0894	0.123	0.171	0.145	0.173	0.121	0.045	0.153
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000196
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	0.0011	<0.003	<0.0020	0.00036
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Total Potassium (K)	mg/L	0.2		0.78	<0.50	0.55	0.71	<1.0	<0.50	0.88	0.67	<0.50	0.65	0.66	<1.0	1.18	0.58	0.59
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.9	-	-	-	-	-	-	7.7	6.7	-	6.59
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		2.06	1.00	1.48	1.76	0.96	1.36	1.93	1.58	1.43	1.75	1.77	2.15	2.25	1.65	1.48
Total Strontium (Sr)	mg/L	0.001		0.0382	0.0119	0.0241	0.0328	0.0206	0.0284	0.0449	0.0340	0.0254	0.0329	0.0346	0.0436	0.0420	0.0366	0.0276
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	0.07	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0089	0.0049	<0.0020	<0.0020	0.0059	0.0035	0.0921	0.0021	0.0030	0.0026	<0.0020	<0.0020	<0.002	0.0026	0.00359
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.001	<0.0050	0.000029
Total Vanadium (V)	mg/L	0.0005	0.006	0.0014	<0.0010	<0.0010	<0.0010	0.0011	0.0014	0.0096	<0.0010	0.0011	<0.0010	<0.0010	0.0009	<0.002	<0.0010	0.00119
Total Zinc (Zn)	mg/L	0.005	0.02	0.0042	<0.0030	<0.0030	0.0038	0.0051	<0.0030	0.0146	<0.0030	<0.0030	0.0039	<0.0030	<0.0030	<0.005	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	0.0058	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.31: Inorganics for SW11

Inorganics				2012							2013	
				Q2			Q3		Q4		Q2	Q4
Parameter	Units	MDL	PWQO	April 27	May 15	June 20	July 19	Aug. 22	Nov. 28	Dec. 19	April 18	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		6	10.2	<5.0	<5.0	9.4	12.2	20.3	<5	<5.0
Conductivity	umho/cm	1		37.4	42	32.7	33.1	36.1	35.2	60.8	100	30.1
Dissolved Chloride (Cl)	mg/L	1		0.38	0.44	<0.10	0.11	0.16	<2.0	1.44	7.26	0.5
Dissolved Sulphate (SO4)	mg/L	1		3.47	1.72	0.38	<0.30	<0.30	<2.0	2.29	8.32	0.30
Hardness (CaCO3)	mg/L	1.0		16.5	24.4	18	18.9	25.3	19.3	27.1	38.8	15.5
Nitrate (N)	mg/L	0.1		0.04	<0.030	0.087	<0.030	<0.030	0.12	0.1	0.49	0.063
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.05	<0.020
pH	pH		6.5-8.5	5.76	6.36	5.2	5.06	5.94	5.63	6.46	6.61	5.36
Total Ammonia-N	mg/L	0.05		<0.020	0.02	<0.020	<0.020	0.032	<0.020	0.108	0.26	<0.020
Total Phosphorus	mg/L	0.002	a	0.0312	0.0231	0.0142	0.0158	0.0255	0.0204	0.0454	0.1	0.0245
Total Suspended Solids	mg/L	1		36.2	9.2	8.6	2.4	31.9	<2.0	88.4	<10	<2.0
Acidity (as CaCO3)	mg/L	2		9.6	5.2	14.6	16	13.6	12.2	20	<5	16
Oil and Grease	mg/L	2		-	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<0.5	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	-	<0.0050
Cyanide, Total	mg/L	0.002		<0.0020	0.0066	0.0066	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.32: Dissolved metals for SW11

Dissolved Metals				2012							2013	
				Q2			Q3		Q4		Q2	Q4
Parameter	Units	MDL	PWQO	April 27	May 15	June 20	July 19	Aug. 22	Nov. 28	Dec. 19	April 18	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.309	0.487	0.546	0.511	0.483	0.421	0.354	0.349	0.350
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.0050	<0.00060	<0.0060	<0.00060	<0.00060	<0.003	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	0.0011	0.0010	0.0012	<0.010	<0.0010	<0.0010	<0.003	0.0009
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	0.012	0.00672
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.002	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.001	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.50	<0.050	<0.050	<0.01	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		0.000027	0.000032	<0.000090	0.00004	<0.00017	0.000028	0.000030	<0.0001	0.000026
Dissolved Calcium (Ca)	mg/L	0.2		4.88	7.29	5.17	05.9	7.9	5.52	7.62	11.40	4.41
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	0.0014	<0.00050	0.0011	<0.010	<0.0010	<0.0010	<0.003	0.00093
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	0.00059	<0.0050	<0.00050	0.00059	0.00080	0.00043
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	0.0011	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	0.003	0.00013
Dissolved Iron (Fe)	mg/L	0.1		0.626	0.881	1.25	1.720	1.79	1.26	1.54	1.58	1.47
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.001	0.000433
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050		<0.050	<0.50	<0.050	<0.050	<0.005	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		1.04	1.50	1.13	1.17	1.34	1.34	1.95	2.51	1.09
Dissolved Manganese (Mn)	mg/L	0.002		0.0325	0.0297	0.0309	0.0496	0.053	0.0382	0.0627	0.0830	0.0389
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.002	<0.000050
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.0020	<0.0020	<0.003	0.0009
Dissolved Phosphorus (P)	mg/L	0.05		-	-	<0.050	-	-	-	-	-	-
Dissolved Potassium (K)	mg/L	0.2		<0.50	<0.50	<1.0	<0.50	<5.0	<0.50	<0.50	1.67	0.086
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	<0.0010
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	0.00054	<0.0010	<0.010	<0.0010	<0.0010	<0.004	0.00017
Dissolved Silicon (Si)	mg/L	0.05		-	-	3.8	-	-	-	-	10.2	7.1
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.0010	<0.00010	<0.00010	<0.0001	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		1.01	1.32	0.93	0.99	1.1	1.26	1.57	3.32	1.10
Dissolved Strontium (Sr)	mg/L	0.001		0.0110	0.0153	0.0133	0.0161	0.016	0.0127	0.0173	0.0300	0.0117
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	<0.0010	<0.010	<0.0010	<0.0010	<0.05	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.0030	<0.00030	<0.00030	<0.0003	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.0010	<0.0010	<0.002	0.00011
Dissolved Titanium (Ti)	mg/L	0.005		0.0050	0.0096	0.0091	0.0108	<0.020	0.0092	0.0102	0.0130	0.0077
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.10	<0.010	<0.010	<0.002	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.002	0.00002
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	0.0013	<0.0010	0.0013	<0.010	<0.0010	<0.0010	<0.002	0.00064
Dissolved Zinc (Zn)	mg/L	0.005		0.0108	0.0126	0.0087	0.0096	<0.030	0.0041	0.0048	0.0090	0.0051
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0010	<0.010	<0.0010	<0.0010	-	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.33: Total metals for SW11

Total Metals				2012							2013	
				Q2			Q3		Q4		Q2	Q4
Parameter	Units	MDL	PWQO	April 27	May 15	June 20	July 19	Aug. 22	Nov. 28	Dec. 19	April 18	Oct 30
Total Aluminum (Al)	mg/L	0.005		1.21	0.654	0.885	0.5390	0.933	0.449	0.740	0.384	0.350
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.003	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	0.0011	0.0011	0.0014	0.0015	<0.0010	<0.0010	<0.003	0.0010
Total Barium (Ba)	mg/L	0.002		0.013	<0.010	0.011	<0.010	0.013	<0.010	0.011	0.011	0.007
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.01	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	0.000031	0.000050	<0.000090	0.000036	0.000034	0.000030	0.000038	<0.0001	0.000027
Total Calcium (Ca)	mg/L	0.2		5.27	6.62	5.36	05.9	7.39	5.73	8.86	16.30	4.50
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		0.0024	0.0016	0.00162	0.0013	0.0021	<0.0010	0.0014	<0.003	0.00101
Total Cobalt (Co)	mg/L	0.0005	0.0009	0.00073	<0.00050	0.00061	0.00058	0.00087	<0.00050	0.00074	0.00110	0.00043
Total Copper (Cu)	mg/L	0.001	0.005	0.0020	0.0015	0.0013	<0.0010	0.0014	<0.0010	<0.0010	0.002	0.0003
Total Iron (Fe)	mg/L	0.1	0.3	1.50	1.17	1.84	1.870	2.82	1.48	2.02	1.70	1.49
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	0.000543
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.005	<0.0050
Total Magnesium (Mg)	mg/L	0.05		1.54	1.52	1.22	1.18	1.62	1.28	2.13	2.96	0.97
Total Manganese (Mn)	mg/L	0.002		0.0437	0.0328	0.0367	0.0472	0.0585	0.0411	0.0693	0.1290	0.0371
Total Mercury (Hg)	mg/L	0.00005		<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.000050
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	<0.0020	<0.003	0.0009
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-
Total Potassium (K)	mg/L	0.2		<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	4.44	0.075
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	<0.0010
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.004	0.00013
Total Silicon (Si)	mg/L	0.05		-	-	4.1	-	-	-	-	10.2	6.5
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.000010
Total Sodium (Na)	mg/L	0.1		1.09	1.24	0.88	0.95	0.98	1.17	1.70	3.43	1.04
Total Strontium (Sr)	mg/L	0.001		0.0134	0.0155	0.0150	0.0156	0.0175	0.0141	0.0192	0.0390	0.0114
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.05	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.003	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0433	0.0175	0.0312	0.013	0.0344	0.0121	0.0266	0.0130	0.0084
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.001	0.000021
Total Vanadium (V)	mg/L	0.0005	0.006	0.0025	0.0015	0.0017	0.0012	0.0021	<0.0010	0.0016	<0.002	0.0009
Total Zinc (Zn)	mg/L	0.005	0.02	0.0053	0.0070	0.0060	0.0051	0.0072	0.0064	0.0083	0.0510	0.0059
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.34: Inorganics for TL1A

Inorganics				2012											2013				
Parameter				Q1	Q2				Q3			Q4			Q1		Q2	Q3	Q4
	Units	MDL	PWQO	March (Apr 4)	April 26	26 Duplicate	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	29 Duplicate	April 17	July 23	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		10.7	13.7	13.7	22.3	22.3	40.9	61.1	62.9	20.2	27.3	42.8	56.4	57.2	56	53.3	27.3
Conductivity	umho/cm	1		43.2	46.3	45	58.6	55.6	86.7	123	131	54	70.3	102	135	136	121	111	57.1
Dissolved Chloride (Cl)	mg/L	1		0.44	0.44	0.43	0.26	0.19	0.32	0.15	0.15	0.87	<2.0	1.56	3.1	2.68	1.87	0.41	0.71
Dissolved Sulphate (SO4)	mg/L	1		3.6	2.94	2.88	1.54	0.44	1.23	<0.30	<0.30	1.78	2.2	1.77	5.58	4.57	2.28	<0.30	<0.30
Hardness (CaCO3)	mg/L	1.0		17.6	19.5	19.3	27	31	49.6	65.1	64.8	26.5	34.1	40.2	75	71	59.9	59.7	27.3
Nitrate (N)	mg/L	0.1		0.109	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.07	<0.10	0.053	0.056	<0.030	0.08	<0.030	0.043
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	<0.020	<0.020	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	6.69	6.74	6.8	7.07	6.74	7.03	7.08	7.16	6.70	6.70	6.76	6.77	6.83	7.16	6.99	7.06
Total Ammonia-N	mg/L	0.05		<0.020	<0.020	<0.020	0.027	<0.020	0.089	0.085	0.081	<0.020	0.029	0.23	0.552	0.545	0.36	0.185	0.044
Total Phosphorus	mg/L	0.002	a	0.0518	0.0079	0.0074	0.0094	0.0366	0.0064	0.0128	0.0055	0.024	0.0265	0.0306	0.0636	0.0574	0.06	0.0208	0.0194
Total Suspended Solids	mg/L	1		8	3.3	<2.0	<2.0	5.3	3.7	10.2	4.6	5.7	2.2	5.2	12	11.7	<10	2.9	8
Acidity (as CaCO3)	mg/L	2		5	4.8	5.2	2.2	4.8	5.8	12	6.8	5.4	5.4	10.4	22.4	21	<5	6	7
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0065	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.35: Dissolved metals for TL1A

Dissolved Metals				2012											2013				
				Q1	Q2				Q3			Q4			Q1		Q2	Q3	Q4
Parameter	Units	MDL	PWQO	March (Apr 4)	April 26	26 Duplicate	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	29 Duplicate	April 17	July 23	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.128	0.0850	0.0825	0.0696	0.187	0.0611	0.0479	0.0175	0.110	0.111	0.0950	0.176	0.183	0.042	0.055	0.0580
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	0.0011	<0.003	<0.0010	0.0005
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	0.012	0.014	<0.010	<0.010	<0.010	0.011	0.02	0.0199	0.013	0.014	0.007
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	0.000037	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000090	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		4.98	05.38	05.45	07.67	08.81	14.30	19.10	18.40	07.52	09.72	11.10	19.50	19.20	16.60	17.20	07.82
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.003	<0.0010	0.0003
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	0.00051	0.00272	0.00407	0.00217	<0.00050	<0.00050	0.00296	0.00593	0.00601	0.0026	0.00458	0.0008
Dissolved Copper (Cu)	mg/L	0.001		0.0014	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0011	<0.002	0.0011	0.00021
Dissolved Iron (Fe)	mg/L	0.1		0.231	0.170	0.094	0.159	0.740	1.640	2.98	0.849	0.818	1.19	2.510	6.670	6.640	2.690	1.79	1.640
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.001	<0.0010	0.000052
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		1.25	1.47	1.37	1.91	2.14	3.38	4.25	4.61	1.87	2.39	3.05	4.60	4.65	4.49	4.10	1.86
Dissolved Manganese (Mn)	mg/L	0.002		0.0076	0.0253	0.0246	0.0561	0.116	1.0600	1.84	1.26	0.0359	0.0950	0.848	1.76	1.76	0.86	1.83	0.235
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.00050	<0.002	<0.0010	0.000058
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0012	0.0012	<0.003	<0.0020	0.00052
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	<0.050	-	-	-	-	-	-	<0.050	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		0.53	0.52	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<0.50	0.66	<1.0	<1.0	1.23	<0.50	0.34
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00110
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	3.5	-	-	-	-	-	-	7.4	7.5	6.35	-	4.25
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		0.96	1.16	1.07	1.36	1.05	1.22	1.34	1.42	1.19	1.40	1.75	2.34	2.35	2.35	1.28	1.19
Dissolved Strontium (Sr)	mg/L	0.001		0.0105	0.0122	0.0121	0.0175	0.0216	0.0335	0.0453	0.0412	0.0160	0.0213	0.0275	0.0407	0.0410	0.0390	0.0387	0.0172
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		0.0021	<0.0020	<0.0020	<0.0020	0.0037	<0.0020	<0.0020	<0.0020	0.0026	0.0026	0.0032	0.0059	0.0059	<0.002	<0.0020	0.00122
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.0010	<0.002	<0.0050	0.000012
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00197	0.00199	<0.002	<0.0010	0.00076
Dissolved Zinc (Zn)	mg/L	0.005		0.0130	0.0057	0.0059	0.0053	0.0032	<0.0030	<0.0030	<0.0030	0.0055	0.0061	0.0054	0.0084	0.0070	<0.005	0.0031	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.36: Total metals for TL1

Total Metals				2012											2013			
Parameter				Q1	Q2				Q3			Q4			Q1		Q2	Q3	Q4
	Units	MDL	PWQO	March (Apr 4)	April 26	26 Duplicate	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	29 Duplicate	April 17	July 23	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.222	0.112	0.118	0.110	0.211	0.0821	0.0540	0.046	0.239	0.156	0.2490	0.428	0.453	0.167	0.081	0.0465
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.0060	<0.0060	<0.00060	<0.00050	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.0011	<0.0010	***<0.010***	***<0.010***	<0.0010	0.0014	0.0013	<0.003	<0.0010	0.00037
Total Barium (Ba)	mg/L	0.002		<0.010	<0.010	<0.010	<0.010	<0.010	0.013	0.015	<0.010	<0.10	<0.10	0.013	0.0258	0.0247	0.012	0.016	0.005
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	***<0.50***	<0.050	<0.010	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	0.000020	<0.000090	<0.000017	<0.000017	<0.000017	***<0.00017***	***<0.00017***	0.000022	<0.000090	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		4.10	05.53	05.30	07.65	09.09	14.30	19.10	16.00	09.00	09.60	13.40	21.50	20.30	18.00	16.70	07.66
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	0.00051	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	0.00123	0.00129	<0.003	<0.0010	0.00024
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	0.00054	0.00279	0.00411	0.00216	***<0.0050***	***<0.0050***	0.00303	0.00723	0.00691	0.0027	0.00532	0.00047
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	<0.0010	0.0013	0.0016	<0.002	<0.0010	<0.00010
Total Iron (Fe)	mg/L	0.1	0.3	0.353	0.286	0.265	0.383	1.130	2.250	3.97	1.990	1.82	1.79	3.910	10.40	9.81	4.08	3.34	0.831
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	<0.0010	<0.00050	<0.00050	<0.001	<0.0010	<0.000050
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.50	<0.50	<0.050	<0.10	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		1.09	1.53	1.41	1.96	2.20	3.30	4.23	4.05	2.23	2.44	3.29	5.13	4.95	4.64	3.69	1.99
Total Manganese (Mn)	mg/L	0.002		0.0075	0.0302	0.0276	0.0643	0.137	1.030	1.86	1.23	0.085	0.095	0.93	2.140	2.020	0.912	2.020	0.15
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.00050	<0.002	<0.0010	0.000063
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.020	<0.0020	0.0015	0.0015	<0.003	<0.0020	0.00048
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	0.09	0.091	-	-	-
Total Potassium (K)	mg/L	0.2		<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<5.0	<5.0	0.63	<1.0	<1.0	1.44	<0.50	0.32
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.001
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	0.00052	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00040	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.3	-	-	-	-	-	-	8.70	8.30	6.38	-	4.52
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	***<0.0010***	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		0.96	1.16	1.07	1.35	1.09	1.23	1.21	1.21	1.30	1.40	1.79	2.61	2.49	2.74	1.13	1.17
Total Strontium (Sr)	mg/L	0.001		0.0096	0.0130	0.0123	0.0179	0.0204	0.0357	0.0444	0.0371	0.019	0.020	0.0301	0.051	0.048	0.043	0.039	0.0182
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	-	-	0.06	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	***<0.0030***	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0063	0.0022	0.0024	0.0024	0.0050	0.0023	<0.0020	<0.0020	<0.020	<0.020	0.0088	0.0147	0.0164	0.006	0.0027	0.0008
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	***<0.10***	<0.010	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	***<0.050***	<0.0050	<0.0010	<0.0010	<0.001	<0.0050	0.000011
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	0.0015	0.00362	0.0034	<0.002	0.0011	0.00033
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0031	<0.0030	<0.0030	***<0.030***	***<0.030***	0.0062	0.0045	0.0051	0.007	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0040	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.37: Inorganics for TL2A

Inorganics				2012							
				Q1	Q2			Q3		Q4	
Parameter	Units	MDL	PWQO	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Oct. 31	31 Dupllicate
Alkalinity (Total as CaCO3)	mg/L	1		33	43.4	60.4	50.2	75	78.6	63.5	62.9
Conductivity	umho/cm	1		88	107	138	114	152	159	142	141
Dissolved Chloride (Cl)	mg/L	1		0.5	0.5	0.42	0.15	0.18	0.27	0.93	0.94
Dissolved Sulphate (SO4)	mg/L	1		3.12	3.08	2.40	0.68	<0.30	1.18	2.08	2.08
Hardness (CaCO3)	mg/L	1.0		37.1	51.7	71.8	63	89.7	84	66.4	67.5
Nitrate (N)	mg/L	0.1		<0.030	<0.030	0.034	<0.030	<0.030	<0.030	<0.030	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
pH	pH		6.5-8.5	7.22	7.37	7.54	6.95	7.5	7.65	7.12	7.13
Total Ammonia-N	mg/L	0.05		0.021	<0.020	0.029	<0.020	0.044	<0.020	0.04	0.033
Total Phosphorus	mg/L	0.002	a	0.094	0.0404	0.133	0.036	0.0379	0.0215	0.0423	0.0483
Total Suspended Solids	mg/L	1		122	59.8	252	4.9	5.2	2.8	6.9	14.4
Acidity (as CaCO3)	mg/L	2		5.4	6.2	3.8	7.2	3.8	3.6	7	8
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	0.0063	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.

Italisized Values have detection limits above the PWQO

Table 3.38: Dissolved metals for TL2A

Dissolved Metals				2012							
				Q1	Q2			Q3		Q4	
Parameter	Units	MDL	PWQO	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Oct. 31	31 Dupllicate
Dissolved Aluminum (Al)	mg/L	0.005		0.138	0.0884	0.0502	0.112	0.0195	0.0103	0.0678	0.0705
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	0.0012	0.0012	0.0011	<0.0010	<0.0010	<0.0010
Dissolved Barium (Ba)	mg/L	0.002		<0.010	<0.010	0.012	0.013	<0.010	<0.010	0.012	0.012
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017
Dissolved Calcium (Ca)	mg/L	0.2		10.0	13.7	19.6	17.1	24.6	23.0	17.5	17.8
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	0.0012	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Copper (Cu)	mg/L	0.001		0.0015	0.0012	0.0021	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Iron (Fe)	mg/L	0.1		0.310	0.303	0.278	0.494	0.459	0.378	0.421	0.413
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050
Dissolved Magnesium (Mg)	mg/L	0.05		2.94	4.25	5.59	4.90	6.87	6.45	5.48	5.63
Dissolved Manganese (Mn)	mg/L	0.002		0.0226	0.0190	0.188	0.0772	0.0257	0.0375	0.0431	0.0406
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	<0.050	-	-	-	-
Dissolved Potassium (K)	mg/L	0.2		1.98	2.37	2.95	1.3	1.96	1.96	2.92	2.98
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	2.9	-	-	-	-
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Sodium (Na)	mg/L	0.1		1.72	2.48	3.04	2.15	3.17	3.29	2.69	2.77
Dissolved Strontium (Sr)	mg/L	0.001		0.0207	0.0299	0.0403	0.0391	0.0568	0.0545	0.0402	0.0401
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Titanium (Ti)	mg/L	0.005		0.0028	<0.0020	<0.0020	0.0023	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Zinc (Zn)	mg/L	0.005		0.0077	0.0041	<0.0030	<0.0030	0.0033	0.0047	<0.0030	<0.0030
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.39: Total metals for TL2A

Total Metals				2012							
				Q1	Q2			Q3		Q4	
Parameter	Units	MDL	PWQO	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Oct. 31	31 Dupllicate
Total Aluminum (Al)	mg/L	0.005		1.77	0.390	1.27	0.197	0.1120	0.0773	0.243	0.588
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.0060	<0.0060
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	0.0012	0.0011	0.0012	<0.0010	***<0.010***	***<0.010***
Total Barium (Ba)	mg/L	0.002		0.019	0.014	0.021	0.014	0.010	<0.010	<0.10	<0.10
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	***<0.50***
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	0.000019	<0.000017	0.000039	<0.000090	<0.000017	<0.000017	***<0.00017***	***<0.00017***
Total Calcium (Ca)	mg/L	0.2		9.10	14.4	18.2	16.4	24.0	22.7	19.0	20.7
Total Chromium (Cr)	mg/L	0.005		0.0034	0.0013	0.0028	<0.00050	<0.0010	<0.0010	<0.010	<0.010
Total Cobalt (Co)	mg/L	0.0005	0.0009	0.00103	<0.00050	0.00095	0.00058	<0.00050	<0.00050	***<0.0050***	***<0.0050***
Total Copper (Cu)	mg/L	0.001	0.005	0.0074	0.0022	0.0087	0.0011	<0.0010	<0.0010	***<0.010***	***<0.010***
Total Iron (Fe)	mg/L	0.1	0.3	2.00	0.735	1.42	1.040	0.891	0.615	0.76	1.11
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	0.0018	<0.0010	0.0043	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.50	<0.50
Total Magnesium (Mg)	mg/L	0.05		3.14	4.72	5.61	4.85	6.49	6.29	6.05	6.64
Total Manganese (Mn)	mg/L	0.002		0.0623	0.0506	0.150	0.1940	0.1460	0.0944	0.056	0.068
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
Total Nickel (Ni)	mg/L	0.001	0.025	0.0027	<0.0020	0.0027	<0.0020	<0.0020	<0.0020	<0.020	<0.020
Total Potassium (K)	mg/L	0.2		2.27	2.50	3.00	1.3	1.88	1.92	<5.0	<5.0
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.010	<0.010
Total Silicon (Si)	mg/L	0.05		-	-	-	2.7	-	-	-	-
Total Silver (Ag)	mg/L	0.0001	0.0001	0.00083	<0.00010	0.00072	<0.00010	<0.00010	<0.00010	***<0.0010***	***<0.0010***
Total Sodium (Na)	mg/L	0.1		1.49	2.63	2.96	2.11	3.13	3.00	2.9	3.1
Total Strontium (Sr)	mg/L	0.001		0.0227	0.0312	0.0408	0.0373	0.0594	0.0526	0.041	0.047
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.010	<0.010
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	***<0.0030***
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010
Total Titanium (Ti)	mg/L	0.005		0.0724	0.0119	0.0420	0.0068	0.0046	0.0047	<0.020	0.021
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	***<0.10***
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	***<0.050***
Total Vanadium (V)	mg/L	0.0005	0.006	0.0032	0.0013	0.0024	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***
Total Zinc (Zn)	mg/L	0.005	0.02	0.0112	0.0031	0.0153	0.0039	<0.0030	<0.0030	***<0.030***	***<0.030***
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.010	<0.010

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L

Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L

Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L

The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L

The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.40: Inorganics for TL3

Inorganics				2012										2013			
				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 24	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		114	20.7	33.8	56.7	34.5	53.2	90.3	130	33.8	47.4	73.6	102	87	68.9	57.8
Conductivity	umho/cm	1		230	64.3	89.3	136	81.5	111	181	270	82.9	108	165	214	212	147	120
Dissolved Chloride (Cl)	mg/L	1		3.5	0.86	1.3	1.67	0.44	0.58	1.25	2.09	1.37	<2.0	2.55	2.75	10.4	1.54	1.9
Dissolved Sulphate (SO4)	mg/L	1		6.36	3.57	3.71	3.1	0.66	0.6	0.56	0.81	2.5	2.2	3.01	3.29	5.57	0.35	0.87
Hardness (CaCO3)	mg/L	1.0		116	28.1	41.3	64.7	44	66	96.5	131	40.8	53.4	67.6	133	104	82.7	59
Nitrate (N)	mg/L	0.1		0.341	0.135	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	0.064	<0.10	0.135	0.159	0.27	<0.030	<0.030
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	0.037	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	7.31	7.16	7.42	7.7	7.16	7.48	7.47	7.4	7.1	7.2	7.49	7.63	7.81	7.27	7.59
Total Ammonia-N	mg/L	0.05		0.187	<0.020	<0.020	<0.020	0.029	<0.020	<0.020	<0.020	<0.020	0.021	0.147	0.32	0.23	0.021	0..020
Total Phosphorus	mg/L	0.002	a	0.0437	0.0534	0.0103	0.0123	0.0222	0.0244	0.0311	0.0313	0.0225	0.106	0.042	0.0529	0.06	0.0272	0.0162
Total Suspended Solids	mg/L	1		9.2	44.6	2.3	<2.0	10.7	4.3	14.4	57	6.9	97.6	16.4	6.3	23	7.8	8
Acidity (as CaCO3)	mg/L	2		3.8	2.4	2.8	2.4	3	2.8	7.6	9	4.4	6.4	6	7.8	<5	5	8
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	0.65	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0055	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	0..0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.002	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.41: Dissolved metals for TL3

Dissolved Metals				2012											2013			
				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 24	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		0.0231	0.295	0.0587	0.0231	0.122	0.0254	0.0126	0.0079	0.0803	0.0678	0.0461	0.047	0.019	0.0364	0.0365
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00049
Dissolved Barium (Ba)	mg/L	0.002		0.015	<0.010	<0.010	<0.010	<0.010	<0.010	0.011	0.012	<0.010	<0.010	0.011	0.012	0.014	<0.010	0.006
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	0.000021	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		31.9	07.7	11.2	17.9	12.4	18.6	27.7	36.0	11.3	15.0	18.4	33.7	28.7	23.5	16.4
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	0.0003
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	0.0001
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	0.0017	0.0019	0.0013	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	0.0010	<0.0010	0.001	<0.002	0.0014	0.00022
Dissolved Iron (Fe)	mg/L	0.1		0.808	0.391	0.099	0.023	0.491	0.769	0.293	0.266	0.541	0.796	1.330	3.180	0.780	0.389	0.535
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	0.000059
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		8.86	2.12	3.28	4.82	3.20	4.76	6.64	10.0	3.04	3.88	5.25	8.67	7.77	5.84	04.4
Dissolved Manganese (Mn)	mg/L	0.002		0.166	0.0261	0.0179	0.0209	0.0179	0.0255	0.175	0.379	0.0228	0.0526	0.108	0.1970	0.0910	0.045	0.027
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.00010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000141
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	0.0007
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		2.09	0.85	1.11	1.26	<1.0	0.82	1.00	1.26	0.87	0.88	1.32	1.60	2.13	0.99	0.92
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	3.7	-	-	-	-	-	-	6.9	5.27	-	4.41
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		5.03	1.47	2.98	2.69	1.46	1.87	2.25	3.08	1.75	2.01	2.75	3.97	5.49	2.17	2.18
Dissolved Strontium (Sr)	mg/L	0.001		0.0671	0.0156	0.0249	0.0374	0.0281	0.0404	0.0566	0.0744	0.0235	0.0312	0.0486	0.0632	0.0650	0.0499	0.0369
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	0.0082	<0.0020	<0.0020	0.0022	<0.0020	<0.0020	<0.0020	0.0021	<0.0020	0.0021	0.0023	<0.002	<0.0020	0.00106
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	0.00006
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00116	<0.002	<0.0010	0.00039
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0114	0.0132	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030	0.0041	0.0051	0.0031	0.0058	0.008	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.42: Total metals for TL3

Total Metals				2012											2013			
				Q1		Q2			Q3			Q4			Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 25	March (Apr 4)	April 26	May 15	June 20	July 19	Aug. 22	Sept. 17	Oct. 31	Nov. 27	Dec. 18	Jan 29	April 17	July 24	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.471	0.882	0.107	0.125	0.253	0.1540	0.472	0.666	0.321	0.659	0.7090	0.470	0.906	0.380	0.1400
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.0060	<0.0060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	<0.0010	<0.0010	<0.003	<0.0010	0.00054
Total Barium (Ba)	mg/L	0.002		0.020	0.012	<0.010	0.010	0.011	<0.010	0.015	0.014	<0.10	<0.10	0.015	0.0187	0.017	0.013	0.008
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	***<0.50***	***<0.50***	<0.050	<0.010	<0.01	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	***<0.00017***	***<0.00017***	0.00002	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		34.0	6.92	11.1	16.4	12.5	17.7	28.0	36.8	11.4	15.8	21.6	37.3	29.5	23.5	16.5
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		0.0010	0.0017	<0.0010	<0.0010	0.00057	<0.0010	0.0012	0.0013	<0.010	<0.010	0.0015	0.00123	0.006	0.0011	0.00047
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	0.00055	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00059	***<0.0050***	***<0.0050***	0.00058	0.00071	0.0008	<0.00050	0.00018
Total Copper (Cu)	mg/L	0.001	0.005	0.0017	0.0023	0.0011	0.0016	0.0015	<0.0010	0.0013	0.0011	***<0.010***	***<0.010***	0.002	0.0018	0.003	0.0015	0.00246
Total Iron (Fe)	mg/L	0.1	0.3	1.94	0.998	0.227	0.301	0.825	1.110	1.05	1.12	1.05	2.04	2.800	6.47	2.65	0.99	0.890
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	***<0.010***	***<0.010***	<0.0010	<0.00050	<0.001	<0.0010	0.000401
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.50	<0.50	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		9.11	2.07	3.06	4.53	3.24	4.42	6.97	9.81	3.12	4.31	5.64	9.74	8.24	5.60	4.04
Total Manganese (Mn)	mg/L	0.002		0.191	0.0355	0.0192	0.0238	0.0403	0.0318	0.201	0.361	0.029	0.140	0.135	0.254	0.177	0.128	0.032
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00050	<0.002	<0.0010	0.000117
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.020	<0.020	<0.0020	0.0012	0.004	<0.0020	0.00122
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	-	0.085	-	-	-
Total Potassium (K)	mg/L	0.2		2.28	0.86	1.03	1.19	<1.0	0.78	1.14	1.11	<5.0	<5.0	1.46	1.8	2.33	1.05	0.95
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0015
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	0.00046	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.5	-	-	-	-	-	-	8.20	7.75	-	4.26
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	***<0.0010***	***<0.0010***	<0.00010	<0.00010	<0.00010	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		5.30	1.37	1.89	2.48	1.48	1.81	2.22	3.23	1.60	2.10	2.97	4.49	5.75	2.06	2.04
Total Strontium (Sr)	mg/L	0.001		0.0715	0.0165	0.0243	0.0354	0.0271	0.0414	0.0589	0.0788	0.023	0.033	0.0487	0.081	0.078	0.054	0.0344
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	-	0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	***<0.0030***	***<0.0030***	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0010	<0.002	<0.0010	0.00012
Total Titanium (Ti)	mg/L	0.005		0.0205	0.0339	0.0031	0.0046	0.0074	0.0069	0.0209	0.0295	<0.020	0.027	0.0306	0.0197	0.047	0.015	0.0056
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	***<0.10***	***<0.10***	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	***<0.050***	***<0.050***	<0.0050	<0.0010	<0.001	<0.0050	0.000069
Total Vanadium (V)	mg/L	0.0005	0.006	0.0019	0.0018	<0.0010	<0.0010	0.0011	<0.0010	0.0013	0.0015	***<0.010***	***<0.010***	0.0019	0.00264	0.003	0.0013	0.00084
Total Zinc (Zn)	mg/L	0.005	0.02	0.0056	0.0044	<0.0030	<0.0030	<0.0030	<0.0030	0.0032	0.0030	***<0.030***	***<0.030***	0.0079	0.0056	0.020	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.010	<0.010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L
Criteria is 1.1 mg/L if the sample hardness is >75mg/L
[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L
Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L
[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L
The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L
The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L
Italisized Values have detection limits above the PWQO

Table 3.43: Inorganics for JCTA

Inorganics				2012										2013			
				Q1		Q2			Q3			Q4		Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Nov. 27	Dec. 19	Jan 28	April 17	July 24	Oct 30
Alkalinity (Total as CaCO3)	mg/L	1		93.1	18.3	28.1	45.7	31.4	45.8	80.6	106	40.4	64.9	-	81	66.3	47.6
Conductivity	umho/cm	1		180	59.2	75.7	108	75.1	95.9	161	222	95.8	146	191	180	136	96.8
Dissolved Chloride (Cl)	mg/L	1		0.92	0.61	0.77	0.97	0.32	0.41	0.81	1.37	<2.0	1.83	-	3.68	0.68	1.32
Dissolved Sulphate (SO4)	mg/L	1		3.63	3.55	3.33	2.47	0.57	0.41	0.51	1.04	2.1	2.55	-	5.07	<0.30	0.72
Hardness (CaCO3)	mg/L	1.0		90.5	24.2	34.2	51.1	42	53.2	83.2	114	44.4	60.8	108	90.3	76.1	48.6
Nitrate (N)	mg/L	0.1		0.044	0.071	<0.030	<0.030	<0.030	<0.030	<0.030	0.063	<0.10	0.054	-	0.19	<0.030	0.042
Nitrite (N)	mg/L	0.01		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.10	<0.020	-	<0.05	<0.020	<0.020
pH	pH		6.5-8.5	6.87	6.95	7.24	7.52	7.00	7.27	7.45	7.58	7.09	7.3	7.86	7.61	7.26	7.49
Total Ammonia-N	mg/L	0.05		0.071	<0.020	<0.020	<0.020	<0.020	<0.020	0.089	0.031	0.038	0.163	-	0.36	0.056	<0.020
Total Phosphorus	mg/L	0.002	a	0.006	0.0216	0.0104	0.0247	0.0149	0.0294	0.0266	0.0543	0.0266	0.0365	-	0.03	0.0205	0.0156
Total Suspended Solids	mg/L	1		4.1	7.9	<2.0	4.5	4.3	6.9	9.7	40.2	<2.0	2.2	-	12	4.9	3.1
Acidity (as CaCO3)	mg/L	2		6.4	4.8	3.2	2.2	3.8	3.4	3.6	6.8	7	8	-	<5	6	7
Oil and Grease	mg/L	2		<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<0.5	<2.0	<2.0
Cyanide, Weak Acid Diss	mg/L	0.002		<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
Cyanide, Total	mg/L	0.002		<0.0020	<0.0020	<0.0020	<0.0020	0.0065	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.0020
Cyanide, Free	mg/L	0.002	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.002	<0.0050	<0.0050

Notes:
PWQO= Provincial Water Quality Objectives
All cocentrations in mg/L unless otherwise stated
MDL= Reportable Detection Limit
*** Exceedence of PWQO Standards**
for the ice-free period should not exceed 0.02 mg/L; a high level of protection against aesthetic deterioration will be provided by a total phophorus concentration for the ice-free period of 0.01 mg/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus concentration below 0.03 mg/L.
Italisized Values have detection limits above the PWQO

Table 3.44: Dissolved metals for JCTA

Dissolved Metals				2012										2013			
				Q1		Q2			Q3			Q4		Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Nov. 27	Dec. 19	Jan 28	April 17	July 24	Oct 30
Dissolved Aluminum (Al)	mg/L	0.005		<0.0050	0.119	0.0601	0.0352	0.138	0.0332	0.0190	0.0092	0.0781	0.0706	0.077	0.034	0.0318	0.0407
Dissolved Antimony (Sb)	mg/L	0.0005		<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Dissolved Arsenic (As)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.003	<0.0010	0.00051
Dissolved Barium (Ba)	mg/L	0.002		0.013	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.010	<0.010	0.010	0.018	0.013	<0.010	0.006
Dissolved Beryllium (Be)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Dissolved Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Dissolved Boron (B)	mg/L	0.01		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.01	<0.050	<0.010
Dissolved Cadmium (Cd)	mg/L	0.0001		<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Dissolved Calcium (Ca)	mg/L	0.2		29.4	6.71	9.48	14.2	11.7	15.1	23.9	31.6	12.2	16.6	27.4	24.5	21.4	13.4
Dissolved Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Dissolved Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.003	<0.0010	0.0003
Dissolved Cobalt (Co)	mg/L	0.0005		<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00087	0.00225	0.0007	<0.00050	0.00021
Dissolved Copper (Cu)	mg/L	0.001		<0.0010	0.0011	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.006	<0.0010	0.00081
Dissolved Iron (Fe)	mg/L	0.1		0.280	0.226	0.111	0.136	0.590	0.893	0.885	0.325	0.867	1.810	4.480	1.180	0.566	0.729
Dissolved Lead (Pb)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	<0.000050
Dissolved Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Dissolved Magnesium (Mg)	mg/L	0.05		4.17	1.82	2.55	3.82	3.03	3.78	5.73	8.53	3.40	4.68	6.94	7.07	5.51	3.68
Dissolved Manganese (Mn)	mg/L	0.002		0.271	0.0120	0.0308	0.0595	0.0551	0.2250	0.464	0.6790	0.147	0.546	1.6900	0.3630	0.032	0.115
Dissolved Mercury (Hg)	mg/L	0.00005	0.0002	<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.00010	<0.000010	<0.000010
Dissolved Molybdenum (Mo)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000133
Dissolved Nickel (Ni)	mg/L	0.001		<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0010	<0.003	<0.0020	0.00061
Dissolved Phosphorus (P)	mg/L	0.05		-	-	-	-	<0.050	-	-	-	-	-	<0.050	-	-	-
Dissolved Potassium (K)	mg/L	0.2		1.68	0.81	0.99	1.17	<1.0	0.59	0.97	1.34	0.77	1.08	1.30	1.73	0.84	0.83
Dissolved Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0014
Dissolved Selenium (Se)	mg/L	0.002		<0.0010	<0.0010	<0.0010	<0.0010	0.00043	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00040	<0.004	<0.0010	<0.00010
Dissolved Silicon (Si)	mg/L	0.05		-	-	-	-	3.6	-	-	-	-	-	6.5	6.02	-	4.37
Dissolved Silver (Ag)	mg/L	0.0001		<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Dissolved Sodium (Na)	mg/L	0.1		2.43	1.25	1.72	2.27	1.40	1.49	1.91	2.67	1.80	2.39	3.02	4.03	1.81	1.78
Dissolved Strontium (Sr)	mg/L	0.001		0.0512	0.0145	0.0199	0.0300	0.0267	0.0336	0.0493	0.0620	0.0261	0.0395	0.0534	0.0520	0.0466	0.0300
Dissolved Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Dissolved Thallium (Tl)	mg/L	0.00005		<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Dissolved Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	0.00012
Dissolved Titanium (Ti)	mg/L	0.005		<0.0020	0.0026	<0.0020	<0.0020	0.0024	<0.0020	<0.0020	<0.0020	<0.0020	0.0026	0.0032	<0.002	<0.0020	0.00135
Dissolved Tungsten (W)	mg/L	0.001		<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Dissolved Uranium (U)	mg/L	0.0001		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.002	<0.0050	0.000043
Dissolved Vanadium (V)	mg/L	0.0005		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.00141	<0.002	<0.0010	0.00041
Dissolved Zinc (Zn)	mg/L	0.005		<0.0030	0.0059	0.0118	0.0036	0.0035	<0.0030	<0.0030	<0.0030	0.0048	<0.0030	<0.0030	0.005	<0.0030	<0.0050
Dissolved Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

At pH >5.5 to 6.5, no condition should be permitted which would increase the acid soluble inorganic aluminum concentration in clay-free samples
to more than 10% above natural background concentrations for waters representative of that geological area of the Province that are unaffected by man-made inputs

Italisized Values have detection limits above the PWQO

Table 3.45: Total metals for JCTA

Total Metals				2012										2013			
				Q1		Q2			Q3			Q4		Q1	Q2	Q3	Q4
Parameter	Units	MDL	PWQO	Jan. 27	March (Apr 5)	April 27	May 15	June 20	July 19	Aug. 22	Sept. 17	Nov. 27	Dec. 19	Jan 28	April 17	July 24	Oct 30
Total Aluminum (Al)	mg/L	0.005		0.0864	0.266	0.140	0.331	0.164	0.1090	0.149	0.555	0.178	0.2250	0.5290	0.4140	0.087	0.063
Total Antimony (Sb)	mg/L	0.0005	0.02	<0.00060	<0.00060	<0.00060	<0.00060	<0.0050	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060	<0.00050	<0.003	<0.00060	<0.00010
Total Arsenic (As)	mg/L	0.001	0.005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.001	0.0011	<0.0010	<0.0010	<0.0010	0.0011	<0.003	<0.0010	0.00054
Total Barium (Ba)	mg/L	0.002		0.014	<0.010	<0.010	0.012	<0.010	<0.010	0.013	0.015	<0.010	0.012	0.026	0.013	0.010	0.006
Total Beryllium (Be)	mg/L	0.0005	0.011 - 1.1[a]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	<0.00050
Total Bismuth (Bi)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.000050
Total Boron (B)	mg/L	0.01	0.2	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.010	<0.010	<0.050	<0.010
Total Cadmium (Cd)	mg/L	0.0001	0.0001 - 0.0005[b]	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000090	<0.0001	<0.000017	<0.000010
Total Calcium (Ca)	mg/L	0.2		30.4	7.12	9.71	14.1	11.1	15.4	25.1	30.4	13.7	19.6	30.4	25.9	21.8	13.2
Total Cesium (Ce)	mg/L	0.0001		-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010
Total Chromium (Cr)	mg/L	0.005		<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.0010	<0.0010	0.001	<0.0010	<0.0010	0.00141	<0.003	<0.0010	0.00036
Total Cobalt (Co)	mg/L	0.0005	0.0009	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00051	0.00072	0.00096	<0.00050	0.00097	0.00314	0.0010	<0.00050	0.00025
Total Copper (Cu)	mg/L	0.001	0.005	<0.0010	<0.0010	0.0011	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0014	<0.002	<0.0010	0.00131
Total Iron (Fe)	mg/L	0.1	0.3	1.24	0.316	0.305	0.704	0.872	1.540	1.50	1.590	1.72	2.850	9.110	2.570	1.04	1.110
Total Lead (Pb)	mg/L	0.0005	0.001 - 0.005[c]	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.001	<0.0010	0.000058
Total Lithium (Li)	mg/L	0.005		<0.050	<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.10	<0.005	<0.050	<0.0050
Total Magnesium (Mg)	mg/L	0.05		4.16	2.06	2.75	3.93	2.64	3.72	6.02	7.98	3.48	4.93	7.75	7.26	5.18	3.67
Total Manganese (Mn)	mg/L	0.002		0.304	0.0108	0.0339	0.100	0.0695	0.2830	0.510	1.090	0.175	0.597	2.08	0.4590	0.124	0.118
Total Mercury (Hg)	mg/L	0.00005		<0.00010	<0.00010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.0001	<0.000010	<0.000010
Total Molybdenum (Mo)	mg/L	0.0005	0.04	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.00050	<0.002	<0.0010	0.000174
Total Nickel (Ni)	mg/L	0.001	0.025	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0014	<0.003	<0.0020	0.00063
Total Phosphorus (P)	mg/L	0.05		-	-	-	-	-	-	-	-	-	-	0.101	-	-	-
Total Potassium (K)	mg/L	0.2		1.83	0.60	1.03	1.20	<1.0	0.59	1.06	1.18	0.88	1.10	1.50	1.94	0.79	0.80
Total Rubidium (Rb)	mg/L	0.001		-	-	-	-	-	-	-	-	-	-	-	-	-	0.0015
Total Selenium (Se)	mg/L	0.002	0.1	<0.0010	<0.0010	<0.0010	<0.0010	0.00044	<0.0010	<0.0010	<0.0010	<0.0010	1.1	<0.00040	<0.004	<0.0010	<0.00010
Total Silicon (Si)	mg/L	0.05		-	-	-	-	3.0	-	-	-	-	-	8.2	6.47	-	3.99
Total Silver (Ag)	mg/L	0.0001	0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.000010
Total Sodium (Na)	mg/L	0.1		2.57	1.27	1.78	2.27	1.21	1.53	1.89	2.66	1.94	2.44	3.52	4.38	1.68	1.79
Total Strontium (Sr)	mg/L	0.001		0.0541	0.0154	0.0210	0.0321	0.0269	0.0372	0.0517	0.0514	0.0295	0.0413	0.0678	0.0570	0.0484	0.0300
Total Tellurium (Te)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	<0.05	<0.0010	<0.00060
Total Thallium (Tl)	mg/L	0.00005	0.0003	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030	<0.0003	<0.00030	<0.000050
Total Tin (Sn)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.002	<0.0010	<0.00010
Total Titanium (Ti)	mg/L	0.005		0.0043	0.0063	0.0040	0.0136	0.0046	0.0046	0.0072	0.0226	0.0058	0.0086	0.0217	0.018	0.0034	0.0023
Total Tungsten (W)	mg/L	0.001	0.03	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.002	<0.010	-
Total Uranium (U)	mg/L	0.0001	0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0010	<0.001	<0.0050	0.000049
Total Vanadium (V)	mg/L	0.0005	0.006	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0012	<0.0010	0.0012	0.0032	<0.002	<0.0010	0.00062
Total Zinc (Zn)	mg/L	0.005	0.02	<0.0030	<0.0030	<0.0030	<0.0030	0.0031	<0.0030	<0.0030	0.003	0.0049	0.0043	0.004	0.024	<0.0030	<0.0050
Total Zirconium (Zr)	mg/L	0.001		<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0040	-	<0.0010	<0.0050

Notes:

PWQO= Provincial Water Quality Objectives

All cocentrations in mg/L unless otherwise stated

MDL= Reportable Detection Limit

*** Exceedence of PWQO Standards**

[a] Criteria is 0.011mg/L if Hardness as CaCO3 is = 75mg/L
Criteria is 1.1 mg/L if the sample hardness is >75mg/L

[b] Criteria is 0.0001mg/L if the the sample hardness is = 0-100 mg/L
Criteria is 0.0005 mg/L if the sample hardness is >100 mg/L

[c] The criteria will be 0.001 mg/L if the sample hardness is 30mg/L
The criteria will be 0.003 mg/L if the sample hardness is = 30-80mg/L
The criteria will be 0.005 µg/L if the sample hardness is = >30-80mg/L

Italisized Values have detection limits above the PWQO

Table 3.46: 2012 Quarterly mean concentrations for inorganics – SW1

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	44.97	49.43	74.50	59.23
Conductivity	99.17	111.07	150.67	126.3
Dissolved Chloride (Cl)	0.553	0.765	0.38	0.765
Dissolved Sulphate (SO4)	2.52	1.35	1.14	2.11
Hardness (CaCO3)	46.8	56.00	73.13	57.13
Nitrate (N)	0.115	-	-	-
Nitrite (N)	-	-	-	-
pH	7.02	7.43	7.43	7.18
Total Ammonia-N	0.071	-	-	-
Total Phosphorus	0.0136	0.0322	0.0099	0.007
Total Suspended Solids	3.35	30.40	9.45	5.00
Acidity (as CaCO3)	4.67	4.40	4.53	5.73
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0067	-	-
Cyanide, Free	-	-	-	-

Table 3.47: 2012 Quarterly mean concentrations for dissolved metals – SW1

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.0580	0.0308	-	0.0125
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	0.013	0.014	0.0105	0.011
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	0.000024	-	-
Dissolved Calcium (Ca)	14.72	16.33	23.27	18.20
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	0.0013	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	-	0.0020	-	-
Dissolved Iron (Fe)	0.181	0.155	2.8567	0.179
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	2.45	3.73	3.64	2.86
Dissolved Manganese (Mn)	0.0969	0.0451	0.0782	0.126
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorus (P)	-	-	-	-
Dissolved Potassium (K)	1.18	1.36	0.81	1.09
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	3.60	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.55	1.73	1.78	1.71
Dissolved Strontium (Sr)	0.0259	0.0291	0.0472	0.0316
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	-	-	-	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0062	0.0051	-	0.0046
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.48: 2012 Quarterly mean concentrations for total metals – SW1

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.102	0.436	0.104	0.062
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	-	-
Total Barium (Ba)	0.0140	0.024	0.012	0.012
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	0.00002	-	-
Total Calcium (Ca)	14.79	15.03	24.37	19.33
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	0.00280	-	-
Total Cobalt (Co)	-	0.00089	-	-
Total Copper (Cu)	-	0.00340	-	-
Total Iron (Fe)	0.560	0.816	0.395	0.460
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	2.44	3.51	3.75	2.90
Total Manganese (Mn)	0.108	0.063	0.145	0.138
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	0.00290	-	-
Total Phophorous (P)	-	-	-	-
Total Potassium (K)	1.12	1.31	0.75	1.12
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	3.10	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	1.52	1.57	1.83	1.77
Total Strontium (Sr)	0.027	0.028	0.045	0.032
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0038	0.018	0.0068	0.0030
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	0.00290	-	-
Total Zinc (Zn)	-	0.00820	-	-
Total Zirconium (Zr)	-	0.0010	-	-

Table 3.49: 2012 Quarterly mean concentrations for inorganics – SW2

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	50.00	54.23	65.03	65.55
Conductivity	139.00	123.33	133.33	140.00
Dissolved Chloride (Cl)	4.58	1.45	0.240	2.20
Dissolved Sulphate (SO4)	5.33	1.62	0.78	1.02
Hardness (CaCO3)	56.50	61.90	73.70	70.25
Nitrate (N)	0.122	0.031	0.0585	-
Nitrite (N)	-	-	-	-
pH	7.56	7.54	7.73	7.40
Total Ammonia-N	-	-	0.028	-
Total Phosphorus	0.0829	0.0952	0.0853	0.0246
Total Suspended Solids	5.90	57.17	35.53	14.00
Acidity (as CaCO3)	5.60	4.33	2.80	3.70
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.006	-	-
Cyanide, Free	-	-	-	-

Table 3.50: 2012 Quarterly mean concentrations for dissolved metals – SW2

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1230	0.0426	0.0350	0.0455
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	-	0.0130	-	0.0130
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	0.000025	-	-
Dissolved Calcium (Ca)	15.80	17.50	21.03	19.05
Dssolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	0.0032	0.0018	0.0010	0.0014
Dissolved Iron (Fe)	0.0690	0.2963	0.4550	0.200
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	4.1500	4.4400	5.1633	5.5150
Dissolved Manganese (Mn)	0.0079	0.0978	0.0479	0.0187
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.56	1.37	0.62	1.38
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	3.60	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	3.79	2.24	1.79	2.13
Dissolved Strontium (Sr)	0.0287	0.0322	0.0332	0.0332
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0051	0.0027	0.0024	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	0.0012	-	-	-
Dissolved Zinc (Zn)	0.0086	0.0089	-	
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.51: 2012 Quarterly mean concentrations for total metals – SW2

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.9820	0.5210	0.5073	0.8125
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	-	-
Total Barium (Ba)	0.0150	0.0193	0.0135	0.0170
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	0.00002	-	-
Total Calcium (Ca)	18.20	17.33	19.73	21.15
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	0.0016	0.0014	0.0015	0.0012
Total Cobalt (Co)	-	0.0008	0.0006	-
Total Copper (Cu)	0.0033	0.0032	0.0015	0.0025
Total Iron (Fe)	0.716	1.181	1.618	1.320
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	3.580	4.413	5.160	6.170
Total Manganese (Mn)	0.0154	0.1612	0.0571	0.0473
Total Mercury (Hg)		-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	0.0023	0.0021	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	1.440	1.333	0.643	1.450
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	3.60	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	4.09	2.11	1.79	2.40
Total Strontium (Sr)	0.0256	0.0336	0.0345	0.0379
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0306	0.0177	0.0218	0.0346
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	0.0020	0.0024	0.0021	0.0012
Total Zinc (Zn)	0.0045	0.0075	0.0046	0.0070
Total Zirconium (Zr)	-	-	-	-

Table 3.52: 2012 Quarterly mean concentrations for inorganics – SW3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	74.55	47.58	61.5	52.7
Conductivity	168	159.5	184.33	250.67
Dissolved Chloride (Cl)	7.03	14.22	17.10	10.83
Dissolved Sulphate (SO4)	3.27	3.10	2.08	2.39
Hardness (CaCO3)	76.7	59.3	72.5	54.73
Nitrate (N)	0.087	-	-	-
Nitrite (N)	--	-	-	-
pH	7.31	7.445	7.373	7.173
Total Ammonia-N	0.067	-	-	-
Total Phosphorus	0.0156	0.0148	0.0140	0.0157
Total Suspended Solids	3.9	3.8	3.63	2.9
Acidity (as CaCO3)	5.1	3.35	3.87	5.87
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.006	-	-
Cyanide, Free	-	-	-	-

Table 3.53: 2012 Quarterly mean concentrations for dissolved metals – SW3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.0186	0.0199	0.0087	0.0137
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	0.015	-	0.010	0.010
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	23.25	16.93	20.57	15.77
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	0.0012	0.0011	-	0.0014
Dissolved Iron (Fe)	0.237	0.084	0.084	0.192
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	4.50	4.12	5.13	3.71
Dissolved Manganese (Mn)	0.0708	0.0132	0.0191	0.0882
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.330	1.273	0.740	1.223
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	2.10	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	5.15	9.13	11.07	6.96
Dissolved Strontium (Sr)	0.0442	0.0394	0.0525	0.0355
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	-	-	-	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	-	0.0031	-	0.0061
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.54: 2012 Quarterly mean concentrations for total metals – SW3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.1475	0.1007	0.0565	0.0607
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	-	-
Total Barium (Ba)	0.017	-	0.010	0.011
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	-
Total Calcium (Ca)	23.65	16.33	20.40	16.20
Total Cesioum (Ce)	-	-	-	-
Total Chromium (Cr)	-	-	-	-
Total Cobalt (Co)	-	-	-	-
Total Copper (Cu)	0.0010	0.0012	-	0.0013
Total Iron (Fe)	0.732	0.243	0.261	0.369
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	4.36	3.78	4.89	3.58
Total Manganese (Mn)	0.0720	0.0201	0.0295	0.1010
Total Mercury (Hg)	-	0.000017	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Potassium (K)	1.32	1.17	0.76	1.23
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	1.90	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	6.30	8.41	10.87	6.77
Total Strontium (Sr)	0.0430	0.0374	0.0523	0.0356
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0068	0.0039	0.0028	0.0028
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	-	-	-
Total Zinc (Zn)	0.0040	-	-	-
Total Zirconium (Zr)	-	-	-	-

Table 3.55: 2012 Quarterly mean concentrations for inorganics – SW4

	Q1-Mean	Q2-Mean	Q3-Mean
Alkalinity (Total as CaCO3)	54.85	44.15	44.25
Conductivity	119.00	111.00	105.25
Dissolved Chloride (Cl)	3.70	3.15	3.21
Dissolved Sulphate (SO4)	2.20	1.77	1.7675
Hardness (CaCO3)	55.95	46.05	47.325
Nitrate (N)	-	-	-
Nitrite (N)	-	-	-
pH	7.50	7.73	7.8175
Total Ammonia-N	0.03	-	-
Total Phosphorus	0.028	0.025	0.022
Total Suspended Solids	3.15	7.80	7.60
Acidity (as CaCO3)	2.30	2.10	2.40
Oil and Grease	-	-	-
Cyanide, Weak Acid Diss	-	-	-
Cyanide, Total	0.003	0.003	-
Cyanide, Free	-	-	-

Table 3.56: 2012 Quarterly mean concentrations for dissolved metals – SW4

	Q1-Mean	Q2-Mean	Q3-Mean
Dissolved Aluminum (Al)	0.0182	0.0099	0.0087
Dissolved Antimony (Sb)	-	-	-
Dissolved Arsenic (As)	-	-	-
Dissolved Barium (Ba)	-	-	-
Dissolved Beryllium (Be)	-	-	-
Dissolved Bismuth (Bi)	-	-	-
Dissolved Boron (B)	-	-	-
Dissolved Cadmium (Cd)	-	-	-
Dissolved Calcium (Ca)	17.10	14.30	14.40
Dissolved Chromium (Cr)	-	-	-
Dissolved Cobalt (Co)	-	-	-
Dissolved Copper (Cu)	0.0018	0.0025	0.0014
Dissolved Iron (Fe)	-	-	-
Dissolved Lead (Pb)	-	-	-
Dissolved Lithium (Li)	-	-	-
Dissolved Magnesium (Mg)	3.215	2.680	2.753
Dissolved Manganese (Mn)	0.0023	0.0014	0.0012
Dissolved Mercury (Hg)	-	-	-
Dissolved Molybdenum (Mo)	-	-	-
Dissolved Nickel (Ni)	-	-	-
Dissolved Phosphorous (P)	-	-	-
Dissolved Potassium (K)	0.900	0.840	0.748
Dissolved Selenium (Se)	-	-	-
Dissolved Silicon (Si)	-	-	-
Dissolved Silver (Ag)	-	1.20	-
Dissolved Sodium (Na)	3.40	2.93	2.84
Dissolved Strontium (Sr)	0.0303	1.2678	0.0239
Dissolved Tellurium (Te)	-	0.0237	-
Dissolved Thallium (Tl)	-	-	-
Dissolved Tin (Sn)	-	-	-
Dissolved Titanium (Ti)	-	-	-
Dissolved Tungsten (W)	-	-	-
Dissolved Uranium (U)	-	-	-
Dissolved Vanadium (V)	-	-	-
Dissolved Zinc (Zn)	-	-	-
Dissolved Zirconium (Zr)	-	-	-

Table 3.57: 2012 Quarterly mean concentrations for total metals – SW4

	Q1-Mean	Q2-Mean	Q3-Mean
Total Aluminum (Al)	0.409	0.520	0.722
Total Antimony (Sb)	-	-	-
Total Arsenic (As)	-	-	-
Total Barium (Ba)	0.012	0.012	0.011
Total Beryllium (Be)	-	-	-
Total Bismuth (Bi)	-	-	-
Total Boron (B)	-	-	-
Total Cadmium (Cd)	-	0.0001	-
Total Calcium (Ca)	17.75	13.95	14.03
Total Chromium (Cr)	-	0.0015	0.0011
Total Cobalt (Co)	-	-	-
Total Copper (Cu)	0.0026	0.0031	0.0021
Total Iron (Fe)	0.454	0.543	0.524
Total Lead (Pb)	-	-	-
Total Lithium (Li)	-	-	-
Total Magnesium (Mg)	3.35	2.63	2.90
Total Manganese (Mn)	0.0107	0.0155	0.0122
Total Mercury (Hg)	-	-	-
Total Molybdenum (Mo)	-	-	-
Total Nickel (Ni)	-	-	-
Total Phosphorous (P)	-	-	-
Total Potassium (K)	1.07	1.50	0.89
Total Selenium (Se)	-	-	-
Total Silicon (Si)	-	1.10	-
Total Silver (Ag)	-	-	-
Total Sodium (Na)	3.50	2.96	3.00
Total Strontium (Sr)	0.0311	0.0259	0.0245
Total Tellurium (Te)	-	-	-
Total Thallium (Tl)	-	-	-
Total Tin (Sn)	-	-	-
Total Titanium (Ti)	0.0136	0.0172	0.0222
Total Tungsten (W)	-	-	-
Total Uranium (U)	-	-	-
Total Vanadium (V)	0.0011	0.0014	0.0011
Total Zinc (Zn)	0.0031	0.0382	0.0039
Total Zirconium (Zr)	-	0.0021	-

Table 3.58: 2012 Quarterly mean concentrations for Inorganics – SW5

	Q1-Mean	Q3-Mean	Q3-Mean
Alkalinity (Total as CaCO3)	50.50	45.05	44.30
Conductivity	117	117.50	109
Dissolved Chloride (Cl)	4.80	4.18	4.09
Dissolved Sulphate (SO4)	3.29	2.85	2.77
Hardness (CaCO3)	53.00	49.80	47.55
Nitrate (N)	0.044	-	-
Nitrite (N)	-	-	-
pH	7.51	7.86	7.96
Total Ammonia-N	-	-	-
Total Phosphorus	0.0080	0.0071	0.0080
Total Suspended Solids	-	2.10	-
Acidity (as CaCO3)	2.00	2.20	2.10
Oil and Grease	-	-	-
Cyanide, Weak Acid Diss	-	-	-
Cyanide, Total	-	0.0053	-
Cyanide, Free	-	-	-

Table 3.59: 2012 Quarterly mean concentrations for dissolved metals – SW5

	Q1-Mean	Q2-Mean	Q3-Mean
Dissolved Aluminum (Al)	-	-	-
Dissolved Antimony (Sb)	-	-	-
Dissolved Arsenic (As)	-	-	-
Dissolved Barium (Ba)	-	-	-
Dissolved Beryllium (Be)	-	-	-
Dissolved Bismuth (Bi)	-	-	-
Dissolved Boron (B)	-	-	-
Dissolved Cadmium (Cd)	-	-	-
Dissolved Calcium (Ca)	15.60	14.55	14.05
Dissolved Cesium (Ce)	-	-	-
Dissolved Chromium (Cr)	-	-	-
Dissolved Cobalt (Co)	-	-	-
Dissolved Copper (Cu)	0.0011	0.0011	0.0011
Dissolved Iron (Fe)	-	-	-
Dissolved Lead (Pb)	-	-	-
Dissolved Lithium (Li)	-	-	-
Dissolved Magnesium (Mg)	3.43	3.24	3.03
Dissolved Manganese (Mn)	-	-	-
Dissolved Mercury (Hg)	-	-	-
Dissolved Molybdenum (Mo)	-	-	-
Dissolved Nickel (Ni)	-	-	-
Dissolved Phosphorous (P)	-	-	-
Dissolved Potassium (K)	1.09	1.09	0.950
Dissolved Rubidium (Rb)	-	-	-
Dissolved Selenium (Se)	-	-	-
Dissolved Silicon (Si)	-	-	-
Dissolved Silver (Ag)	-	-	-
Dissolved Sodium (Na)	3.74	3.40	3.29
Dissolved Strontium (Sr)	0.0313	0.0277	0.0260
Dissolved Tellurium (Te)	-	-	-
Dissolved Thallium (Tl)	-	-	-
Dissolved Tin (Sn)	-	-	-
Dissolved Titanium (Ti)	-	-	-
Dissolved Tungsten (W)	-	-	-
Dissolved Uranium (U)	-	-	-
Dissolved Vanadium (V)	-	-	-
Dissolved Zinc (Zn)	-	-	0.0035
Dissolved Zirconium (Zr)	-	-	-

Table 3.60: 2012 Quarterly mean concentrations for total metals – SW5

	Q1-Mean	Q2-Mean	Q3-Mean
Total Aluminum (Al)	0.0086	0.0232	0.0118
Total Antimony (Sb)	-	-	-
Total Arsenic (As)	-	-	-
Total Barium (Ba)	-	-	-
Total Beryllium (Be)	-	-	-
Total Bismuth (Bi)	-	-	-
Total Boron (B)	-	-	-
Total Cadmium (Cd)	-	-	-
Total Calcium (Ca)	14.80	13.75	14.15
Total Cesium (Ce)	-	-	-
Total Chromium (Cr)	-	-	-
Total Cobalt (Co)	-	-	-
Total Copper (Cu)	0.0012	0.0011	0.0013
Total Iron (Fe)	0.022	0.037	0.123
Total Lead (Pb)	-	-	-
Total Lithium (Li)	-	-	-
Total Magnesium (Mg)	3.15	2.89	3.02
Total Manganese (Mn)	0.0017	0.0034	0.0034
Total Mercury (Hg)	-	-	-
Total Molybdenum (Mo)	-	-	-
Total Nickel (Ni)	-	-	-
Total Phosphorous (P)	-	-	-
Total Potassium (K)	1.060	0.980	0.970
Total Rubidium (Rb)	-	-	-
Total Selenium (Se)	-	-	-
Total Silicon (Si)	-	-	-
Total Silver (Ag)	-	-	-
Total Sodium (Na)	3.62	3.06	3.22
Total Strontium (Sr)	0.0291	0.0271	0.0273
Total Tellurium (Te)	-	-	-
Total Thallium (Tl)	-	-	-
Total Tin (Sn)	-	-	-
Total Titanium (Ti)	-	-	-
Total Tungsten (W)	-	-	-
Total Uranium (U)	-	-	-
Total Vanadium (V)	-	-	-
Total Zinc (Zn)	-	-	-
Total Zirconium (Zr)	-	-	-

Table 3.61: 2012 Quarterly mean concentrations for inorganics – SW6

	Q1-Mean	Q2-Mean	Q3-Mean
Alkalinity (Total as CaCO3)	51.00	44.80	44.80
Conductivity	118.00	117.50	109.50
Dissolved Chloride (Cl)	4.85	4.18	4.23
Dissolved Sulphate (SO4)	3.33	2.88	3.64
Hardness (CaCO3)	52.80	49.80	46.6
Nitrate (N)	0.046	-	-
Nitrite (N)	-	-	-
pH	7.54	7.87	7.94
Total Ammonia-N	-	-	-
Total Phosphorus	0.0078	0.0295	0.0079
Total Suspended Solids	-	2.75	-
Acidity (as CaCO3)	2.40	3.10	2.00
Oil and Grease	-	-	-
Cyanide, Weak Acid Diss	-	-	-
Cyanide, Total	-	0.0059	-
Cyanide, Free	-	-	-

Table 3.62: 2012 Quarterly mean concentrations for dissolved metals – SW6

	Q1-Mean	Q2-Mean	Q3-Mean
Dissolved Aluminum (Al)	-	-	-
Dissolved Antimony (Sb)	-	-	-
Dissolved Arsenic (As)	-	-	-
Dissolved Barium (Ba)	-	-	-
Dissolved Beryllium (Be)	-	-	-
Dissolved Bismuth (Bi)	-	-	-
Dissolved Boron (B)	-	-	-
Dissolved Cadmium (Cd)	-	-	-
Dissolved Calcium (Ca)	15.60	14.23	13.70
Dissolved Cesium (Ce)	-	-	-
Dissolved Chromium (Cr)	-	-	-
Dissolved Cobalt (Co)	-	-	-
Dissolved Copper (Cu)	0.0010	0.0011	-
Dissolved Iron (Fe)	-	-	-
Dissolved Lead (Pb)	-	-	-
Dissolved Lithium (Li)	-	-	-
Dissolved Magnesium (Mg)	3.34	3.18	3.01
Dissolved Manganese (Mn)	-	0.0023	-
Dissolved Mercury (Hg)	-	-	-
Dissolved Molybdenum (Mo)	-	-	-
Dissolved Nickel (Ni)	-	-	-
Dissolved Phosphorous (P)	-	-	-
Dissolved Potassium (K)	1.09	1.10	0.925
Dissolved Rubidium (Rb)	-	-	-
Dissolved Selenium (Se)	-	-	-
Dissolved Silicon (Si)	-	-	-
Dissolved Silver (Ag)		-	-
Dissolved Sodium (Na)	3.73	3.34	3.22
Dissolved Strontium (Sr)	0.0313	0.0272	0.0256
Dissolved Tellurium (Te)	-	-	-
Dissolved Thallium (Tl)	-	-	-
Dissolved Tin (Sn)	-	-	-
Dissolved Titanium (Ti)	-	-	-
Dissolved Tungsten (W)	-	-	-
Dissolved Uranium (U)	-	-	-
Dissolved Vanadium (V)	-	-	-
Dissolved Zinc (Zn)	-	0.0031	-
Dissolved Zirconium (Zr)	-	-	-

Table 3.63: 2012 Quarterly mean concentrations for total metals – SW6

	Q1-Mean	Q2-Mean	Q3-Mean
Total Aluminum (Al)	0.0082	0.0237	0.0143
Total Antimony (Sb)	-	-	-
Total Arsenic (As)	-	-	-
Total Barium (Ba)	-	-	-
Total Beryllium (Be)	-	-	-
Total Bismuth (Bi)	-	0.0012	-
Total Boron (B)	-	-	-
Total Cadmium (Cd)	-	-	-
Total Calcium (Ca)	16.60	13.07	14.10
Total Cesium (Ce)	-	-	-
Total Chromium (Cr)	-	-	-
Total Cobalt (Co)	-	-	-
Total Copper (Cu)	0.0012	0.0011	0.0012
Total Iron (Fe)	0.0210	0.0360	-
Total Lead (Pb)	-	-	-
Total Lithium (Li)	-	-	-
Total Magnesium (Mg)	3.51	2.70	3.06
Total Manganese (Mn)	0.0019	0.0038	0.0031
Total Mercury (Hg)	-	-	-
Total Molybdenum (Mo)	-	-	-
Total Nickel (Ni)	-	-	-
Total Phosphorous	-	-	-
Total Potassium (K)	1.16	0.95	0.98
Total Rubidium (Rb)	-	-	-
Total Selenium (Se)	-	-	-
Total Silicon (Si)	-	-	-
Total Silver (Ag)	-	-	-
Total Sodium (Na)	3.80	2.88	3.24
Total Strontium (Sr)	0.0321	0.0265	0.0273
Total Tellurium (Te)	-	-	-
Total Thallium (Tl)	-	-	-
Total Tin (Sn)	-	-	-
Total Titanium (Ti)	-	-	-
Total Tungsten (W)	-	-	-
Total Uranium (U)	-	-	-
Total Vanadium (V)	-	-	-
Total Zinc (Zn)	-	0.005	-
Total Zirconium (Zr)	-	-	-

Table 3.64: 2012 Quarterly mean concentrations for inorganics – SW7

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	22.95	54.07	65.03	43.90
Conductivity	55.75	117.00	136.43	105.67
Dissolved Chloride (Cl)	0.195	0.165	0.227	0.500
Dissolved Sulphate (SO4)	1.77	1.10	3.16	4.87
Hardness (CaCO3)	22.01	55.97	72.43	48.43
Nitrate (N)	0.0395	0.250	0.105	0.305
Nitrite (N)	-	-	-	-
pH	6.94	7.76	7.67	7.35
Total Ammonia-N	0.0215	0.030	-	0.058
Total Phosphorus	0.019	0.011	0.018	0.012
Total Suspended Solids	17.75	10.87	6.75	4.20
Acidity (as CaCO3)	2.80	2.73	2.67	4.94
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0049	-	-
Cyanide, Free	-	-	-	-

Table 3.65: 2012 Quarterly mean concentrations for dissolved metals – SW7

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.0809	0.0054	0.0557	0.0980
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	0.0011	-
Dissolved Barium (Ba)	0.0120	0.0150	0.0210	0.0110
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	0.00002	-	-	-
Dissolved Calcium (Ca)	7.42	19.37	23.57	14.80
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	-	-	-	0.0010
Dissolved Iron (Fe)	0.228	0.101	0.455	0.630
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	0.86	1.82	3.33	2.80
Dissolved Manganese (Mn)	0.0199	0.0470	0.0327	0.0359
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	0.540	0.630	0.747	0.765
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	4.20	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.18	1.07	1.61	1.49
Dissolved Strontium (Sr)	0.0126	0.0274	0.0406	0.0300
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0039	-	0.0023	0.0033
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	0.0010	-
Dissolved Zinc (Zn)	0.0033	0.0076	0.0035	0.0060
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.66: 2012 Quarterly mean concentrations for total metals – SW7

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.1580	0.0666	0.1049	0.1547
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	0.0012	-
Total Barium (Ba)	0.0120	0.0160	0.0135	0.0120
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	-
Total Calcium (Ca)	6.43	19.10	23.23	16.50
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	-	-	-
Total Cobalt (Co)	-	-	-	-
Total Copper (Cu)	-	-	0.0012	0.0015
Total Iron (Fe)	0.4880	0.4170	0.6697	0.8903
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	0.822	1.79	3.22	2.96
Total Manganese (Mn)	0.0439	0.0727	0.0417	0.0410
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	-	0.615	0.673	0.980
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	3.70	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	1.02	1.04	1.56	1.56
Total Strontium (Sr)	0.0123	0.0278	0.0401	0.0306
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0060	0.0074	0.0046	0.0042
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	-	0.0012	-
Total Zinc (Zn)	0.0030	0.0039	-	0.0079
Total Zirconium (Zr)	-	-	-	-

Table 3.67: 2012 Quarterly mean concentrations for inorganics – SW8

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	61.55	24.30	75.10	78.60
Conductivity	128.45	78.00	156.00	160.33
Dissolved Chloride (Cl)	0.280	0.230	0.237	0.360
Dissolved Sulphate (SO4)	3.31	4.03	2.75	1.18
Hardness (CaCO3)	66.15	38.40	80.63	72.87
Nitrate (N)	0.197	0.134	0.114	0.108
Nitrite (N)	-	-	-	-
pH	7.23	7.36	7.86	7.72
Total Ammonia-N	0.224	0.022	-	0.114
Total Phosphorus	0.035	0.020	0.049	0.0059
Total Suspended Solids	86.2	20.30	24.03	3.85
Acidity (as CaCO3)	3.50	2.67	2.60	4.13
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0056	0.0059	-
Cyanide, Free	-	-	-	-

Table 3.68: 2012 Quarterly mean concentrations for dissolved metals – SW8

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1640	0.1411	0.0187	-
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	0.0310	-	0.0173	0.0167
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	22.31	11.78	27.03	25.53
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	0.0014	0.0012	-	-
Dissolved Iron (Fe)	0.2765	0.4050	0.2830	0.1797
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	2.52	2.19	3.18	2.22
Dissolved Manganese (Mn)	0.3614	0.0191	0.0555	0.1363
Dissolved Mercury (Hg)	-	0.000013	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	0.765	0.750	0.790	0.563
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	3.70	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.47	1.26	1.47	1.20
Dissolved Strontium (Sr)	0.0334	0.0232	0.0437	0.0335
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0027	0.0035	-	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0120	-	-	0.0040
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.69: 2012 Quarterly mean concentrations for total metals – SW8

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.1973	0.2482	0.0520	0.0199
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	0.0010	-	-
Total Barium (Ba)	0.0350	0.0120	0.0225	0.0190
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	-
Total Calcium (Ca)	23.13	11.42	25.57	28.10
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	0.0011	-	-
Total Cobalt (Co)	-	-	-	-
Total Copper (Cu)	0.0012	0.0016	-	-
Total Iron (Fe)	0.757	0.720	0.598	0.720
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	2.54	2.12	2.88	2.25
Total Manganese (Mn)	0.4169	0.0309	0.0964	0.1540
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	0.970	0.700	0.760	0.570
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	-	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	1.51	1.20	1.30	1.35
Total Strontium (Sr)	0.0337	0.0234	0.0421	0.0357
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0078	0.0071	0.0036	-
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	0.0017	-	-
Total Zinc (Zn)	-	0.0036	-	-
Total Zirconium (Zr)	-	-	-	-

Table 3.70: 2012 Quarterly mean concentrations for inorganics – SW9

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	94.50	80.43	109.87	112.93
Conductivity	174	165.93	215	222
Dissolved Chloride (Cl)	0.350	0.305	0.337	0.510
Dissolved Sulphate (SO4)	1.25	1.10	2.71	0.78
Hardness (CaCO3)	94.1	85.20	114.60	101.50
Nitrate (N)	0.143	0.083	0.115	0.121
Nitrite (N)	-	-	-	-
pH	7.54	7.54	7.85	7.71
Total Ammonia-N	0.035	0.020	-	0.032
Total Phosphorus	0.0115	0.0078	0.0389	0.0111
Total Suspended Solids	24.20	2.00	12.90	3.23
Acidity (as CaCO3)	4.20	3.93	3.47	4.73
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0059	0.0059	0.0059
Cyanide, Free	-	-	-	-

Table 3.71: 2012 Quarterly mean concentrations for dissolved metals – SW9

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1030	0.0720	0.0175	0.0268
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	-	0.0157	0.0177	0.0180
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	9.24	26.10	35.47	31.20
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	-	-	-	-
Dissolved Iron (Fe)	0.187	0.211	0.208	0.185
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	2.21	4.92	6.36	5.78
Dissolved Manganese (Mn)	0.014	0.030	0.074	0.175
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.26	1.83	1.39	1.44
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	5.20	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.44	2.58	2.91	2.88
Dissolved Strontium (Sr)	0.0180	0.0463	0.0611	0.0520
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	-	0.0022	-	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0062	0.0042	0.0040	0.0048
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.72: 2012 Quarterly mean concentrations for total metals – SW9

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.270	0.080	0.105	0.069
Total Antimony (Sb)	-	-		-
Total Arsenic (As)	-	-	-	-
Total Barium (Ba)	0.0290	0.0160	0.0235	0.0193
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	-
Total Calcium (Ca)	29.51	25.77	34.70	35.03
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	-	-	-
Total Cobalt (Co)	-	-	-	-
Total Copper (Cu)	-	-	0.0023	-
Total Iron (Fe)	0.5560	0.1917	0.4920	0.3953
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	4.85	4.86	6.13	5.98
Total Manganese (Mn)	0.1092	0.0372	0.1420	0.1687
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	1.51	1.77	1.40	1.52
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	4.30	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	2.70	2.54	2.73	2.98
Total Strontium (Sr)	0.0467	0.0465	0.0599	0.0565
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0118	0.0029	0.0051	0.0034
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	0.0010	-	-	-
Total Zinc (Zn)	0.0039	0.0035	-	-
Total Zirconium (Zr)	-	-	-	-

Table 3.73: 2012 Quarterly mean concentrations for inorganics – SW10

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	44.45	37.27	59.20	57.27
Conductivity	97.00	89.83	122.60	120.67
Dissolved Chloride (Cl)	0.235	0.205	0.240	0.320
Dissolved Sulphate (SO4)	3.36	2.42	1.54	2.05
Hardness (CaCO3)	47.20	44.43	61.77	54.07
Nitrate (N)	0.0675	0.0600	0.0563	0.0565
Nitrite (N)	-	-	-	-
pH	7.25	7.37	7.51	7.49
Total Ammonia-N	0.037	-	0.0215	0.0357
Total Phosphorus	0.0595	0.0073	0.0356	0.0087
Total Suspended Solids	37.35	31.50	228.70	4.80
Acidity (as CaCO3)	3.20	3.20	3.13	5.00
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0058	-	-
Cyanide, Free	-	-	-	-

Table 3.74: 2012 Quarterly mean concentrations for dissolved metals – SW10

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.0786	0.1398	0.0581	0.0458
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	-	0.0115	0.0120	0.0110
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	15.28	14.37	19.93	17.33
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	0.0013	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	-	-	-	-
Dissolved Iron (Fe)	0.483	0.727	1.162	0.780
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	2.21	2.11	2.90	2.62
Dissolved Manganese (Mn)	0.0775	0.0390	0.0778	0.1297
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	0.630	0.680	0.695	0.615
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	4.60	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.49	1.43	1.71	1.58
Dissolved Strontium (Sr)	0.0253	0.0254	0.0344	0.0289
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0023	0.0038	0.0025	0.0022
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	0.0012	-
Dissolved Zinc (Zn)	0.0066	0.0041	-	0.0049
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.75: 2012 Quarterly mean concentrations for total metals – SW10

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.1665	0.1472	0.6560	0.0608
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	0.0021	-
Total Barium (Ba)	0.0120	0.0115	0.0190	0.0110
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	0.0014	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	0.000057	-
Total Calcium (Ca)	16.25	14.06	19.97	19.20
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	0.00083	0.0048	-
Total Cobalt (Co)	-	-	0.0016	-
Total Copper (Cu)	-	-	0.0028	-
Total Iron (Fe)	1.42	0.94	3.85	1.22
Total Lead (Pb)	-	-	0.0011	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	2.25	2.09	2.92	2.67
Total Manganese (Mn)	0.097	0.039	0.134	0.146
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	0.0022	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	0.7800	0.6300	0.7750	0.6550
Total Rubidium (Rb)	--	-	-	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	3.90	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	1.53	1.40	1.62	1.65
Total Strontium (Sr)	0.0251	0.0258	0.0358	0.0310
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0069	0.0059	0.0326	0.0028
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	0.0014	0.0011	0.0055	0.0011
Total Zinc (Zn)	0.0042	0.0045	0.0146	0.0039
Total Zirconium (Zr)	-	0.0058	-	-

Table 3.76: 2012 Quarterly mean concentrations for inorganics – SW11

	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	8.10	9.40	16.25
Conductivity	37.37	34.60	48.00
Dissolved Chloride (Cl)	0.410	0.135	1.44
Dissolved Sulphate (SO4)	1.86	-	2.29
Hardness (CaCO3)	19.63	22.10	23.20
Nitrate (N)	0.064	-	0.110
Nitrite (N)	-	-	-
pH	5.77	5.50	6.05
Total Ammonia-N	0.020	0.032	0.108
Total Phosphorus	0.023	0.021	0.0329
Total Suspended Solids	18.00	17.15	88.40
Acidity (as CaCO3)	9.80	14.80	16.10
Oil and Grease	-	-	-
Cyanide, Weak Acid Diss	-	-	-
Cyanide, Total	0.0066	-	-
Cyanide, Free	-	-	-

Table 3.77: 2012 Quarterly mean concentrations for dissolved metals – SW11

	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.4473	0.4970	0.3875
Dissolved Antimony (Sb)	-	-	-
Dissolved Arsenic (As)	0.0011	0.0012	-
Dissolved Barium (Ba)	-	-	-
Dissolved Beryllium (Be)	-	-	-
Dissolved Bismuth (Bi)	-	-	-
Dissolved Boron (B)	-	-	-
Dissolved Cadmium (Cd)	0.000030	0.000040	0.000029
Dissolved Calcium (Ca)	5.78	6.89	6.57
Dissolved Cesium (Ce)	-	-	-
Dissolved Chromium (Cr)	0.0014	0.0011	-
Dissolved Cobalt (Co)	-	0.00059	0.00059
Dissolved Copper (Cu)	0.0011	-	-
Dissolved Iron (Fe)	0.92	1.76	1.40
Dissolved Lead (Pb)	-	-	-
Dissolved Lithium (Li)	-	-	-
Dissolved Magnesium (Mg)	1.22	1.26	1.65
Dissolved Manganese (Mn)	0.0310	0.0513	0.0505
Dissolved Mercury (Hg)	-	-	-
Dissolved Molybdenum (Mo)	-	-	-
Dissolved Nickel (Ni)	-	-	-
Dissolved Phosphorous (P)	-	-	-
Dissolved Potassium (K)	-	-	-
Dissolved Rubidium (Rb)	-	-	-
Dissolved Selenium (Se)	0.00054	-	-
Dissolved Silicon (Si)	3.80	-	-
Dissolved Silver (Ag)	-	-	-
Dissolved Sodium (Na)	1.09	1.05	1.42
Dissolved Strontium (Sr)	0.0132	0.0161	0.0150
Dissolved Tellurium (Te)	-	-	-
Dissolved Thallium (Tl)	-	-	-
Dissolved Tin (Sn)	-	-	-
Dissolved Titanium (Ti)	0.0079	0.0108	0.0097
Dissolved Tungsten (W)	-	-	-
Dissolved Uranium (U)	-	-	-
Dissolved Vanadium (V)	0.0013	0.0013	-
Dissolved Zinc (Zn)	0.0107	0.0096	0.0045
Dissolved Zirconium (Zr)	-	-	-

Table 3.78: 2012 Quarterly mean concentrations for total metals – SW11

	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.9163	0.7360	0.5945
Total Antimony (Sb)	-	-	-
Total Arsenic (As)	0.0011	0.0015	-
Total Barium (Ba)	0.0120	0.0130	0.0110
Total Beryllium (Be)	-	-	-
Total Bismuth (Bi)	-	-	-
Total Boron (B)	-	-	-
Total Cadmium (Cd)	0.000041	0.000035	0.000034
Total Calcium (Ca)	5.75	6.66	7.30
Total Cesium (Ce)	-	-	-
Total Chromium (Cr)	0.0019	0.0017	0.0014
Total Cobalt (Co)	0.00067	0.00073	0.00074
Total Copper (Cu)	0.0016	0.0014	-
Total Iron (Fe)	1.50	2.35	1.75
Total Lead (Pb)	-	-	-
Total Lithium (Li)	-	-	-
Total Magnesium (Mg)	1.43	1.40	1.71
Total Manganese (Mn)	0.0377	0.0529	0.0552
Total Mercury (Hg)	-	-	-
Total Molybdenum (Mo)	-	-	-
Total Nickel (Ni)	-	0.0021	-
Total Phosphorous (P)	-	-	-
Total Potassium (K)	-	-	-
Total Rubidium (Rb)	-	-	-
Total Selenium (Se)	-	-	-
Total Silicon (Si)	4.10	-	-
Total Silver (Ag)	-	-	-
Total Sodium (Na)	1.07	0.97	1.44
Total Strontium (Sr)	0.0146	0.0166	0.0167
Total Tellurium (Te)	-	-	-
Total Thallium (Tl)	-	-	-
Total Tin (Sn)	-	-	-
Total Titanium (Ti)	0.0307	0.0237	0.0194
Total Tungsten (W)	-	-	-
Total Uranium (U)	-	-	-
Total Vanadium (V)	0.0019	0.0017	0.0016
Total Zinc (Zn)	0.0061	0.0062	0.0074
Total Zirconium (Zr)	-	-	-

Table 3.79: 2012 Quarterly mean concentrations for inorganics – TL1A

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	10.70	18.00	54.97	30.10
Conductivity	43.20	51.38	113.57	75.43
Dissolved Chloride (Cl)	0.440	0.330	0.207	1.215
Dissolved Sulphate (SO4)	3.60	1.95	1.23	1.92
Hardness (CaCO3)	17.60	24.20	59.83	33.60
Nitrate (N)	0.109	-	-	0.0615
Nitrite (N)	-	-	-	-
pH	6.69	6.84	7.09	6.72
Total Ammonia-N	-	0.027	0.085	0.130
Total Phosphorus	0.0518	0.015	0.008	0.027
Total Suspended Solids	8.00	4.30	6.17	4.37
Acidity (as CaCO3)	5.00	4.25	8.20	7.07
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0065	-	-
Cyanide, Free	-	-	-	-

Table 3.80: 2012 Quarterly mean concentrations for dissolved metals – TL1A

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1280	0.1060	0.0422	0.1053
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	0.0010	-
Dissolved Barium (Ba)	-	-	0.0130	0.0110
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	0.000037	-	-
Dissolved Calcium (Ca)	4.98	6.83	17.27	9.45
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	0.00051	0.0030	0.0030
Dissolved Copper (Cu)	0.0014	0.0011	-	-
Dissolved Iron (Fe)	0.231	0.291	1.82	1.51
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	1.25	1.72	4.08	2.44
Dissolved Manganese (Mn)	0.0076	0.0555	1.39	0.326
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	0.530	0.520	-	0.660
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	3.50	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	0.960	1.16	1.33	1.45
Dissolved Strontium (Sr)	0.0105	0.0159	0.0400	0.0216
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0021	0.0037	-	0.0028
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0130	0.0050	-	0.0057
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.81: 2012 Quarterly mean concentrations for total metals – TL1A

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.2220	0.1378	0.0606	0.2147
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	0.0011	-
Total Barium (Ba)	-	-	0.0140	0.0130
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	0.000020	-	0.000022
Total Calcium (Ca)	4.10	6.89	16.47	10.67
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	0.00051	-	-
Total Cobalt (Co)	-	0.00054	0.0030	0.0030
Total Copper (Cu)	-	-	-	-
Total Iron (Fe)	0.353	0.516	2.74	2.51
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	1.09	1.78	3.86	2.65
Total Manganese (Mn)	0.0075	0.0648	1.37	0.370
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	-	-	-	0.630
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	0.00052	-	-
Total Silicon (Si)	-	3.30	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	0.960	1.17	1.22	1.50
Total Strontium (Sr)	0.0096	0.0159	0.0391	0.0230
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0063	0.0030	0.0023	0.0088
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	-	-	0.0015
Total Zinc (Zn)	-	-	0.0031	0.0062
Total Zirconium (Zr)	-	-	-	-

Table 3.82: 2012 Quarterly mean concentrations for inorganics – TL2A

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	33.00	51.33	76.80	63.20
Conductivity	1.00	97.50	126.00	148.50
Dissolved Chloride (Cl)	1.00	0.500	0.285	0.580
Dissolved Sulphate (SO4)	1.00	3.10	1.54	1.78
Hardness (CaCO3)	1.00	44.40	67.40	76.90
Nitrate (N)	0.100	-	0.0340	-
Nitrite (N)	0.010	-	-	-
pH	-	7.30	7.25	7.35
Total Ammonia-N	0.050	0.0210	0.029	0.0390
Total Phosphorus	0.0020	0.0672	0.0845	0.0375
Total Suspended Solids	1.00	90.90	128.45	7.33
Acidity (as CaCO3)	2.00	5.80	5.50	5.60
Oil and Grease	2.00	-	-	-
Cyanide, Weak Acid Diss	0.0020	-	-	-
Cyanide, Total	0.0020	-	0.0063	-
Cyanide, Free	0.0020	0.0050	-	-

Table 3.83: 2012 Quarterly mean concentrations for dissolved metals – TL2A

	Q2-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1380	0.0835	0.0149	0.0692
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	0.0012	0.0011	-
Dissolved Barium (Ba)	-	0.0125	-	0.0120
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	10.00	16.80	23.80	17.65
Dissolved Chromium (Cr)	-	0.0012	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	0.0015	0.0017	-	-
Dissolved Iron (Fe)	0.310	0.358	0.419	0.417
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	2.94	4.91	6.66	5.56
Dissolved Manganese (Mn)	0.0226	0.0947	0.0316	0.0419
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.98	2.21	1.96	2.95
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	2.90	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.72	2.56	3.23	2.73
Dissolved Strontium (Sr)	0.0207	0.0364	0.0557	0.0402
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0028	0.0023	-	-
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0077	0.0041	0.0040	-
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.84: 2012 Quarterly mean concentrations for total metals – TL2A

	Q2-Mean	Q3-Mean	Q4-Mean	Q4-Mean
Total Aluminum (Al)	1.7700	0.6190	0.0947	0.4155
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	0.0012	0.0012	-
Total Barium (Ba)	0.0190	0.0163	0.0100	-
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	0.000019	0.000039	-	-
Total Calcium (Ca)	9.10	16.33	23.35	19.85
Total Chromium (Cr)	0.0034	0.0021	-	-
Total Cobalt (Co)	0.0010	0.00077	-	-
Total Copper (Cu)	0.0074	0.0040	-	-
Total Iron (Fe)	2.00	1.07	0.7530	0.9350
Total Lead (Pb)	0.0018	0.0043	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	3.14	5.06	6.39	6.35
Total Manganese (Mn)	0.0623	0.1315	0.1202	0.0620
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	0.0027	0.0027	-	-
Total Potassium (K)	2.27	2.27	1.90	-
Total Selenium (Se)	-	-	-	-
Total Silicon (Si)	-	2.70	-	-
Total Silver (Ag)	0.00083	0.00072	-	-
Total Sodium (Na)	1.49	2.57	3.07	3.00
Total Strontium (Sr)	0.0227	0.0364	0.0560	0.0440
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0724	0.0202	0.0047	0.0210
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	0.0032	0.0019	-	-
Total Zinc (Zn)	0.0112	0.0074	-	-
Total Zirconium (Zr)	-	-	-	-

Table 3.85: 2012 Quarterly mean concentrations for inorganics – TL3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	27.25	48.13	84.70	60.50
Conductivity	76.80	109.50	177.97	136.50
Dissolved Chloride (Cl)	1.08	0.90	1.57	2.55
Dissolved Sulphate (SO4)	3.64	1.45	1.29	2.61
Hardness (CaCO3)	34.70	58.23	89.43	60.50
Nitrate (N)	0.135	-	0.0640	0.135
Nitrite (N)	-	-	-	-
pH	7.29	7.45	7.32	7.35
Total Ammonia-N	-	0.0290	-	0.0840
Total Phosphorus	0.0319	0.0196	0.0283	0.0740
Total Suspended Solids	23.45	7.50	26.10	57.00
Acidity (as CaCO3)	2.60	2.73	7.00	6.20
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0055	-	-
Cyanide, Free	-	-	-	-

Table 3.86: 2012 Quarterly mean concentrations for dissolved metals – TL3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1591	0.0679	0.0153	0.0647
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	-	-
Dissolved Barium (Ba)	0.0150	-	0.0115	0.0110
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	0.000021	-	-
Dissolved Calcium (Ca)	19.82	13.83	27.43	14.90
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	-
Dissolved Copper (Cu)	0.0017	0.0016	-	0.0010
Dissolved Iron (Fe)	0.5995	0.2043	0.4427	0.8890
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	5.49	3.77	7.13	4.06
Dissolved Manganese (Mn)	0.0961	0.0189	0.1932	0.0611
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.47	1.19	1.03	1.02
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	-	-	-
Dissolved Silicon (Si)	-	3.70	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	3.25	2.38	2.40	2.17
Dissolved Strontium (Sr)	0.0414	0.0301	0.0571	0.0344
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0082	0.0022	-	0.0021
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0114	0.0132	-	0.0041
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.87: 2012 Quarterly mean concentrations for total metals – TL3

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.6765	0.1617	0.4307	0.5630
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	-	-
Total Barium (Ba)	0.0160	0.0105	0.0145	0.0150
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	0.000020
Total Calcium (Ca)	20.46	13.33	27.50	16.27
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	0.0014	0.00057	0.0013	0.0015
Total Cobalt (Co)	0.00055	-	0.00059	0.00058
Total Copper (Cu)	0.0020	0.0014	0.0012	0.0020
Total Iron (Fe)	1.47	0.4510	1.09	1.96
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	5.59	3.61	7.07	4.36
Total Manganese (Mn)	0.1133	0.0278	0.1979	0.1013
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	1.57	1.11	1.01	1.46
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	0.00046	-	-
Total Silicon (Si)	-	3.50	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	3.34	1.95	2.42	2.22
Total Strontium (Sr)	0.0440	0.0289	0.0597	0.0349
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0272	0.0050	0.0191	0.0288
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	0.0019	0.0011	0.0014	0.0019
Total Zinc (Zn)	0.0050	-	0.0031	0.0079
Total Zirconium (Zr)	-	-	-	-

Table 3.88: 2012 Quarterly mean concentrations for inorganics – JCTA

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Alkalinity (Total as CaCO3)	55.70	35.07	77.47	52.65
Conductivity	119.60	86.27	159.63	120.90
Dissolved Chloride (Cl)	0.765	0.687	0.863	1.83
Dissolved Sulphate (SO4)	3.59	2.12	0.653	2.33
Hardness (CaCO3)	57.35	42.43	83.47	52.60
Nitrate (N)	0.0575	-	0.063	0.054
Nitrite (N)	-	-	-	-
pH	6.91	7.25	7.43	7.20
Total Ammonia-N	0.0710	-	0.0600	0.101
Total Phosphorus	0.0138	0.0167	0.0368	0.0316
Total Suspended Solids	6.00	4.40	18.93	2.20
Acidity (as CaCO3)	5.60	3.07	4.60	7.50
Oil and Grease	-	-	-	-
Cyanide, Weak Acid Diss	-	-	-	-
Cyanide, Total	-	0.0065	-	-
Cyanide, Free	-	-	-	-

Table 3.89: 2012 Quarterly mean concentrations for dissolved metals – JCTA

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Dissolved Aluminum (Al)	0.1190	0.0778	0.0205	0.0744
Dissolved Antimony (Sb)	-	-	-	-
Dissolved Arsenic (As)	-	-	0.0010	-
Dissolved Barium (Ba)	0.0130	-	0.010	0.010
Dissolved Beryllium (Be)	-	-	-	-
Dissolved Bismuth (Bi)	-	-	-	-
Dissolved Boron (B)	-	-	-	-
Dissolved Cadmium (Cd)	-	-	-	-
Dissolved Calcium (Ca)	18.06	11.79	23.53	14.40
Dissolved Cesium (Ce)	-	-	-	-
Dissolved Chromium (Cr)	-	-	-	-
Dissolved Cobalt (Co)	-	-	-	0.00087
Dissolved Copper (Cu)	0.0011	-	-	-
Dissolved Iron (Fe)	0.253	0.279	0.701	1.34
Dissolved Lead (Pb)	-	-	-	-
Dissolved Lithium (Li)	-	-	-	-
Dissolved Magnesium (Mg)	3.00	3.13	6.01	4.04
Dissolved Manganese (Mn)	0.142	0.048	0.456	0.347
Dissolved Mercury (Hg)	-	-	-	-
Dissolved Molybdenum (Mo)	-	-	-	-
Dissolved Nickel (Ni)	-	-	-	-
Dissolved Phosphorous (P)	-	-	-	-
Dissolved Potassium (K)	1.25	1.08	0.967	0.925
Dissolved Rubidium (Rb)	-	-	-	-
Dissolved Selenium (Se)	-	0.00043	-	-
Dissolved Silicon (Si)	-	3.60	-	-
Dissolved Silver (Ag)	-	-	-	-
Dissolved Sodium (Na)	1.84	1.80	2.02	2.10
Dissolved Strontium (Sr)	0.0329	0.0255	0.0483	0.0328
Dissolved Tellurium (Te)	-	-	-	-
Dissolved Thallium (Tl)	-	-	-	-
Dissolved Tin (Sn)	-	-	-	-
Dissolved Titanium (Ti)	0.0026	0.0024	-	0.0026
Dissolved Tungsten (W)	-	-	-	-
Dissolved Uranium (U)	-	-	-	-
Dissolved Vanadium (V)	-	-	-	-
Dissolved Zinc (Zn)	0.0059	0.0063	-	0.0048
Dissolved Zirconium (Zr)	-	-	-	-

Table 3.90: 2012 Quarterly mean concentrations for total metals – JCTA

	Q1-Mean	Q2-Mean	Q3-Mean	Q4-Mean
Total Aluminum (Al)	0.1762	0.2117	0.2710	0.2015
Total Antimony (Sb)	-	-	-	-
Total Arsenic (As)	-	-	0.0011	-
Total Barium (Ba)	0.0140	0.0120	0.0140	0.0120
Total Beryllium (Be)	-	-	-	-
Total Bismuth (Bi)	-	-	-	-
Total Boron (B)	-	-	-	-
Total Cadmium (Cd)	-	-	-	-
Total Calcium (Ca)	18.76	11.64	23.63	16.65
Total Cesium (Ce)	-	-	-	-
Total Chromium (Cr)	-	-	0.0010	-
Total Cobalt (Co)	-	-	0.00073	0.0010
Total Copper (Cu)	-	0.0012	-	-
Total Iron (Fe)	0.778	0.627	1.54	2.29
Total Lead (Pb)	-	-	-	-
Total Lithium (Li)	-	-	-	-
Total Magnesium (Mg)	3.11	3.11	5.91	4.21
Total Manganese (Mn)	0.157	0.068	0.628	0.386
Total Mercury (Hg)	-	-	-	-
Total Molybdenum (Mo)	-	-	-	-
Total Nickel (Ni)	-	-	-	-
Total Phosphorous (P)	-	-	-	-
Total Potassium (K)	1.22	1.12	0.943	0.990
Total Rubidium (Rb)	-	-	-	-
Total Selenium (Se)	-	0.00044	-	1.1000
Total Silicon (Si)	-	3.00	-	-
Total Silver (Ag)	-	-	-	-
Total Sodium (Na)	1.92	1.75	2.03	2.19
Total Strontium (Sr)	0.0348	0.0267	0.0468	0.0354
Total Tellurium (Te)	-	-	-	-
Total Thallium (Tl)	-	-	-	-
Total Tin (Sn)	-	-	-	-
Total Titanium (Ti)	0.0053	0.0074	0.0115	0.0072
Total Tungsten (W)	-	-	-	-
Total Uranium (U)	-	-	-	-
Total Vanadium (V)	-	-	0.0012	0.0012
Total Zinc (Zn)	-	0.0031	0.0030	0.0046
Total Zirconium (Zr)	-	-	-	-

3.2 Sediment

The results from the sediment sampling program have been tabulated below and the laboratory Certificates of Analysis are included in Appendix A. Sediment samples were collected at nine lake locations and 10 stream locations, and were analyzed for grain size and inorganics.

3.2.1 Surface Sediment Grain Size

Sediment grain size distribution was analyzed for the lakes (Wabigoon Lake, Wabigoon Lake Reference Site and Thunder Lake) and used in conjunction with benthic invertebrate community analysis to determine any correlations between the two sets of data (Table 3.91). Laboratory results indicated higher percentages of silt and clay at the Wabigoon Lake sampling location than at the Wabigoon Lake Reference site location. However, Wabigoon Lake and the Wabigoon Lake Reference site are considered characteristically similar and therefore make a good pairing for comparison. Sediment grain size percentages at the two sites ranged from 50% clay and 32% silt at the Wabigoon Lake Reference Site to 26% clay and 61% silt at the Wabigoon Lake sampling site.

Sediment grain size distribution in Thunder Lake showed a high percent of sand (84%), followed by silt (15%), and clay (1.1%).

No statistical analyses were completed for sediment grain size distribution as the minimum number of samples needed to complete statistical analysis was not collected (minimum of 3 per site).

Sediment grain size distribution was also analyzed for two streams (Blackwater creek, and an unnamed creek). Blackwater creek is a potentially impacted stream that drains into Wabigoon Lake, while the unnamed creek runs on either side of the former tree nursery and drains into Thunder Lake. Laboratory results indicate higher percentages of sand (47%) and silt (30%) in samples collected at Blackwater creek. Higher percentages of gravel (41%) and sand (67%) were found at the unnamed creek. Percent fines represented by clays ranged from 35% in Blackwater creek to 1.8% in the unnamed creek (Table 3.92).

Table 3.91: Grain size distribution and moisture in Sediments - Lakes

Streams													
Parameter	Units	Samples						Statistics					
Blackwater Creek		SB12-11A	SB12-12	SB12-13	SB12-14	SB12-15A	SB12-16	Min	Max	Med	Mean	SD	SE
Grain Size													
Gravel (>2mm)	%	0.61	29.9	4.85	2.32	<0.1	<0.1	0.6	29.9	3.6	9.4	13.8	5.6
Sand (2.0mm - 0.063mm)	%	26.2	12.7	78.4	78.7	47.9	39.8	12.7	78.7	43.9	47.3	27.0	11.0
Silt (0.063mm - 4um)	%	48.5	37.9	12.4	14.5	34.6	32.6	12.4	48.5	33.6	30.1	14.0	5.7
Clay (<4um)	%	24.8	19.5	4.28	4.44	17.5	27.7	4.3	27.7	18.5	16.4	10.0	4.1
Moisture	%	36.8	68.5	18.6	20.2	30.0	36.0	18.6	68.5	33.0	35.0	18.1	7.4
Tree Nursery Creek		SB12-2A	SB12-3	SB12-4A	SB12-5A								
Grain Size													
Gravel (>2mm)	%	3.53	77.8	<0.10	<0.10			3.5	77.8	40.7	40.7	52.5	26.3
Sand (2.0mm - 0.063mm)	%	72.2	21.8	84.3	91.6			21.8	91.6	78.3	67.5	31.5	15.7
Silt (0.063mm - 4um)	%	22.1	0.23	12.8	6.65			0.2	22.1	9.7	10.4	9.3	4.7
Clay (<4um)	%	2.20	0.16	2.91	1.78			0.2	2.9	2.0	1.8	1.2	0.6
Moisture	%	17.5	19.0	22.8	22.1			17.5	22.8	20.6	20.4	2.5	1.3

Table 3.92: Grain size distribution and moisture in Sediments - Streams

Lakes													
Parameter	Units	Samples						Statistics					
Wabigoon Lake		SB12-22	SB12-23	SB12-24				Min	Max	Med	Mean	SD	SE
Grain Size													
Gravel (>2mm)	%	<0.10	<0.10	<0.10				<0.10	<0.10	<0.10	0.00	0	0
Sand (2.0mm - 0.063mm)	%	9.92	5.56	21.8				5.6	21.8	9.9	12.4	8.4	4.9
Silt (0.063mm - 4um)	%	62.8	63.6	57.9				57.9	63.6	62.8	61.4	3.1	1.8
Clay (<4um)	%	27.2	30.8	20.3				20.3	30.8	27.2	26.1	5.3	3.1
Moisture	%	57.5	67.2	53.0				53.0	67.2	57.5	59.2	7.3	4.2
Wabigoon Lake Reference		SB12-25	SB12-26										
Grain Size													
Gravel (>2mm)	%	<0.10	<0.10					<0.10	<0.10	<0.01	0.00	0	0
Sand (2.0mm - 0.063mm)	%	25.0	11.9					11.9	25.0	18.5	18.5	0	0
Silt (0.063mm - 4um)	%	30.3	33.5					30.3	33.5	31.9	31.9	0	0
Clay (<4um)	%	44.8	54.7					44.8	54.7	49.8	49.8	0	0
Moisture	%	54.9	62.0					54.9	62.0	58.5	58.5	0	0
Thunder Lake		SB12-17	SB12-18	SB12-19	SB12-20								
Grain Size													
Gravel (>2mm)	%	<0.10	<0.10	<0.10	<0.10			<0.10	<0.10	<0.01	0.00	0	0
Sand (2.0mm - 0.063mm)	%	59.1	82.5	97.0	95.7			59.1	97.0	89.1	83.6	17.6	8.8
Silt (0.063mm - 4um)	%	38.7	16.7	2.20	3.63			2.2	38.7	10.2	15.3	16.9	8.5
Clay (<4um)	%	2.17	0.81	0.80	0.66			0.7	2.2	0.8	1.1	0.7	0.4
Moisture	%	47.7	23.4	24.0	26.0			23.4	47.7	25.0	30.3	11.7	5.8

3.2.2 Surface Sediment Inorganics

Sediment inorganic parameters were analyzed for samples collected at the three lake sampling locations used in the study of benthic invertebrate communities. Metal results were compared to Provincial Sediment Quality Guidelines (PSQG) LEL and PSQG SEL standards, where available. Anions and nutrients were not compared to PSQG standards, as leachable parameters are not included in these guidelines.

Higher total phosphorus concentrations were observed in the Wabigoon Lake Reference Site compared to Wabigoon Lake and Thunder Lake (Table 3.93). Total phosphorus was elevated in both samples collected at the Wabigoon Lake Reference Site (SB 12-25 – 853 mg/kg and SB 12-26 – 793 mg/kg) when compared to PSQG. One sample had elevated levels of total phosphorus at one sampling location within Wabigoon Lake (SB12-24 – 644 mg/kg), when compared to PSQG. No exceedances of PSQG for phosphorus concentrations were found in samples collected at Thunder Lake.

One sampling location within the unnamed creek had concentrations of total phosphorus above the PSQG (SB12-3 – 680 mg/kg). No other exceedances were found at that location, or at the other sampling station within the unnamed creek. No exceedances of any parameters were found in sediment samples collected at the Blackwater Creek (Tables 3.93 and 3.94).

Grain size distribution in Wabigoon Lake and Wabigoon Lake Reference is similar, with both lakes having high silt and/or clay content. Thunder Lake has a high sand content. Differences in grain size distributions will result in differences in benthic invertebrate distribution.

Table 3.93: Summary of the inorganic analysis of the surface sediment – Lakes

Lakes							
Parameter	Units					PSQG	
Wabigoon Lake		SB12-22	SB12-23	SB12-24		LEL	SEL
Leachable Ammonia as N	mg/kg	304	380	96.9			
Leachable Bromide	mg/kg	<1.0	<1.0	<1.0			
Leachable Chloride	mg/kg	<20	<20	<20			
Leachable Fluoride	mg/kg	1.3	2.8	<1.0			
Leachable Nitrate-N	mg/kg	<1.0	<1.0	<1.0			
Leachable Nitrite-N	mg/kg	<1.0	<1.0	<1.0			
Leachable Total Kjeldahl Nitrogen	mg/kg	4010	4740	2140			
Leachable Sulphate	mg/kg	189	55	29			
Phosphorus, Total	mg/kg	388	504	**644**		600	2000
Nitrate+Nitrite-N	mg/L	<1.0	1.3	<1.0			
Mercury (Hg)	mg/kg	0.050	0.034	0.033		0.2	2
Zirconium (Zr)	mg/kg	6.0	9.3	6.2			
Wabigoon Lake Reference		**SB12-25**	**SB12-26**				
Leachable Ammonia as N	mg/kg	81.3	106				
Leachable Bromide	mg/kg	<1.0	<1.0				
Leachable Chloride	mg/kg	<20	<20				
Leachable Fluoride	mg/kg	<1.0	1.1				
Leachable Nitrate-N	mg/kg	1.9	2.2				
Leachable Nitrite-N	mg/kg	<1.0	<1.0				
Leachable Total Kjeldahl Nitrogen	mg/kg	1420	1480				
Leachable Sulphate	mg/kg	22	37				
Phosphorus, Total	mg/kg	**853**	**793**			600	2000
Nitrate+Nitrite-N	mg/L	1.0	<1.0				
Mercury (Hg)	mg/kg	0.039	0.044			0.2	2
Zirconium (Zr)	mg/kg	8.3	11.7				
Thunder Lake		**SB12-17**	**SB12-18**	**SB12-19**	**SB12-20**		
Leachable Ammonia as N	mg/kg	104	28.2	14.3	25.6		
Leachable Bromide	mg/kg	<1.0	<1.0	<1.0	<1.0		
Leachable Chloride	mg/kg	<20	<20	<20	<20		
Leachable Fluoride	mg/kg	<1.0	<1.0	<1.0	<1.0		
Leachable Nitrate-N	mg/kg	<1.0	<1.0	<1.0	<1.0		
Leachable Nitrite-N	mg/kg	<1.0	<1.0	<1.0	<1.0		
Leachable Total Kjeldahl Nitrogen	mg/kg	1570	270	260	440		
Leachable Sulphate	mg/kg	49	<20	<20	<20		
Phosphorus, Total	mg/kg	403	192	341	155	600	2000
Nitrate+Nitrite-N	mg/L	<1.0	<1.0	<1.0	<1.0		
Mercury (Hg)	mg/kg	0.011	<0.010	<0.010	<0.010	0.2	2
Zirconium (Zr)	mg/kg	<5.0	<5.0	<5.0	<5.0		

Table 3.94: Summary of the inorganic analysis of the surface sediment – Streams

Streams									
Parameter	units	Samples						PSQG	
Blackwater Creek		SB12-11A	SB12-12	SB12-13	SB12-14	SB12-15A	SB12-16	LEL	SEL
Leachable Ammonia as N	mg/kg	70.1	384	47.7	39.9	105	107		
Leachable Bromide	mg/kg	<1.0	3.6	<1.0	<1.0	1.2	<1.0		
Leachable Chloride	mg/kg	<20	<20	<20	<20	<20	<20		
Leachable Fluoride	mg/kg	1.4	4.3	<1.0	<1.0	<1.0	1.0		
Leachable Nitrate-N	mg/kg	<1.0	4.6	<1.0	<1.0	<1.0	<1.0		
Leachable Nitrite-N	mg/kg	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Leachable Total Kjeldahl Nitrogen	mg/kg	810	4470	410	650	1300	1340		
Leachable Sulphate	mg/kg	<20	406	<20	<20	44	<20		
Phosphorus, Total	mg/kg	459	575	270	255	391	438	600	2000
Nitrate+Nitrite-N	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Mercury (Hg)	mg/kg	0.031	0.042	<0.010	0.011	0.020	0.025	0.2	2
Zirconium (Zr)	mg/kg	<5.0	7.1	<5.0	<5.0	<5.0	8.5		
Unamed Creek		**SB12-2A**	**SB12-3**	**SB12-4A**	**SB12-5A**				
Leachable Ammonia as N	mg/kg	79.3	20.7	14.3	10.8				
Leachable Bromide	mg/kg	<1.0	<1.0	<1.0	<1.0				
Leachable Chloride	mg/kg	<20	<20	<20	<20				
Leachable Fluoride	mg/kg	<1.0	<1.0	<1.0	<1.0				
Leachable Nitrate-N	mg/kg	<1.0	<1.0	<1.0	<1.0				
Leachable Nitrite-N	mg/kg	<1.0	<1.0	<1.0	<1.0				
Leachable Total Kjeldahl Nitrogen	mg/kg	940	320	210	<200				
Leachable Sulphate	mg/kg	<20	<20	21	<20				
Phosphorus, Total	mg/kg	240	**680**	154	114			600	2000
Nitrate+Nitrite-N	mg/L	<1.0	2.8	<1.0	<1.0				
Mercury (Hg)	mg/kg	<0.010	<0.010	<0.010	<0.010			0.2	2
Zirconium (Zr)	mg/kg	<5.0	<5.0	<5.0	<5.0				

3.3 Benthic Invertebrate Community (BIC)

Results of the benthic invertebrate sampling for the lakes and streams were tabulated, and are described below. Taxon richness, relative abundance, percent Ephemeroptera, Plecoptera, Tricoptera (EPT), percent Diptera, Simpson's diversity index and evenness were calculated for each sampling station. Taxon richness describes the total number of different taxonomic categories collected at a sampling site. The Simpson diversity index takes into account both the abundance patterns and taxonomic richness of the community. It is calculated by determining for each taxonomic group the proportion of individuals that contribute to the total invertebrates present. Simpson's diversity can range between 0 and 1, with higher values indicating greater diversity. EPT ratios of 50 % or greater are indicative of good biodiversity, values between 50 % and 25 % are considered moderate and values below 25 % are considered indicative of poor biodiversity. Values for percent Diptera greater than 40 % are indicative of poor water quality, values between 20 % and 40 % are considered moderate, and values lower than 20 % are considered indicative of good water quality. Evenness is the measure of equality of abundance in a community. The certificates of analysis are located in Appendix A.

3.3.1 Wabigoon Lake

SB 12-22

For SB 12-22, 14 taxa were identified. Of these 14 taxa the most abundant group was the Diptera Chironomidae, followed by the Oligochaeta Naididae (Figure 3.1). These groups represent 80 % and 6 % of the total invertebrate population in the sample respectively. Percent EPT was low at 2.7% with no members of the Plecoptera family being found. Percent diptera was high at 80 %, the highest among all the samples collected at Wabigoon Lake. A Simpson's diversity index of 0.3 was calculated, this value indicates that the diversity at this sampling site is low. A value of 0.11 for Evenness was obtained, which confirms that there is a dominant family in the area sampled. Benthic invertebrate density was calculated at 18,400 individuals/m^2. The estimated density at this site is quite high due to the fact that there was a very large number of Chironomids captured in the samples.

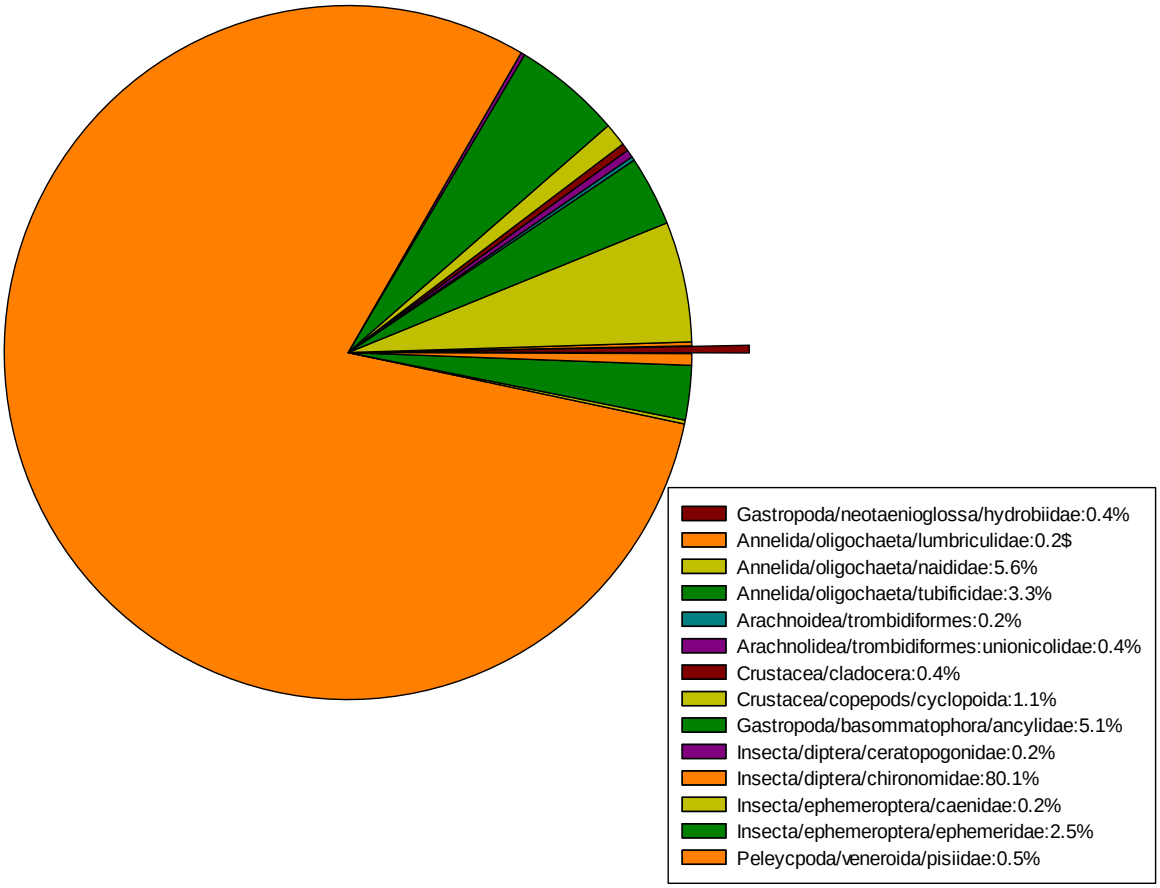

Figure 3.1: Benthic invertebrate distribution in SB 12-22

SB 12-23

Taxon richness in SB 12-23 was 13 and, of the 13 taxa, the most abundant group was the Diptera Chironomidae followed by the Ephemeroptera Ephemeridae (Figure 3.2). These groups represented 53 % and 17 % of the total invertebrate population in the sample. There were no members of the Plecoptera family in this sample. The Percent Diptera was calculated at 56 %. The Simpson's diversity index was calculated at 0.7 indicating a high diversity of organisms in the sample, while the evenness was calculated at 0.24, showing that the distribution is skewed towards having many organisms of only one or two families (Chironomidae and Ephemeridae). Density for this sample was calculated at 1,817 individuals/m^2.

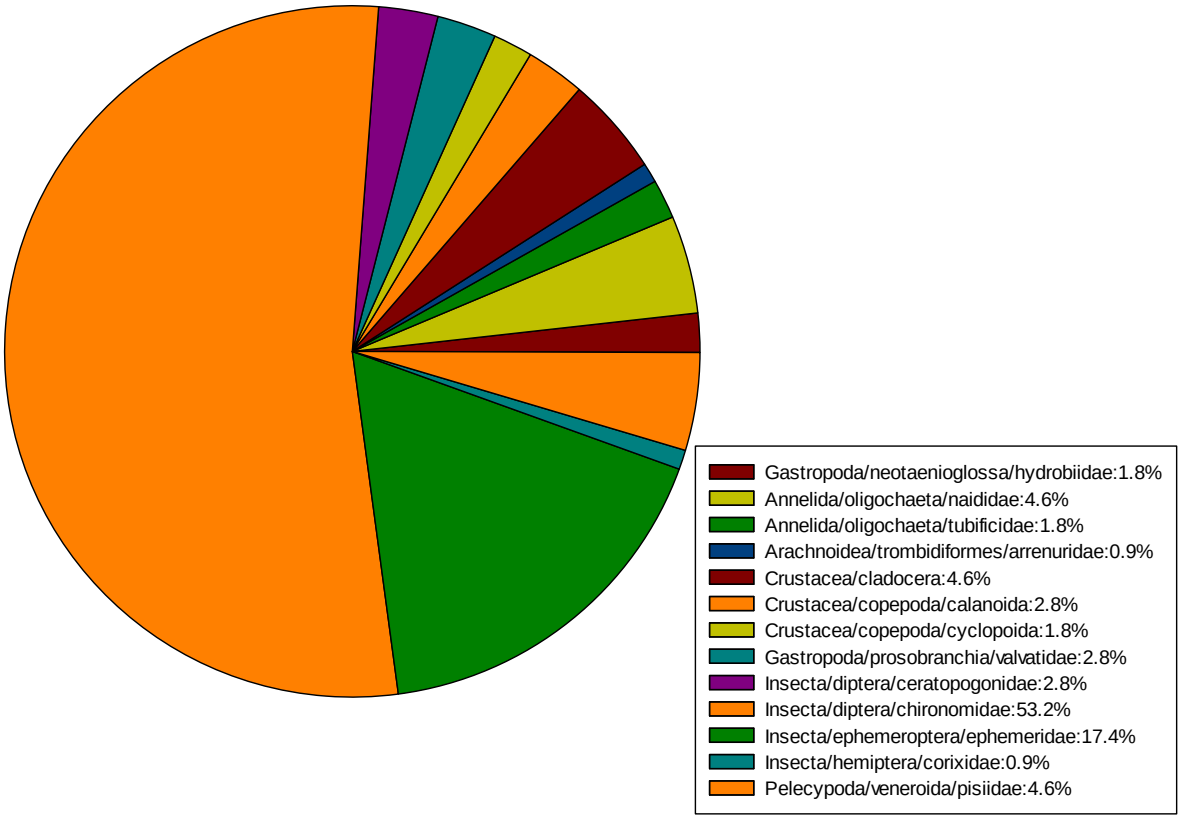

Figure 3.2: Benthic invertebrate distribution in SB 12-23

SB 12-24

Taxon richness for SB 12-24 was very similar to SB12-23, with 13 different taxa identified. The most abundant groups were the Diptera Chironomidae and the Ephemeroptera Ephemeridae which represented 56 % and 22 % of the total invertebrate population in the sample (Figure 3.3). Percent EPT was 27 %, while percent Diptera was 56 %. Simpson's diversity index was calculated at 0.6 which indicated that, at this location, there is a moderate diversity of species, while evenness calculated at 0.21, which indicates that species distribution is skewed towards one dominant species. Density for this sample was calculated at 1567 individuals/m^2.

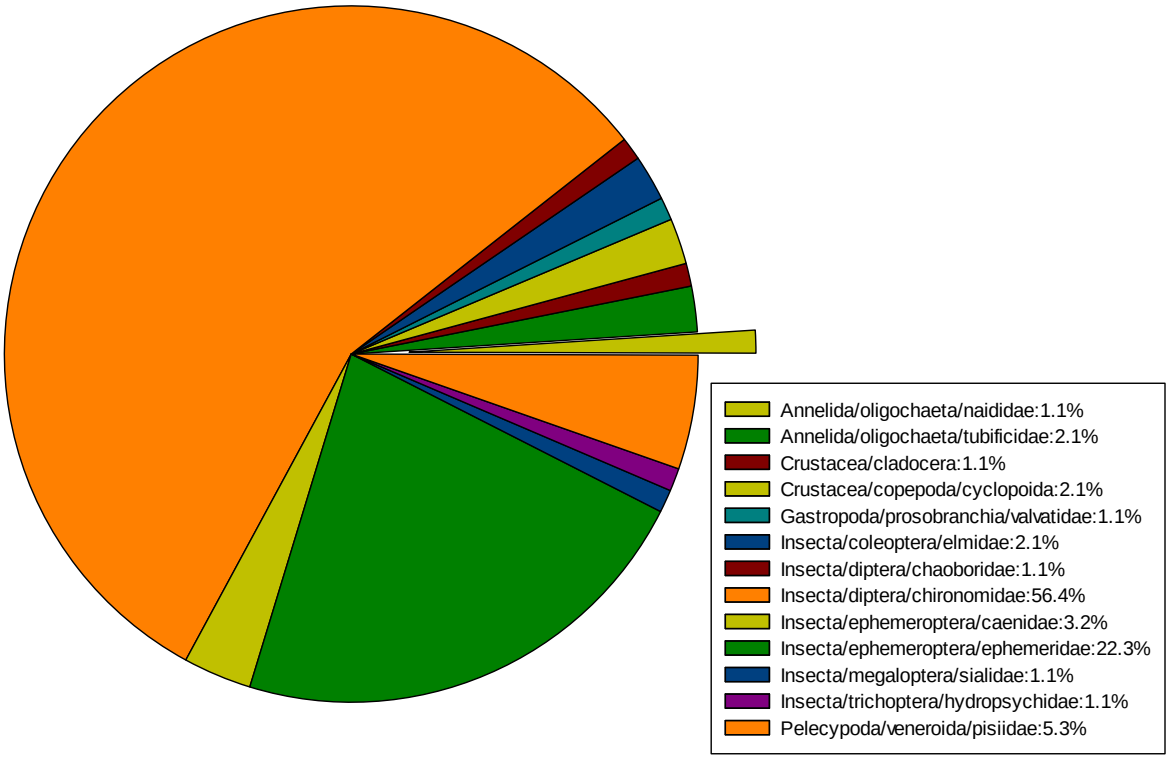

Figure 3.3: Benthic invertebrate distribution in SB 12-24

Overall, benthic invertebrate community samples from Wabigoon Lake show a low to moderate diversity of species, with one common dominant species (chironomids). Chironomids are a family that are usually associated with waterbodies of poor water quality. It should also be noted that the further away from the mouth of the Blackwater creek the samples were collected, the lower the abundance of chironomids and the larger the abundance of other families that usually represent good water quality, including the Ephemeridae.

3.3.2 Wabigoon Lake Reference Site

SB 12-25

A total of 10 taxon were identified for SB 12-25, with the most abundant groups being the Diptera Chaoboridae followed by the Ephemeroptera Ephemeridae which represented 61 % and 20 % of the total invertebrate population in the sample (Figure 3.4). Percent EPT was 62 %, which indicates moderate water quality, while percent Diptera was 28 %. The Simpson's diversity index was calculated at 0.6, indicating moderate diversity of species. The evenness was calculated at 0.23 showing that the distribution is skewed towards having many organisms of only one or two families. Density was calculated at 5733 individuals/m^2. This sampling site has a moderate to good water quality as shown by the percent EPT and percent Diptera.

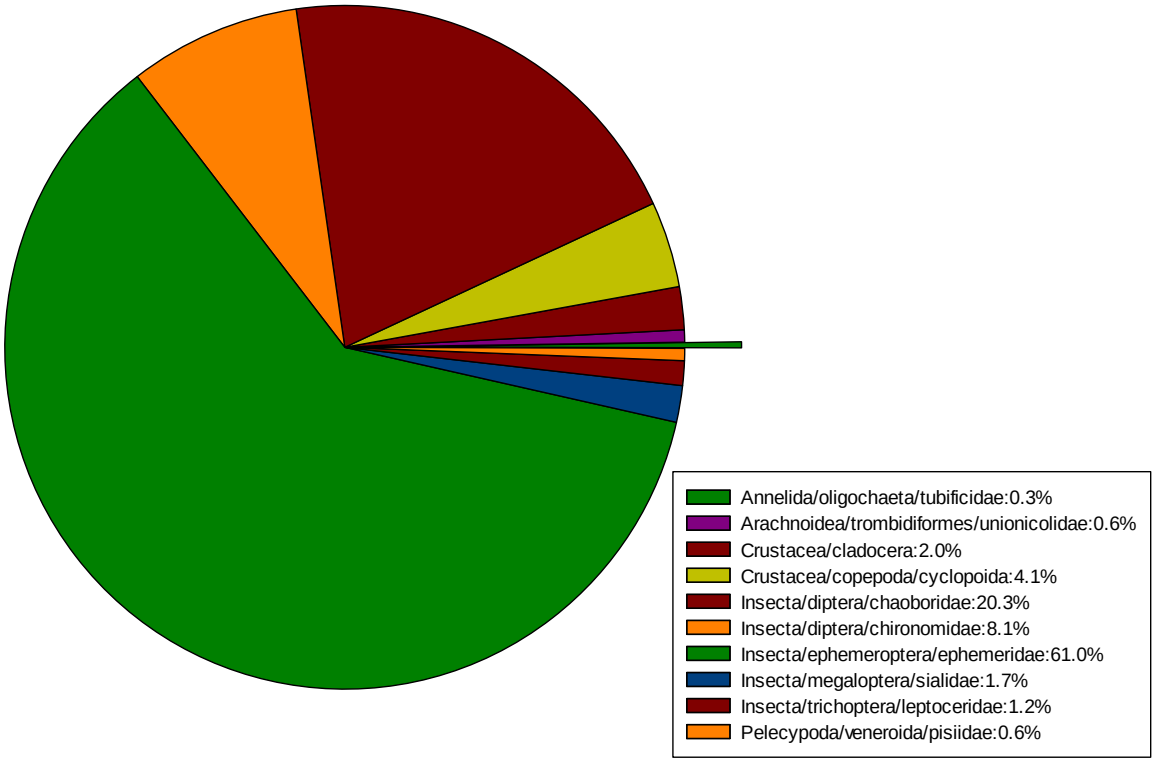

Figure 3.4: Benthic invertebrate distribution in SB 12-25

SB 12-26

A total of eight taxon were identified for SB 12-26. The most abundant groups were the Ephemeroptera Ephemeridae and the Diptera Chaoboridae, which represented 59 % and 15 % of the total population in the sample (Figure 3.5). As in SB 12-25, members of the Ephemeroptera family were the most abundant. Simpson's diversity index was calculated at 0.6 indicating moderate diversity of species. The evenness was calculated at 0.3 showing that the distribution is skewed towards having many organisms of only one or two families. Density was calculated at 2867 individuals/m^2. Percent EPT was 61 % and percent Diptera was 33 %. This sampling site had moderate to good water quality as demonstrated by the percent EPT.

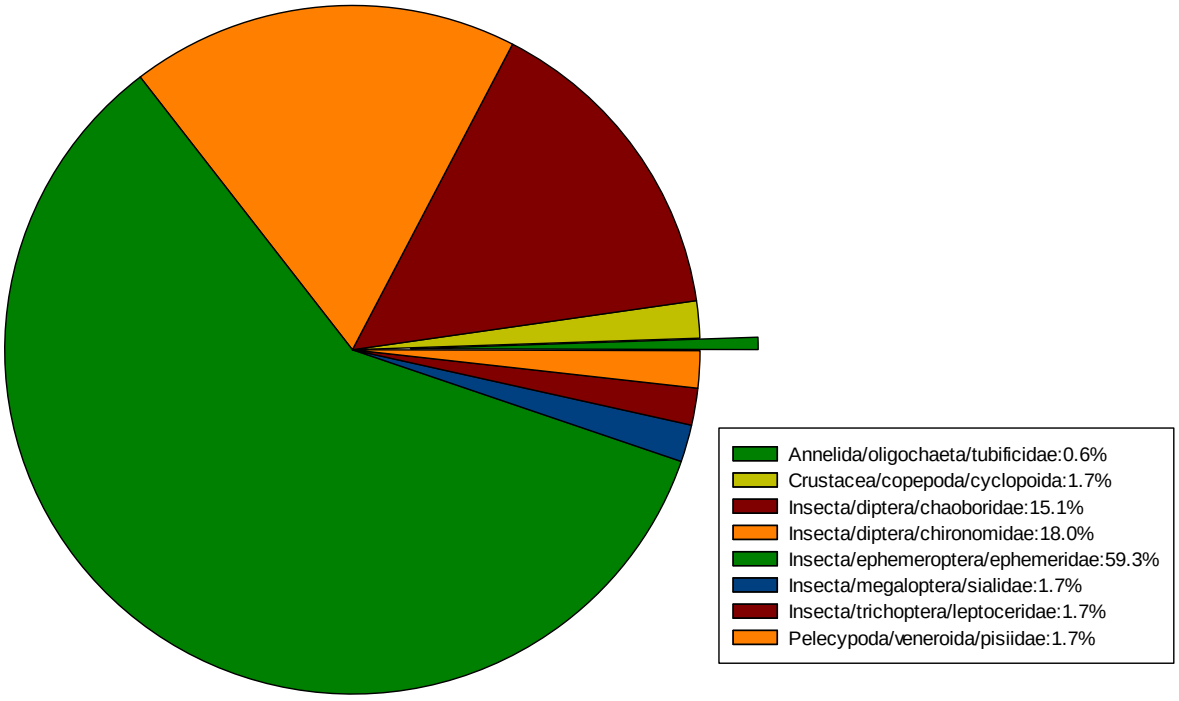

Figure 3.5: Benthic invertebrate distribution in SB 12-26

3.3.3 Thunder Lake

SB 12-17

A total of 21 taxon were identified for SB 12-17. The most abundant groups were the Diptera Chironomidae followed by the Pelecypoda Pisiidae, which represented 45 % and 18 % of the total population in the sample (Figure 3.6). The percent Diptera was calculated at 49 %, the percent EPT was 16%. The Simpson's diversity index was calculated at 0.87 indicating a high diversity of species. The evenness was calculated at 0.20 showing that the distribution is skewed towards having many organisms of only one or two families. The density was calculated to be 4,267 individuals/m^2.

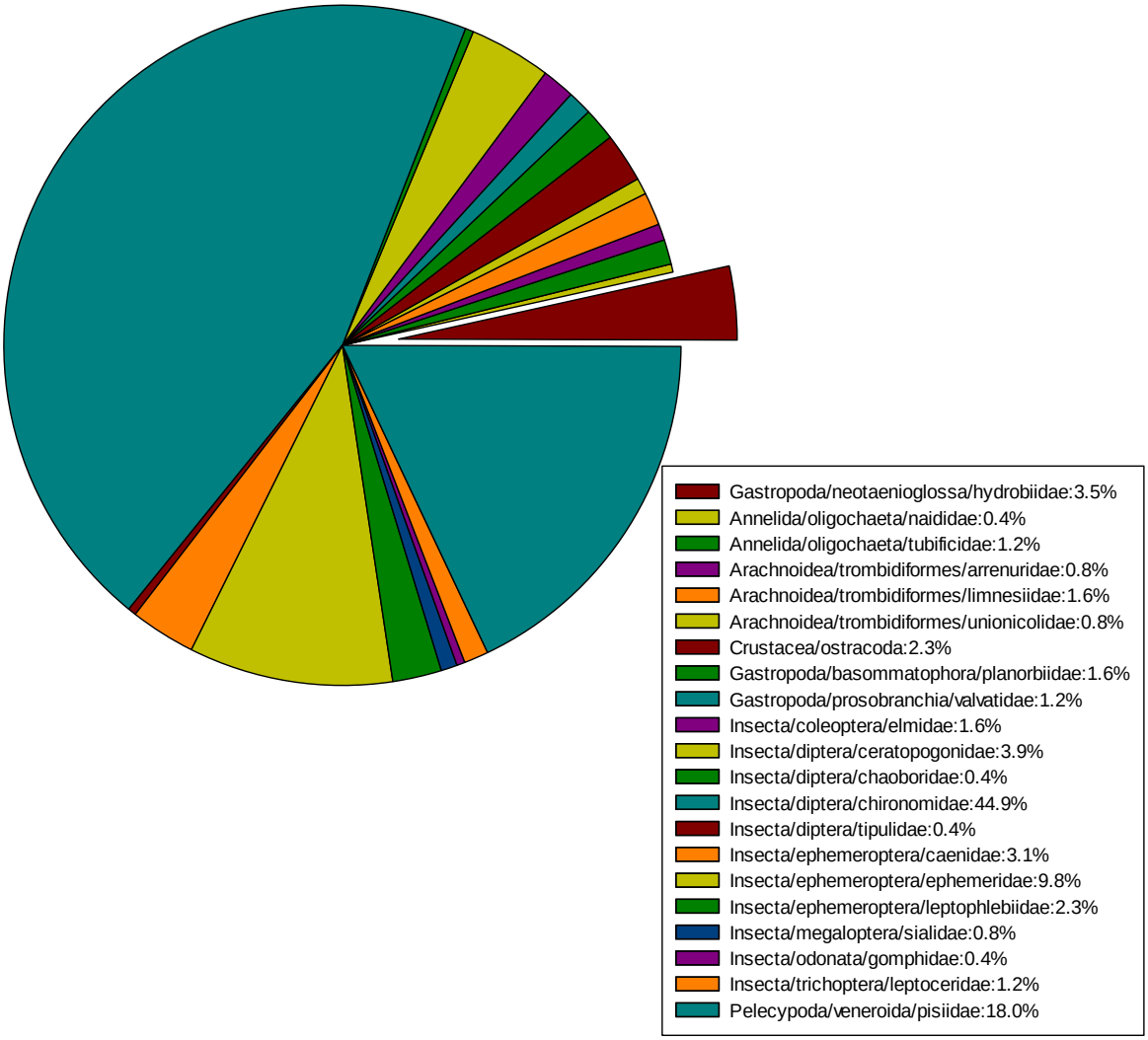

Figure 3.6: Benthic invertebrate distribution in SB 12-17

SB 12-18

A total of 23 taxon were identified for SB 12-18. The most abundant groups were the Diptera Chironomidae and the Pelecypoda Pisidiidae which represented 51% and 20 % of the total population of the sample (Figure 3.7). The percent EPT was 0.22 %, while the percent Diptera was 58 %. The Simpson's diversity index was 0.7 indicating a high diversity of species. The evenness was calculated at 0.10 showing that the distribution is skewed towards having many organisms of only one or two families. Density was calculated as 7450 individuals/m^2.

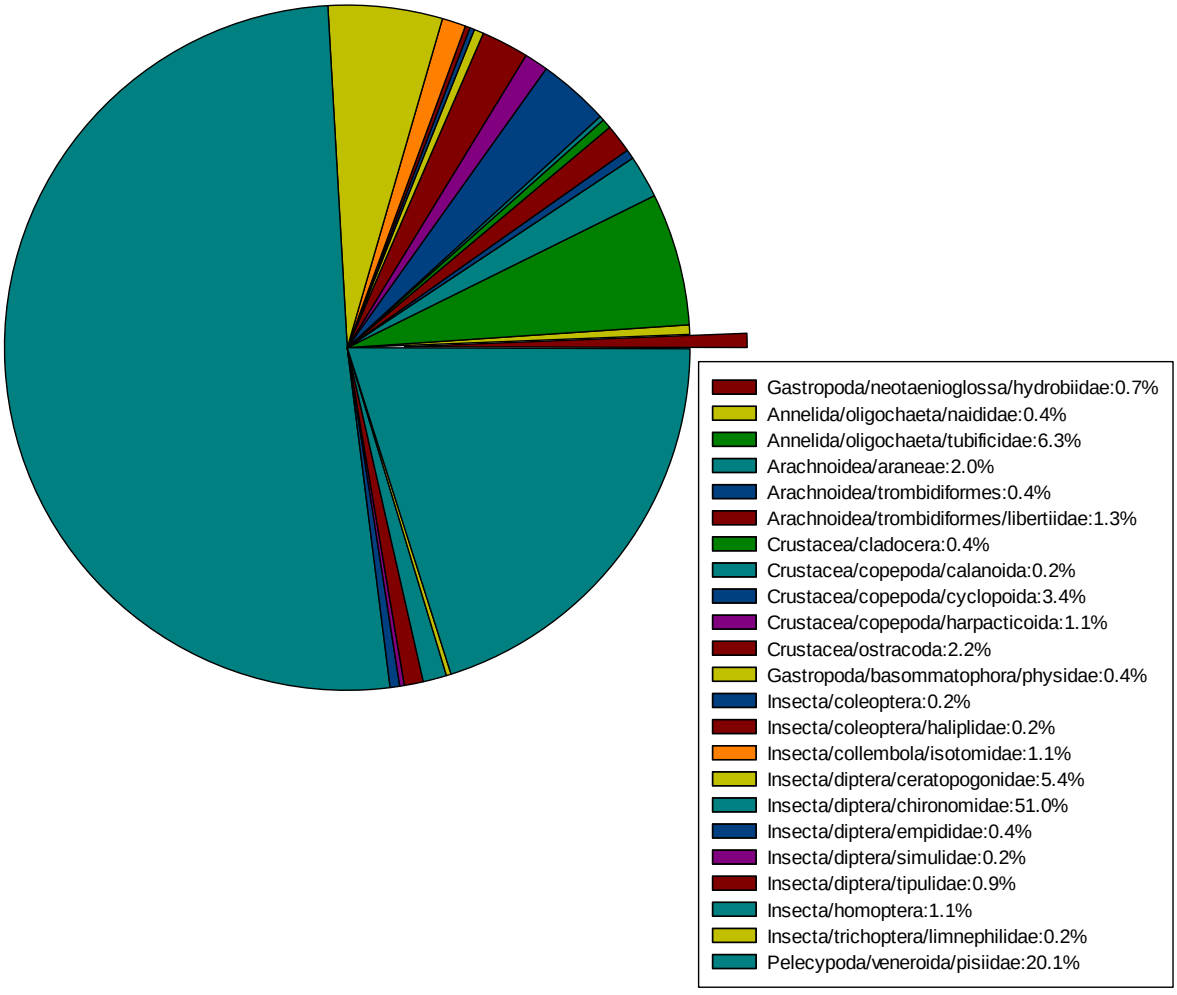

Figure 3.7: Benthic invertebrate distribution in SB12-18

SB 12-19

A total of 17 taxon were identified for SB 12-19. The most abundant groups were the Diptera Chironomidae and the Pelecypoda Pisidiidae which represented 50 % and 14 % of the total invertebrate population (Figure 3.8). The percent EPT was 51%, while the percent Diptera was calculated at 49%. The Simpson's diversity index was calculated at 0.7, indicating a high diversity of species. The evenness was calculated at 0.20 showing that the distribution is skewed towards having many organisms of only one or two families. The density was calculated as 2117 individuals/m^2.

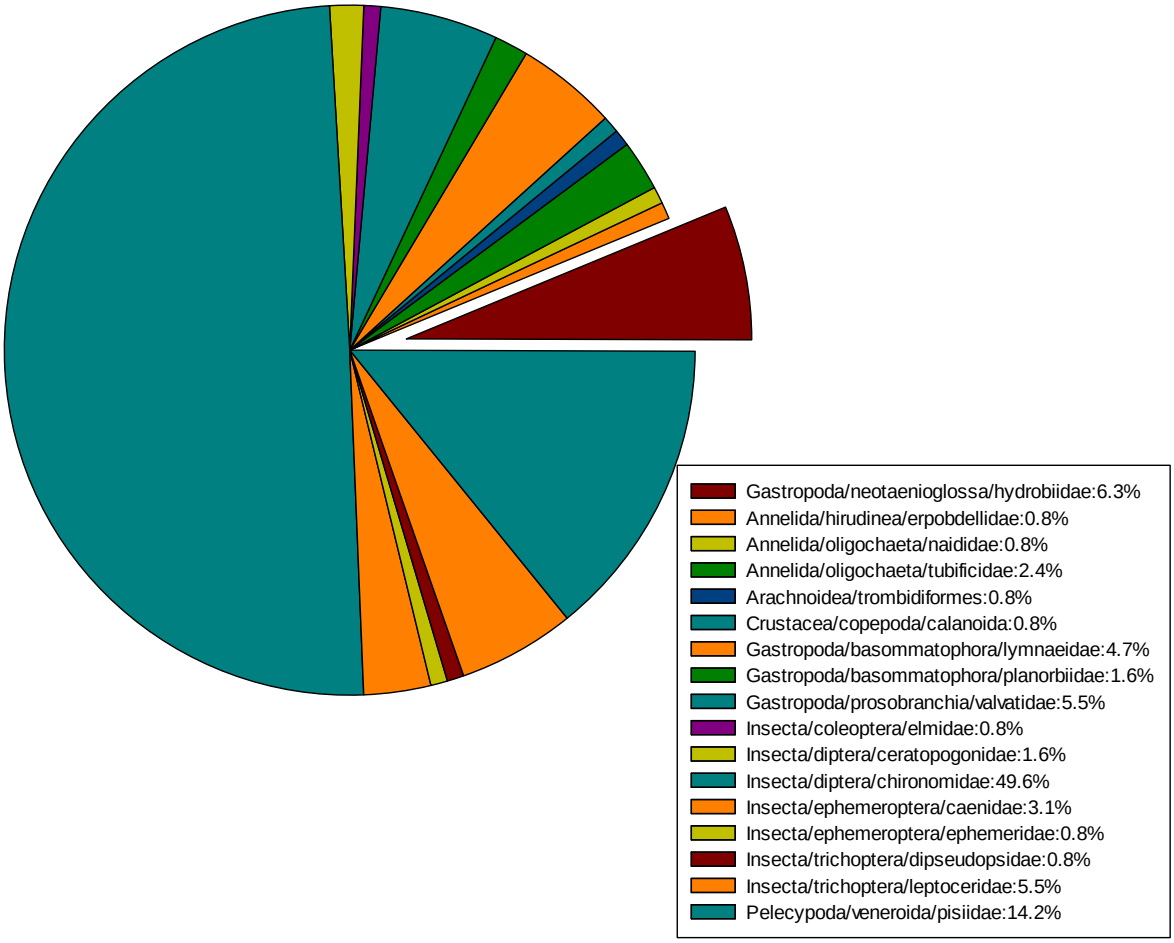

Figure 3.8: Benthic invertebrate distribution in SB 12-19

SB 12-20

A total of 16 taxon were identified for SB 12-20. The most abundant groups were the Diptera Chironomidae and the Pelecypoda Pisidiidae, which represented 23 % and 28 % of the total invertebrate population in the sample (Figure 3.9). The percent EPT was 11 %, while the percent Diptera was calculated at 23 %. The Simpson's diversity index was calculated at 0.8, indicating moderate diversity of species. The evenness was calculated at 0.4 showing that the sample had a moderate variety of families. The density was estimated to be 2750 individuals/m^2.

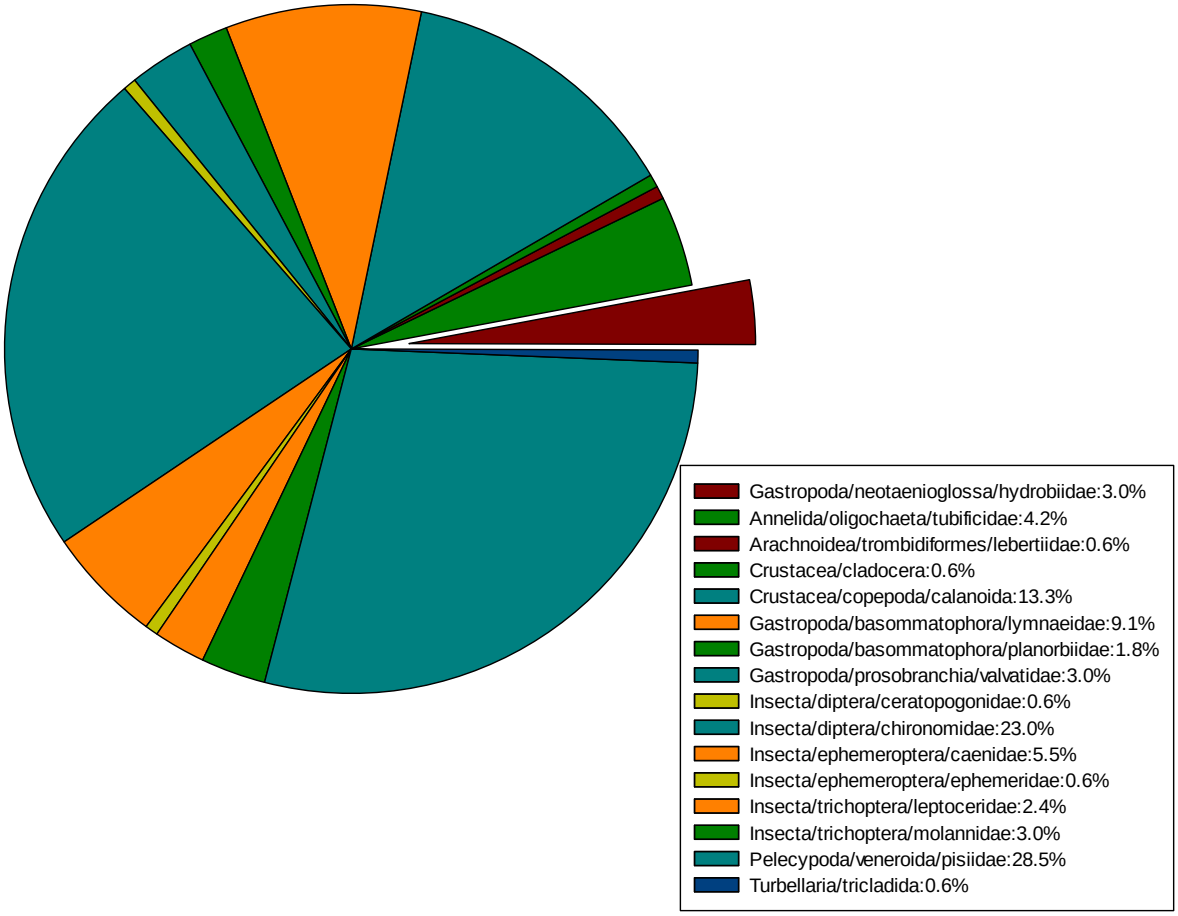

Figure 3.9: Benthic invertebrate distribution in SG BEN4

Overall, the data indicates a higher abundance of taxa in Thunder Lake compared to Wabigoon Lake. While the most abundant family was Chironomidae, there was a high diversity of families in the samples collected as shown by the higher Simpson's diversity index when compared to

Wabigoon Lake samples. Evenness indicated that despite the higher abundance of taxa, there was still a skewed dominance of most samples by the Chironomids. Water quality in Thunder Lake, as demonstrated by the abundance of EPT species and diptera species, can be classified as relatively poor.

3.3.4 Blackwater Creek

SB 12-11A

A total of 18 taxon were identified for SB 12-11A; the most abundant group were the Diptera Chironomidae followed by the Crustacea Ostracoda, which represented 50 % and 18 % of the total invertebrate population in the sample (Figure 3.10). Percent EPT was calculated at 0.8 % while percent Diptera was 52 %. Simpson diversity index was calculated at 0.7 which indicates a high diversity of taxa present in the sample. Evenness was calculated at 0.2 which indicates that the invertebrate population in this sample is skewed towards a higher presence of one or two species.

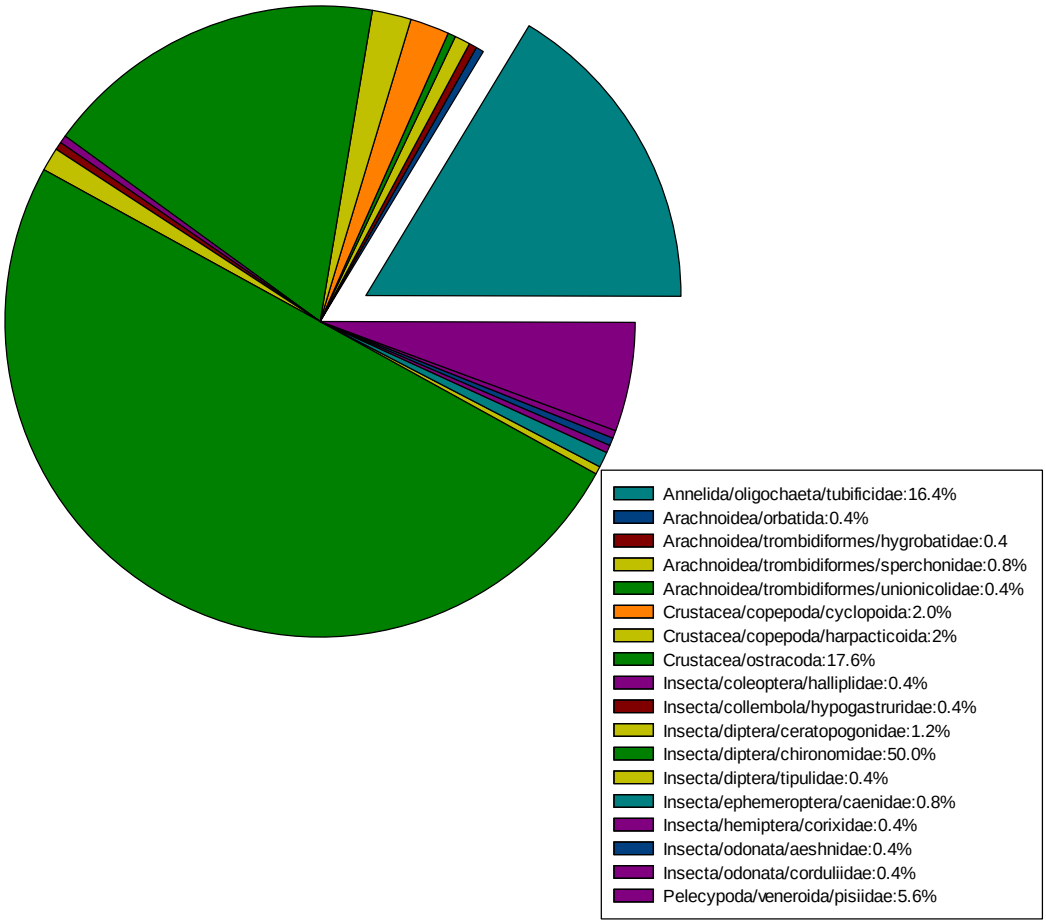

Figure 3.10: Benthic invertebrate distribution in SB 12-11A

SB 12-12

A total of 10 taxon were identified for SB 12-12 (Figure 3.11). The most abundant group were the Pelecypoda Pisiidae followed by the Diptera Chironomidae, which represented 80 % and 6.6 % of the total invertebrate population in the sample. Percent EPT was calculated at 1.3 %, while percent Diptera was calculated at 11%. Simpson's diversity index was calculated at 0.4 which indicates that in this stream the diversity is low. Evenness was calculated at 0.2, indicating that the sample was dominated by one species, as evidenced by the number of Pelecypoda Pisiidae present.

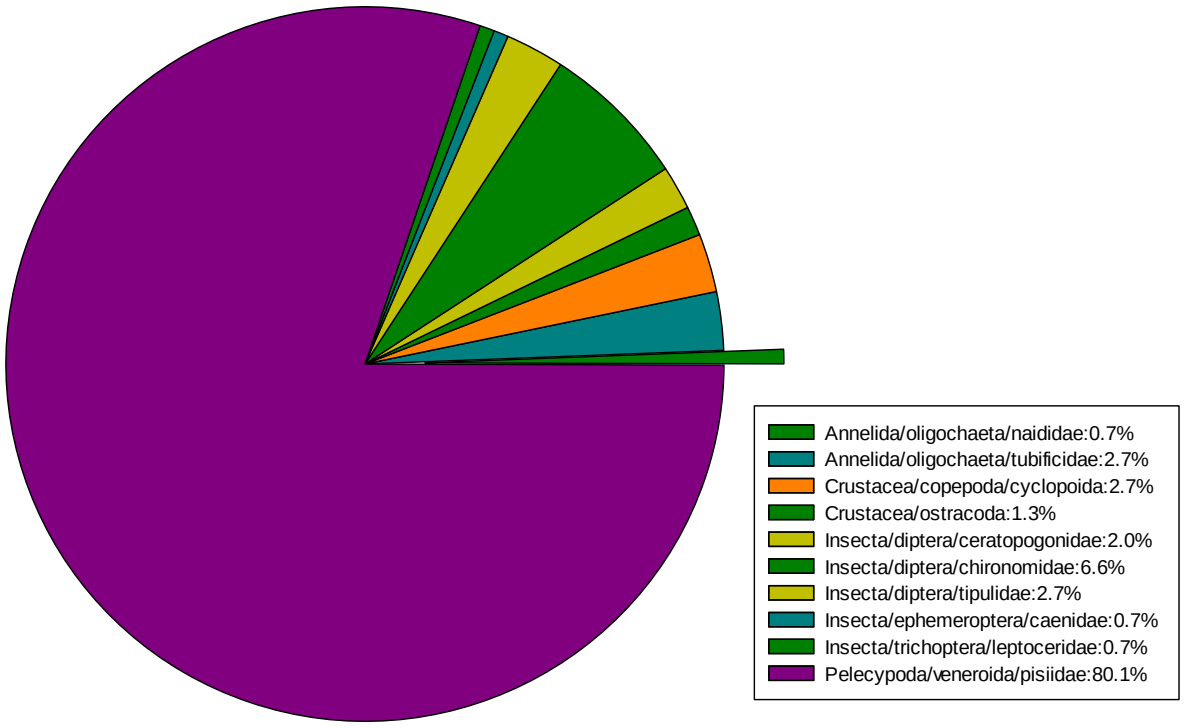

Figure 3.11: Benthic invertebrate distribution in SB 12-12

SB 12-13

A total of 24 taxon were identified for SB 12-13 (Figure 3.12). The most abundant families were the Diptera Chironomidae followed by the Diptera Ceratopogonidae, which represented 48 % and 19 % of the total population in the sample. Percent EPT was calculated at 2.8%, while percent Diptera was calculated at 72%. Simpson's diversity index was calculated at 0.7, indicating a high diversity of species. The evenness was calculated at 0.10 showing that the distribution is skewed towards having many organisms of only one family.

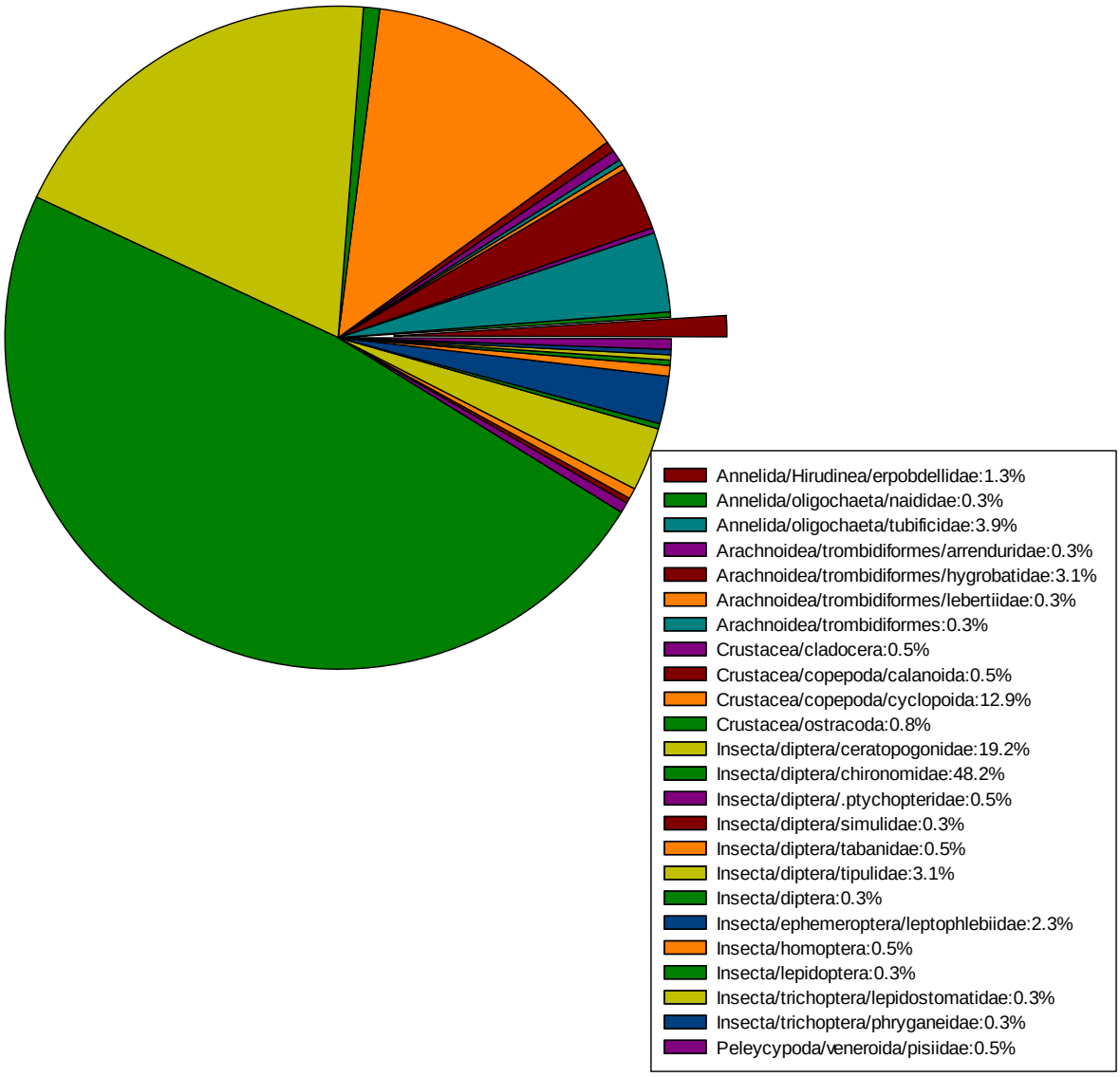

Figure 3.12: Benthic invertebrate distribution in SB 12-13

SB 12-14

A total of 21 taxon were identified for SB 12-14 (Figure 3.13). The most abundant families were the Diptera Chironomidae followed by the Diptera Ceratopogonidae, which represented 46 % and 18 % of the total population in the sample. Percent EPT was calculated at 0.9 %, while percent Diptera was calculated at 69 %. Simpson's diversity index was calculated at 0.7, indicating a high diversity of species. The evenness was calculated at 0.20 showing that the distribution was skewed towards having many organisms of only one or two families.

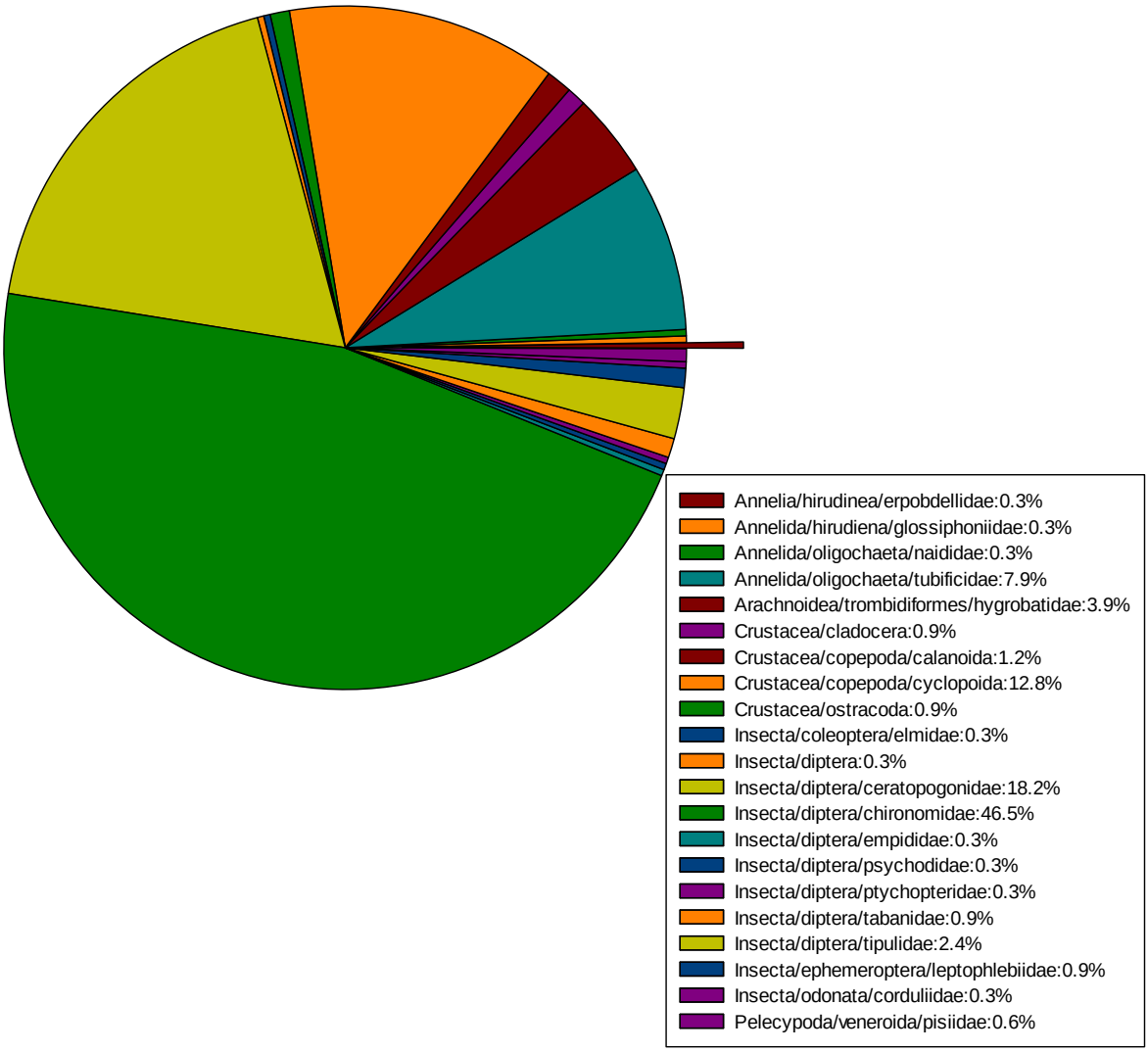

Figure 3.13: Benthic invertebrate distribution in SB 12-14

SB 12-15

A total of 23 taxon were identified for SB 12-15 (Figure 3.14). The most abundant families were the Diptera Chironomidae followed by the Diptera Ceratopogonidae, which represented 63 % and 13 % of the total population in the sample. Percent EPT was calculated at 5.3 %, while percent Diptera was calculated at 77 %. Simpson's diversity index was calculated at 0.6, indicating a moderate diversity of species. The evenness was calculated at 0.10 showing that the distribution is skewed towards having many organisms of only one family.

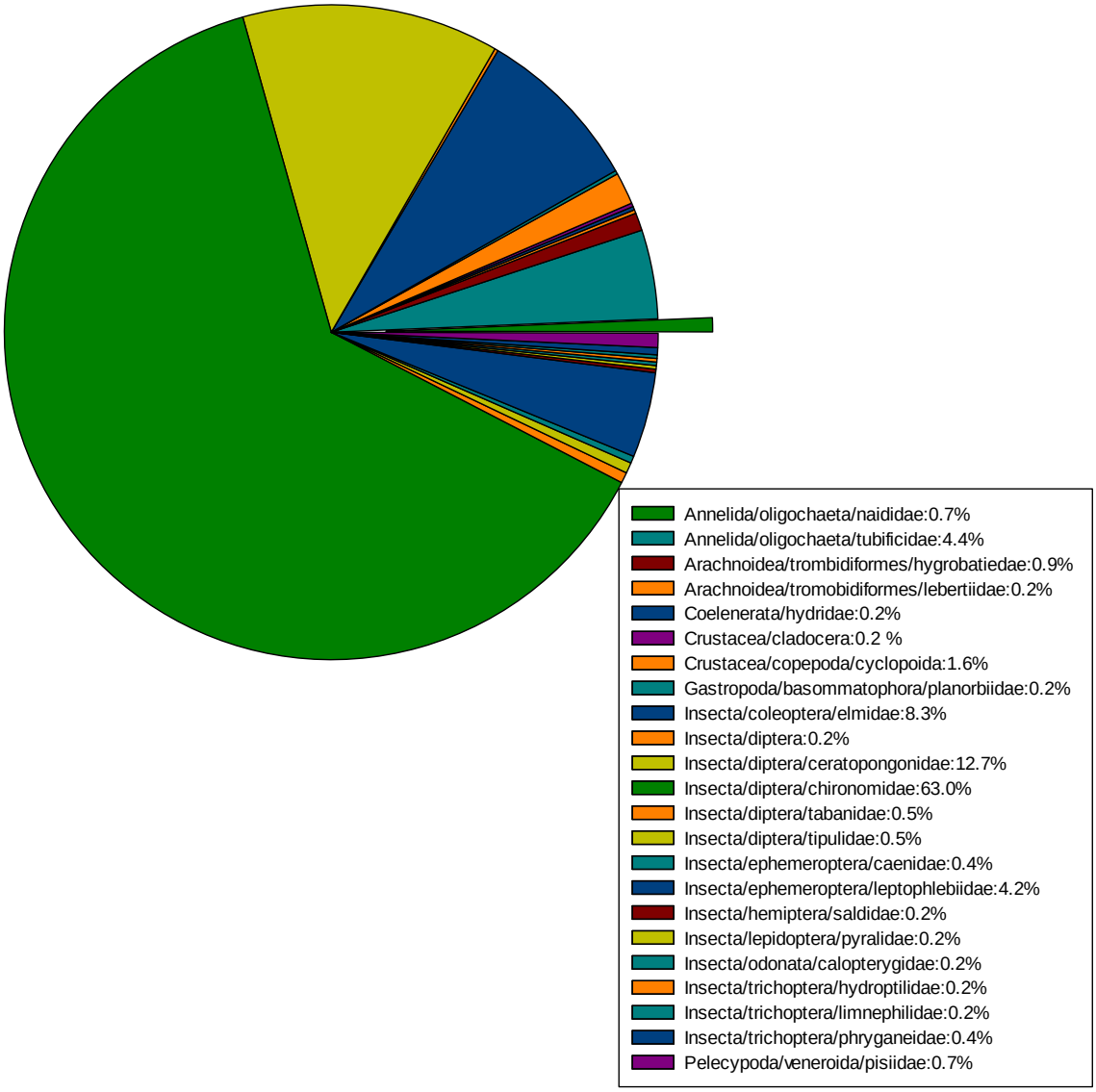

Figure 3.14: Benthic invertebrate distribution in SB 12-15

SB 12-16

A total of 17 taxon were identified for SB 12-16 (Figure 3.15); the most abundant families were the Trichoptera Hydropsychidae followed by the Diptera Chironomidae, which represented 25 % and 19 % of the total population in the sample. Percent EPT was calculated at 46 %, while percent Diptera was calculated at 24 %. Simpson's diversity index was calculated at 0.9, indicating a high diversity of species. The evenness was calculated at 0.4 showing that the sample had a good distribution of families.

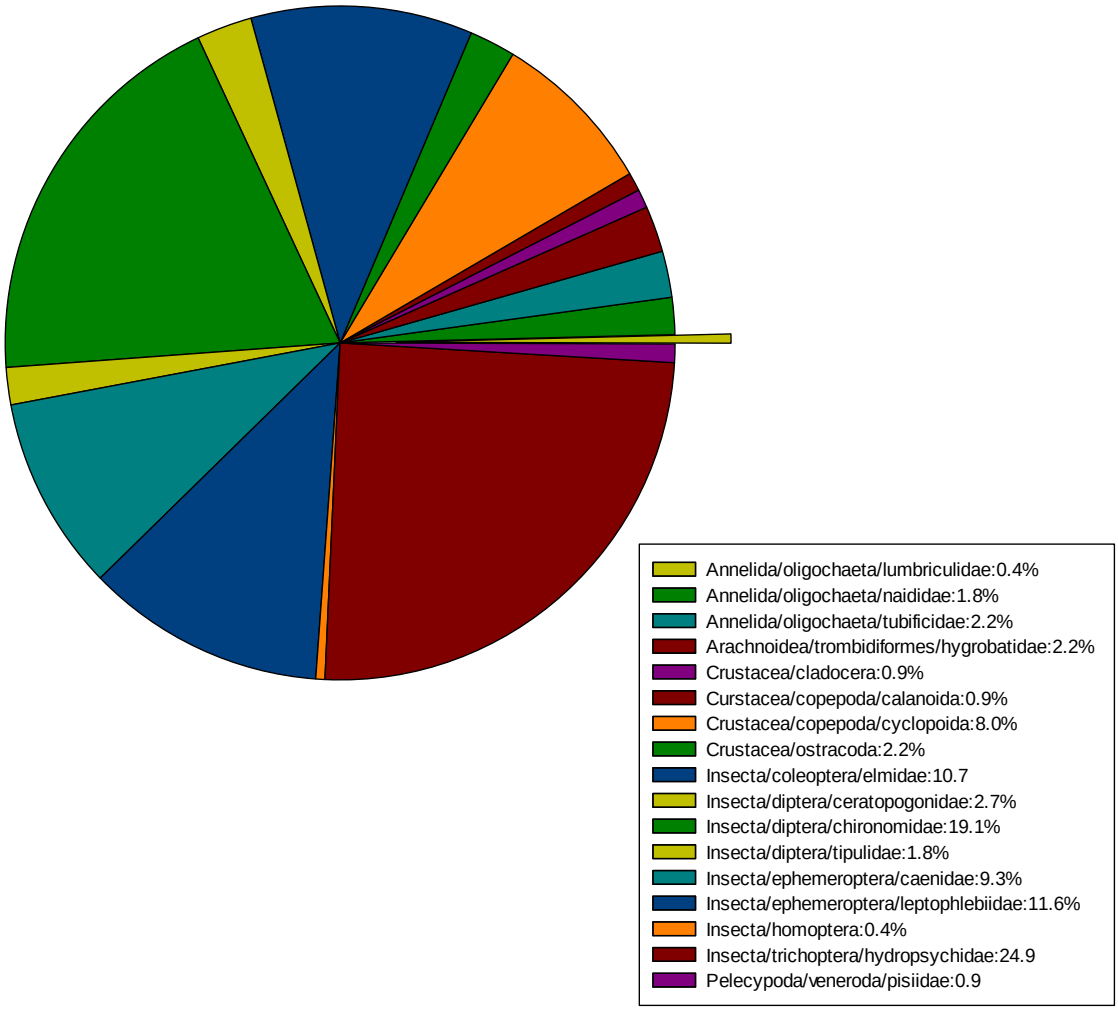

Figure 3.15: Benthic invertebrate distribution in SB 12-16

Overall, the results for the Blackwater Creek benthic invertebrate community survey indicates that water quality is moderate to good, with a higher percentage of members of the EPT families in samples collected downstream compared to samples collected upstream. The benthic invertebrate community is diverse as shown by high Simpson's diversity indexes, but tends to be dominated by one or two species as shown by the low evenness in most samples.

3.3.5 Unnamed Creek

SB 12-2A

A total of five taxon were identified for SB 12-2A (Figure 3.16). The most abundant families were the Diptera Chironomidae followed by the Plecoptera Capniidae and the Trichoptera Lepidostomatidae, which represented 27 %, 15 % and 15 % of the total population in the sample respectively. Percent EPT was calculated at 51 %, while percent Diptera was calculated at 36 %. Simpson's diversity index was calculated at 0.9, indicating a high diversity of species. The evenness was calculated at 0.30 showing that the sample had a good distribution of families.

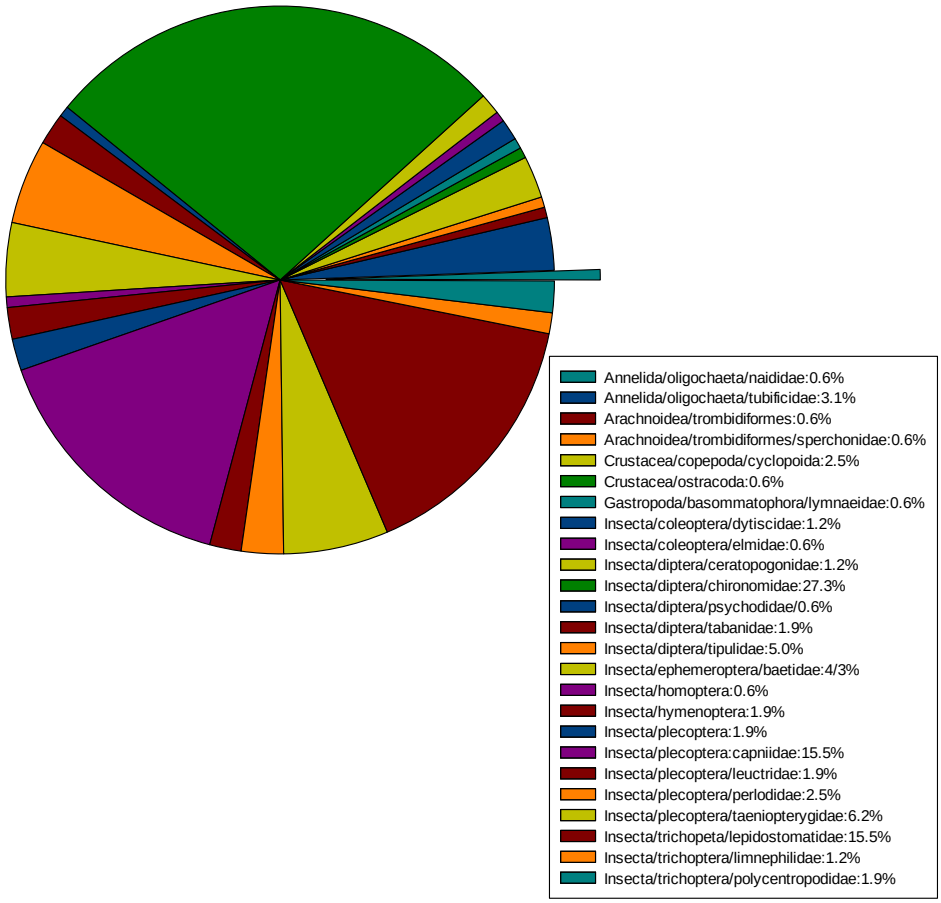

Figure 3.16: Benthic invertebrate distribution in SB 12-2A

SB 12-3

A total of 22 taxon were identified for SB 12-3 (Figure 3.17). The most abundant families were the Diptera Chironomidae followed by the Trichoptera Hydropsychidae, which represented 47 % and 22 % of the total population in the sample. Percent EPT was calculated at 32 %, while percent Diptera was calculated at 50 %. Simpson's diversity index was calculated at 0.7, indicating a moderate diversity of species. The evenness was calculated at 0.2 showing that the distribution was skewed towards having many organisms of only one or two families.

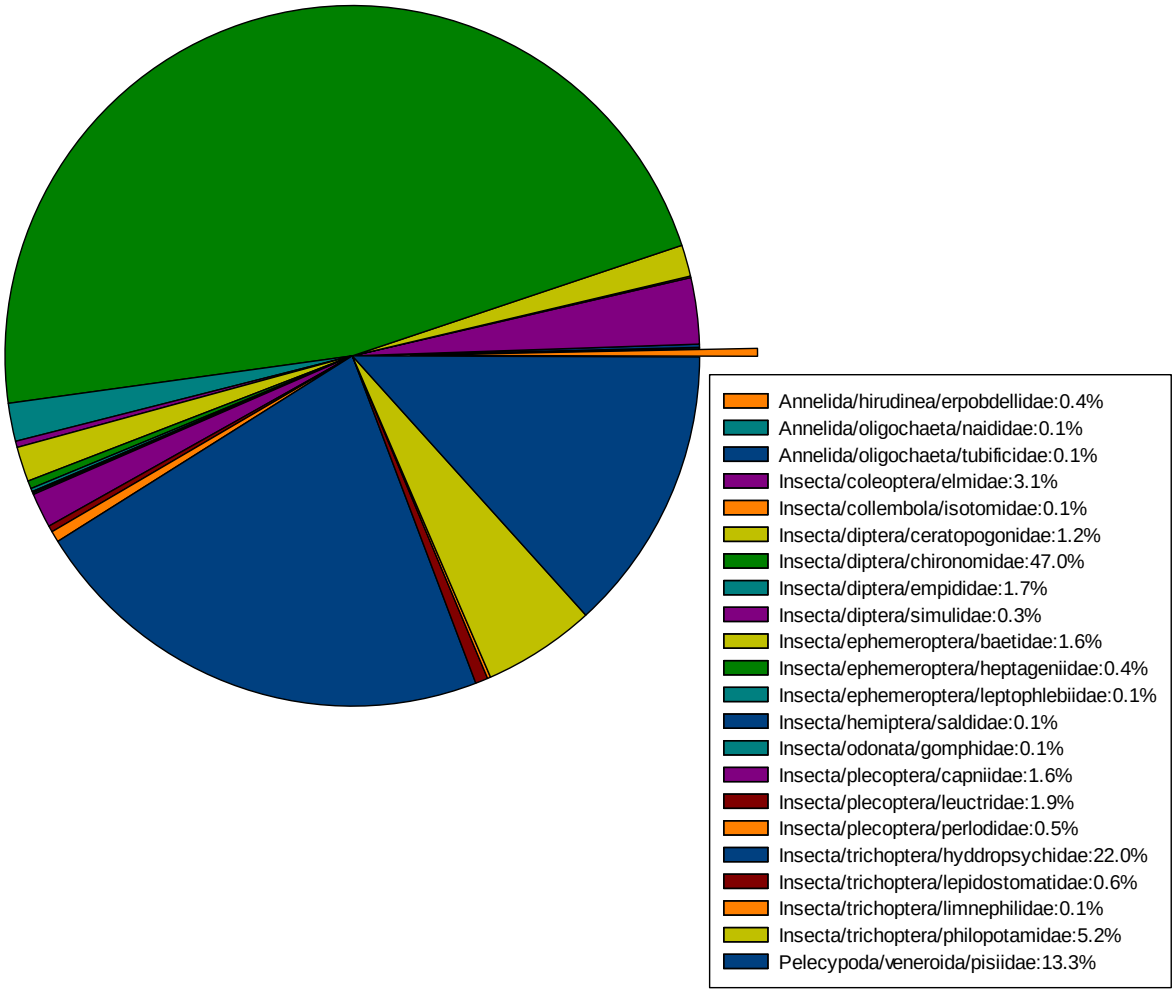

Figure 3.17: Benthic invertebrate distribution in SB 12-3

SB 12-4A

A total of 32 taxon were identified for SB 12-4A (Figure 3.18). The most abundant families were the Diptera Chironomidae followed by the Oligochaeta Naididae, which represented 24 % and 12 % of the total population in the sample. Percent EPT was calculated at 46 %, while percent Diptera was calculated at 31 %. Simpson's diversity index was calculated at 0.9, indicating a high diversity of species. The evenness was calculated at 0.30 showing that the sample had a good distribution of families.

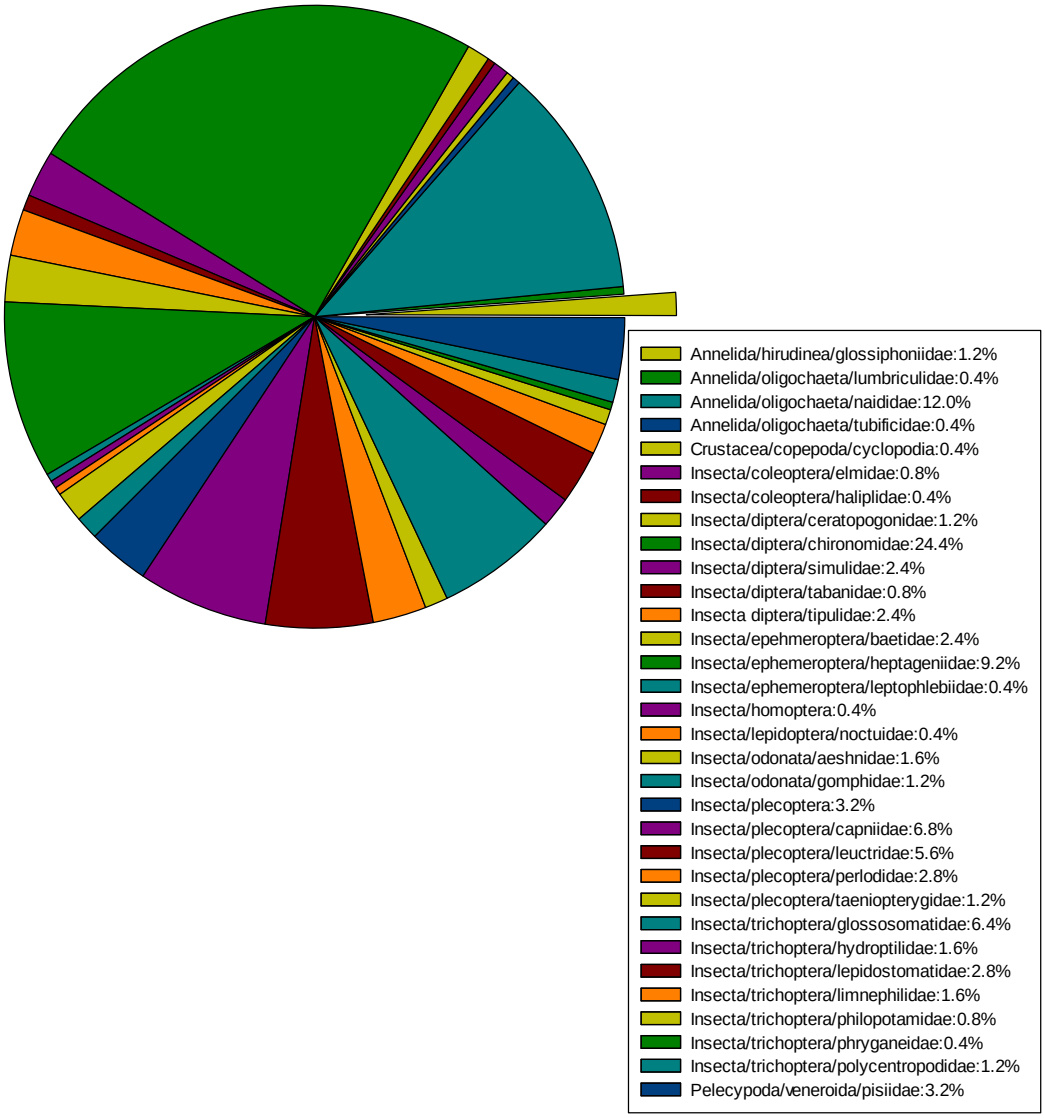

Figure 3.18: Benthic invertebrate distribution in SB 12-4A

SB 12-5A

A total of 27 taxon were identified for SB 12-5A (Figure 3.19). The most abundant families were the Diptera Chironomidae followed by the Trichoptera Lepidostomatiedae, which represented 69 % and 4.5 % of the total population in the sample. Percent EPT was calculated at 2.8 %, while percent Diptera was calculated at 72 %. Simpson's diversity index was calculated at 0.7, indicating a high diversity of species. The evenness was calculated at 0.10 showing that the distribution is skewed towards having many organisms of only one family.

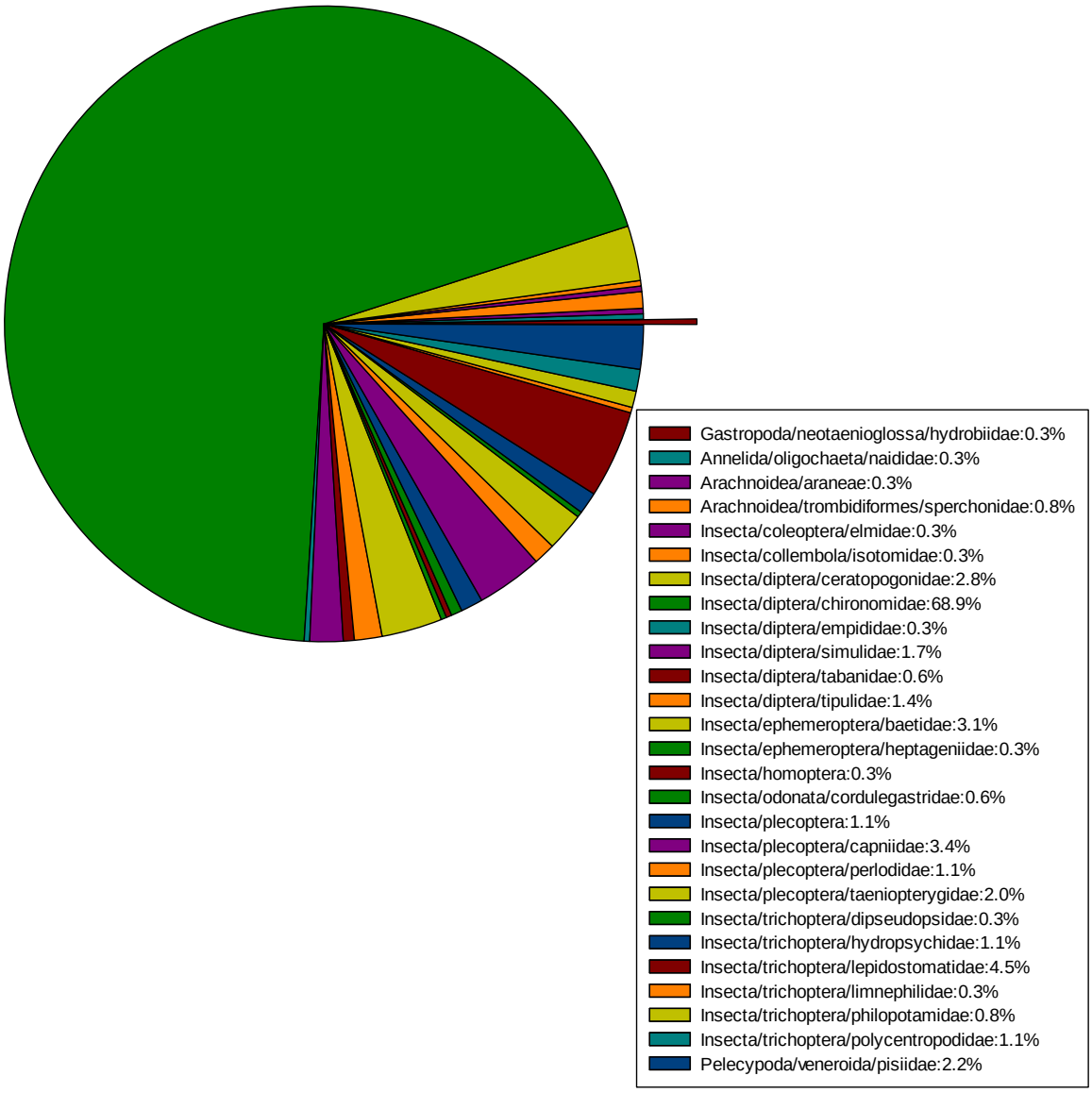

Figure 3.19: Benthic invertebrate distribution in SB 12-5A

The unnamed creek that runs along either side of the former tree nursery had the highest EPT ratio of all waterbodies sampled. The elevated number of EPT members indicates that the water quality is moderate to good in the creek. The Simpson's diversity index indicated that taxon diversity is high, but similar to other sampling locations, some of the samples were dominated by one or two families.

In general, the benthic invertebrate community reflects general conditions at the Site. Lake samples were characterized by invertebrates which are resistant to poor water quality (Chironomidae) and associated with fine grained substrates. Stream samples had more EPT members, than lake sites, which indicates that water quality is likely better in the streams. Along the Blackwater Creek, samples collected upstream had lower EPT ratios compared to the sample collected downstream at the mouth of the creek, indicating that water flow in the downstream areas is likely higher and therefore the water is well oxygenated.

3.4 Quality Assurance/Quality Control

3.4.1 Surface Water

DST maintains a standard Quality Assurance/Quality Control (QA/QC) program for all environmental studies. All surface water sampling was completed in accordance with industry standards, and applicable provincial guidelines/standards. Shipment of water samples to the laboratory occurred under a Chain of Custody protocol. The laboratory used for chemical analysis is accredited by the Canadian Association for Laboratory Accreditation (CALA).

DST operates under a Certificate of Authorization issued by the Professional Engineers of Ontario (PEO) and the Association of Professional Geoscientist of Ontario (APGO), and our work was carried out with due regard to PEO and APGO Guidelines for professional practice.

The 2012/13 data from the Treasury Metals Goliath Gold Project was subject to QA/QC protocols used by DST and ALS Ltd. (ALS). ALS prepared and analyzed method blanks, blank spikes, and matrix spikes to monitor the accuracy and precision of their analytical processes and instrumentation. In addition, laboratory duplicate samples were analyzed and compared for relative percent difference (RPD). The results of all laboratory QA/QC analyses are presented in the laboratory Certificates of Analysis in Appendix A, RPD calculations are located in Appendix B. Based upon ALS's internal QA/QC reviews, the data resulting from the 2012/13 monitoring events were deemed to be within acceptable QA/QC standards with no notable flagged data being recorded.

The results of analyses of field blanks and travel blanks submitted by Treasury with each sampling event are presented in Appendix A within the certificates of analysis. The following analytes were detected above the PWQO:

- pH in all field and travel blanks submitted for 2012/13 sampling exceeded the 6.5 pH-8.5 pH standard ranging from 4.98 pH – 5.98 pH.

DST calculated the relative percent difference between analytical results obtained from field duplicate samples to examine sampling and laboratory accuracy. Through these calculations, it was determined that two parameters were above DSTs recommended criteria of 80 % for metals: total phosphorus in May 2012 had a calculated RPD of 91.6 % and dissolved aluminum in October 2012 had a calculated RPD of 83.03 % sampled from SW3 and TL2A respectively. This is likely due to the potential presence of sediment if surface water samples.

4. DISCUSSION

4.1 Surface Water

The surface water sampling results from the Project area in 2012 were similar to those of 2013 and are typical of oligotrophic lakes in northwestern Ontario. In the 2012 and 2013 sampling events, surface water in the area had low nutrient concentrations (nitrogen and phosphorus). Overall water quality appears to be good. Total iron concentrations were found to exceed PWQO guidelines (0.300 mg/L) at all but one of the 15 sampling locations at some point in either the 2012 and 2013 sampling programs and, in many cases, in the majority of sampling events. Total iron exceedances ranged from 0.301 mg/L to 10.40 mg/L. Total cobalt and total zinc concentrations exceeded PWQO guidelines at 6 of the 15 sampling locations at some point in the 2012 or 2013 sampling programs. Total copper, total lead, total selenium, total silver and total vanadium also exceeded PWQO guidelines in isolated instances throughout the 2012 and 2013 sampling programs. pH levels fell below the PWQO guideline of between 6.5pH - 8.5pH at two sampling locations, SW7 and SW11 with eight of the nine sampling periods for SW11 falling below with a range of 5.2 pH – 6.46 pH. These low pH values can likely be attributed to the fact that SW11 is located immediately downstream of a wetland. Wetlands tend to have acidic water, especially wetlands classified as bogs.

4.2 Sediment

Sediment samples were collected at three lake sampling locations (Wabigoon Lake, Wabigoon Lake Reference Site and Thunder Lake). The Wabigoon Lake Reference Site was considered to reflect background conditions for Wabigoon Lake at the mouth of the Blackwater Creek. Wabigoon Lake and Thunder Lake are considered downstream locations from the Goliath Gold project. Grain size, anions, nutrients and metal parameters were analyzed for each sample.

In summary, grain size distribution in Wabigoon Lake and the Wabigoon Lake Reference Site is similar, with both lakes having high silt and/or clay content. Thunder Lake has a high sand content, this will result in differences in benthic invertebrate distribution. Total phosphorus was elevated in samples collected in the Wabigoon Lake Reference Site and at one sampling site in Wabigoon Lake, the furthest sampling site from the discharge point of the Blackwater creek. Two metals were analyzed for sediment chemistry (mercury and zirconium). Mercury concentrations were all below the PSQG at all sampling sites. No guidelines are available for zirconium.

Sediment can play are large role in affecting nutrient concentrations of the overlying waters, and is typically controlled by the redox potential at the sediment-water interface (Graetz et al. 1973). It is recommended that nutrients and all metals monitoring is continued within the water column on at least a quarterly basis in 2014. To further examine the relationship between nutrient levels in the sediment and surface a more comprehensive sediment study could be performed which would include examining the redox potential of the sediment.

4.3 Benthic Invertebrate Community

Benthic invertebrate samples were collected from two lakes (Wabigoon Lake and Thunder Lake) and two streams (an unnamed creek and Blackwater Creek) located within the Goliath Gold Project footprint area. In general, the benthic invertebrate community reflected normal conditions at the Site. Lake samples were characterized by invertebrates which are resistant to poor water quality (Chironomidae) and fine grained substrates. Creek samples had more EPT members which are indicators of clean, well oxygenated water (Hynes, 1970). Along the Blackwater Creek, samples collected upstream had lower EPT ratios compared to the sample collected downstream at the mouth of the Creek, indicating that water flow in the downstream areas is likely higher and therefore the water is well oxygenated.

The data collected during the 2012 sampling event, are important components of permitting applications (such as a Permit to Take Water and the Ontario Water Resources Act Section 53 authorizations) typically associated with exploration projects. In addition, the federal Metal Mining Effluent Regulations (MMER) stipulate the completion of biological monitoring studies in order to ensure protection of the environment in the vicinity of an operational mine (Environment Canada, 2002). Long-term monitoring of water quality, sediment, benthos, and fish are typical aspects of environmental effects monitoring (Environment Canada, 2002). As such, determining biological and physico-chemical benchmarks or reference conditions for aquatic habitat and community features will assist the permitting process through reduced uncertainty and, as a result, enhance study designs.

5. CLOSURE

We appreciate this opportunity to provide environmental services to Treasury. If you have any questions or comments, please contact the undersigned.

For DST CONSULTING ENGINEERS INC.

<Original signed by>

Julieta Werner, Ph.D., M.Sc.,
Project Manager

<Original signed by>

Terry Honsberger, MSc., HBSc.
Junior Associate

6. REFERENCES

Guidance on Sampling and Analytical Method for Use at Contaminated Sites in Ontario. 1996. Ministry of the Environment.

Guidelines for the Ministry of the Environment Protection and Management of Aquatic Sediment Quality in Ontario. 1993. Ministry of the Environment.

Hynes HBN, 1970. The Ecology of Running Waters. University of Toronto Press. Pp. 83.

Maxxam Environmental QA/QC Interpretation Guide. 2011. Maxxam Analytics.

Metal Mining Guidance Document for Aquatic Environmental Effects Monitoring (MMER). 2002. Environment Canada.

Ontario Benthos Biomonitoring Network. 2004. Ontario Ministry of Environment.

Ontario Provincial Water Quality Objectives for the protection of aquatic life in Freshwater. 1999. Ministry of the Environment.

APPENDIX A

Laboratory Reports for Surface Water Quality, Sediment Quality and Benthic Invertebrates

TREASURY METALS INC.
ATTN: Mac Potter
899 Tree Nursery Rd
Wabigoon ON P0V 2W0

Date Received: 27-JAN-12
Report Date: 10-FEB-12 14:48 (MT)
Version: FINAL

Client Phone: 807-223-6191

Certificate of Analysis

Lab Work Order #: L1108291

Project P.O. #: M02010-P0115
Job Reference: M09706A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1108291-1 WATER 25-JAN-12 SW3	L1108291-2 WATER 25-JAN-12 TL3	L1108291-3 WATER 25-JAN-12 SW1	L1108291-4 WATER 26-JAN-12 SW4	L1108291-5 WATER 26-JAN-12 SW6
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	225	230	180	120	118
	Hardness (as CaCO3) (mg/L)	115	116	90.5	54.9	52.8
	pH (pH)	7.09	7.31	6.87	7.49	7.54
	Total Suspended Solids (mg/L)	5.1	9.2	4.1	3.7	<2.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	6.8	3.8	6.4	2.0	2.4
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	115	114	93.1	54.8	51.0
	Ammonia, Total (as N) (mg/L)	0.067	0.187	0.071	0.027	<0.020
	Chloride (Cl) (mg/L)	6.40	3.50	0.92	3.68	4.85
	Nitrate (as N) (mg/L)	0.059 USF	0.341	0.044 USF	<0.030	0.046 USF
	Nitrite (as N) (mg/L)	<0.020 USF	<0.020	<0.020 USF	<0.020	<0.020 USF
	Phosphorus (P)-Total (mg/L)	0.0118	0.0437	0.0066	0.0278	0.0078
	Sulfate (SO4) (mg/L)	3.77	6.36	3.63	2.19	3.33
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.217	0.471	0.0864	0.415	0.0082
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	0.017	0.020	0.014	0.012	<0.010
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017 RRV	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	35.5	34.0	30.4	18.1	16.6
	Chromium (Cr)-Total (mg/L)	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	0.0017	<0.0010	0.0026	0.0012
	Iron (Fe)-Total (mg/L)	1.23	1.94	1.24	0.460	0.021
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	6.62	9.11	4.16	3.40	3.51
	Manganese (Mn)-Total (mg/L)	0.125	0.191	0.304	0.0092	0.0019
	Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	1.88	2.28	1.83	1.08	1.16
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1108291-6 WATER 26-JAN-12 SW5	L1108291-7 WATER 26-JAN-12 SW9	L1108291-8 WATER 26-JAN-12 SW10	L1108291-9 WATER 27-JAN-12 SW7	L1108291-10 WATER 27-JAN-12 SW8
Sample ID / Description / Sampled Date / Sampled Time / Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	117	276	144	23.6	209
	Hardness (as CaCO3) (mg/L)	53.0	156	72.9	7.72	114
	pH (pH)	7.51	7.91	7.55	6.24	7.62
	Total Suspended Solids (mg/L)	<2.0	40.4	58.6	2.5	137
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.0	3.0	2.6	3.4	3.4
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	50.5	162	74.1	8.3	111
	Ammonia, Total (as N) (mg/L)	<0.020	0.035	0.037	0.023	0.224
	Chloride (Cl) (mg/L)	4.80 USF	0.47 USF	0.23 USF	0.23 USF	0.38 USF
	Nitrate (as N) (mg/L)	0.044 USF	0.124 USF	0.057 USF	0.036 USF	0.290 USF
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0080	0.0081	0.0979	0.0101	0.0354
	Sulfate (SO4) (mg/L)	3.29	0.77	2.84	2.47	3.49
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0086	0.399	0.144	0.216	0.0786
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	<0.010	0.029	0.012	<0.010	0.035
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	14.8	49.4	25.0	2.15	40.5
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	0.0012	<0.0010	<0.0010	<0.0010	0.0011
	Iron (Fe)-Total (mg/L)	0.022	0.797	1.97	0.390	1.04
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	3.15	7.82	3.60	0.584	4.22
	Manganese (Mn)-Total (mg/L)	0.0017	0.189	0.164	0.0110	0.816
	Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	1.06	1.98	0.78	<0.50	0.97
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1108291-11	L1108291-12	L1108291-13		
Description	WATER	WATER	WATER		
Sampled Date	26-JAN-12	26-JAN-12	25-JAN-12		
Sampled Time					
Client ID	SW103	SW42	TRAVEL BLANK		
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	<3.0	118	<3.0		
Hardness (as CaCO3) (mg/L)	<0.51	57.0	<0.51		
pH (pH)	5.92	7.50	5.44		
Total Suspended Solids (mg/L)	<2.0	2.6	<2.0		
Anions and Nutrients Acidity (as CaCO3) (mg/L)	<2.0	2.6	<2.0		
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	54.9	<5.0		
Ammonia, Total (as N) (mg/L)	<0.020	0.026	<0.020		
Chloride (Cl) (mg/L)	<0.10	3.71	<0.10		
Nitrate (as N) (mg/L)	<0.030 USF	<0.030	<0.030 USF		
Nitrite (as N) (mg/L)	<0.020 USF	<0.020	<0.020 USF		
Phosphorus (P)-Total (mg/L)	<0.0050	0.0284	<0.0050		
Sulfate (SO4) (mg/L)	<0.30	2.20	<0.30		
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020		
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020		
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050		
Total Metals Aluminum (Al)-Total (mg/L)	<0.0050	0.403	<0.0050		
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060		
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Barium (Ba)-Total (mg/L)	<0.010	0.011	<0.010		
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050		
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017		
Calcium (Ca)-Total (mg/L)	<0.20	17.4	<0.20		
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050		
Copper (Cu)-Total (mg/L)	<0.0010	0.0025	<0.0010		
Iron (Fe)-Total (mg/L)	<0.020	0.447	<0.020		
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050		
Magnesium (Mg)-Total (mg/L)	<0.020	3.30	<0.020		
Manganese (Mn)-Total (mg/L)	<0.0010	0.0122	<0.0010		
Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020		
Potassium (K)-Total (mg/L)	<0.50	1.05	<0.50		
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1108291-1	L1108291-2	L1108291-3	L1108291-4	L1108291-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	25-JAN-12	25-JAN-12	25-JAN-12	26-JAN-12	26-JAN-12
Sampled Time					
Client ID	SW3	TL3	SW1	SW4	SW6
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	7.61	5.30	2.57	3.51	3.80
Strontium (Sr)-Total (mg/L)	0.0660	0.0715	0.0541	0.0320	0.0321
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0107	0.0205	0.0043	0.0141	<0.0020
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	0.0019	<0.0010	0.0011	<0.0010
Zinc (Zn)-Total (mg/L)	0.0040	0.0056	<0.0030	0.0031	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	0.0053	0.0231	<0.0050	0.0147	<0.0050
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	0.015	0.015	0.013	<0.010	<0.010
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Dissolved (mg/L)	35.2	31.9	29.4	16.8	15.6
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0017	0.0010
Iron (Fe)-Dissolved (mg/L)	0.327	0.808	0.280	<0.020	<0.020
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	6.54	8.86	4.17	3.12	3.34
Manganese (Mn)-Dissolved (mg/L)	0.125	0.166	0.271	0.0022	<0.0010
Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	1.73	2.09	1.68	0.86	1.09
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	5.40	5.03	2.43	3.35	3.73
Strontium (Sr)-Dissolved (mg/L)	0.0645	0.0671	0.0512	0.0291	0.0313

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1108291-6	L1108291-7	L1108291-8	L1108291-9	L1108291-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	26-JAN-12	26-JAN-12	26-JAN-12	27-JAN-12	27-JAN-12
Sampled Time					
Client ID	SW5	SW9	SW10	SW7	SW8
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	3.62	3.96	2.06	1.47	2.20
Strontium (Sr)-Total (mg/L)	0.0291	0.0771	0.0382	0.0079	0.0576
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	<0.0020	0.0198	0.0089	0.0064	0.0043
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	0.0010	0.0014	<0.0010	<0.0010
Zinc (Zn)-Total (mg/L)	<0.0030	0.0039	0.0042	0.0030	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	<0.0050		0.0101	0.155	<0.0050
Antimony (Sb)-Dissolved (mg/L)	<0.00060		<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	<0.010		<0.010	<0.010	0.031
Beryllium (Be)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050		<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017		<0.000017	0.000021	<0.000017
Calcium (Ca)-Dissolved (mg/L)	15.6		23.7	2.13	39.0
Chromium (Cr)-Dissolved (mg/L)	<0.0010		0.0013	<0.0010	<0.0010
Cobalt (Co)-Dissolved (mg/L)	<0.00050		<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	0.0011		<0.0010	<0.0010	<0.0010
Iron (Fe)-Dissolved (mg/L)	<0.020		0.421	0.251	0.244
Lead (Pb)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050		<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	3.43		3.35	0.585	3.99
Manganese (Mn)-Dissolved (mg/L)	<0.0010		0.130	0.0082	0.708
Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020		<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	1.09		0.71	<0.50	0.89
Selenium (Se)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010		<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	3.74		1.97	1.64	2.07
Strontium (Sr)-Dissolved (mg/L)	0.0313		0.0372	0.0079	0.0553

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1108291-11	L1108291-12	L1108291-13		
Description	WATER	WATER	WATER		
Sampled Date	26-JAN-12	26-JAN-12	25-JAN-12		
Sampled Time					
Client ID	SW103	SW42	TRAVEL BLANK		
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
Sodium (Na)-Total (mg/L)	<0.10	3.49	<0.10		
Strontium (Sr)-Total (mg/L)	<0.0010	0.0301	<0.0010		
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Titanium (Ti)-Total (mg/L)	<0.0020	0.0131	<0.0020		
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
Vanadium (V)-Total (mg/L)	<0.0010	0.0011	<0.0010		
Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030		
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	<0.0050	0.0217	<0.0050		
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060		
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017		
Calcium (Ca)-Dissolved (mg/L)	<0.20	17.4	<0.20		
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0019	<0.0010		
Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	<0.020		
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
Magnesium (Mg)-Dissolved (mg/L)	<0.020	3.31	<0.020		
Manganese (Mn)-Dissolved (mg/L)	<0.0010	0.0023	<0.0010		
Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
Potassium (K)-Dissolved (mg/L)	<0.50	0.94	<0.50		
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
Sodium (Na)-Dissolved (mg/L)	<0.10	3.45	<0.10		
Strontium (Sr)-Dissolved (mg/L)	<0.0010	0.0315	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1108291-1	L1108291-2	L1108291-3	L1108291-4	L1108291-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	25-JAN-12	25-JAN-12	25-JAN-12	26-JAN-12	26-JAN-12
	Sampled Time					
	Client ID	SW3	TL3	SW1	SW4	SW6
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1108291-6 WATER 26-JAN-12 SW5	L1108291-7 WATER 26-JAN-12 SW9	L1108291-8 WATER 26-JAN-12 SW10	L1108291-9 WATER 27-JAN-12 SW7	L1108291-10 WATER 27-JAN-12 SW8
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030		<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020		<0.0020	0.0039	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010		<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050		<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030		<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010		<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1108291-11	L1108291-12	L1108291-13		
	Description	WATER	WATER	WATER		
	Sampled Date	26-JAN-12	26-JAN-12	25-JAN-12		
	Sampled Time					
	Client ID	SW103	SW42	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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)
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1108291-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Boron (B)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Cobalt (Co)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Copper (Cu)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1108291-1, -11
Matrix Spike	Tungsten (W)-Dissolved	MS-B	L1108291-1, -11

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis
USF	Unreliable: Sample Frozen in Transit

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-COL-VA	Water	Free Cyanide by Diffusion	ASTM D 4282

This analysis is carried out using procedures adapted from ASTM D 4282 Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion. ALS has adapted this method to use active (bubbling with air) diffusion instead of microdiffusion. Free cyanide is determined by sample diffusion at pH 6 and analysis using the chloramine-T colourimetric method.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

Reference Information

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3120 B-ICPMS
MET-T-MS-TB	Water	Total Metals in Water by ICPMS	APHA 3120 B-ICPMS
NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B-Hexane Gravimetric

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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, BC, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
899 Tree Nursery Rd
Wabigoon ON P0V 2W0
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2319486								
WG1423104-2 LCS								
Acidity (as CaCO3)			100.4		%		85-115	01-FEB-12
WG1423104-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	01-FEB-12
ALK-TOT-CAP-TB	**Water**							
Batch R2318829								
WG1422377-2 LCS								
Alkalinity, Total (as CaCO3)			97.3		%		85-115	27-JAN-12
WG1422377-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	27-JAN-12
Batch R2320159								
WG1423702-2 LCS								
Alkalinity, Total (as CaCO3)			96.0		%		85-115	31-JAN-12
WG1423702-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	31-JAN-12
CL-IC-TB	**Water**							
Batch R2319683								
WG1422617-3 DUP		**L1108291-4**						
Chloride (Cl)		3.68	3.68		mg/L	0.065	20	30-JAN-12
WG1422617-2 LCS								
Chloride (Cl)			101.0		%		85-115	30-JAN-12
WG1422617-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	30-JAN-12
WG1422617-4 MS		**L1108291-4**						
Chloride (Cl)			112.3		%		75-125	30-JAN-12
CN-FREE-COL-VA	**Water**							
Batch R2322161								
WG1425965-4 DUP		**L1108291-13**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	07-FEB-12
WG1425965-2 LCS								
Cyanide, Free			91.9		%		80-120	07-FEB-12
WG1425965-3 LCS								
Cyanide, Free			89.5		%		80-120	07-FEB-12
WG1425965-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-COL-VA	**Water**							
Batch R2323254								
WG1427004-2 LCS								
Cyanide, Free			80.6		%		80-120	09-FEB-12
WG1427004-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	09-FEB-12
CN-TOT-WT	**Water**							
Batch R2319692								
WG1423855-4 CVS								
Cyanide, Total			99.0		%		85-115	01-FEB-12
WG1423855-2 DUP		**L1108291-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	01-FEB-12
WG1423855-3 LCS								
Cyanide, Total			109.8		%		80-120	01-FEB-12
WG1423855-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	01-FEB-12
CN-WAD-WT	**Water**							
Batch R2319659								
WG1423834-4 CVS								
Cyanide, Weak Acid Diss			102.5		%		85-115	01-FEB-12
WG1423834-5 DUP		**L1108291-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	01-FEB-12
WG1423834-3 LCS								
Cyanide, Weak Acid Diss			94.0		%		80-120	01-FEB-12
WG1423834-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	01-FEB-12
EC-CAP-TB	**Water**							
Batch R2318829								
WG1422377-2 LCS								
Conductivity (EC)			92.5		%		90-110	27-JAN-12
WG1422377-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	27-JAN-12
HG-D-CVAF-TB	**Water**							
Batch R2319199								
WG1423323-4 DUP		**L1108291-7**						
Mercury (Hg)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-JAN-12
WG1423323-2 LCS								
Mercury (Hg)-Dissolved			101.0		%		80-120	31-JAN-12
WG1423323-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-TB	**Water**							
Batch R2319199								
WG1423323-1 MB								
Mercury (Hg)-Dissolved			<0.00010		mg/L		0.0001	31-JAN-12
WG1423323-5 MS		**L1108291-7**						
Mercury (Hg)-Dissolved			94.8		%		70-130	31-JAN-12
HG-T-CVAF-TB	**Water**							
Batch R2319157								
WG1423285-6 DUP		**L1108291-5**						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-JAN-12
WG1423285-2 LCS								
Mercury (Hg)-Total			101.0		%		80-120	31-JAN-12
WG1423285-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	31-JAN-12
WG1423285-5 MS		**L1107980-4**						
Mercury (Hg)-Total			86.6		%		70-130	31-JAN-12
WG1423285-7 MS		**L1108291-5**						
Mercury (Hg)-Total			100.3		%		70-130	31-JAN-12
MET-D-MS-TB	**Water**							
Batch R2319497								
WG1422978-3 DUP		**L1108291-1**						
Aluminum (Al)-Dissolved		0.0053	<0.0050	RPD-NA	mg/L	N/A	20	31-JAN-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	31-JAN-12
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Barium (Ba)-Dissolved		0.015	0.015		mg/L	0.047	20	31-JAN-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-JAN-12
Calcium (Ca)-Dissolved		35.2	35.3		mg/L	0.32	20	31-JAN-12
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	31-JAN-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Iron (Fe)-Dissolved		0.327	0.335		mg/L	2.4	20	31-JAN-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-JAN-12
Magnesium (Mg)-Dissolved		6.54	6.67		mg/L	1.9	20	31-JAN-12
Manganese (Mn)-Dissolved		0.125	0.123		mg/L	1.5	20	31-JAN-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319497								
WG1422978-3 DUP		**L1108291-1**						
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-JAN-12
Potassium (K)-Dissolved		1.73	1.78		mg/L	2.9	20	31-JAN-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-JAN-12
Sodium (Na)-Dissolved		5.40	5.37		mg/L	0.49	20	31-JAN-12
Strontium (Sr)-Dissolved		0.0645	0.0644		mg/L	0.13	20	31-JAN-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	31-JAN-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-JAN-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	31-JAN-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	31-JAN-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Zinc (Zn)-Dissolved		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	31-JAN-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
WG1422978-2 LCS								
Aluminum (Al)-Dissolved			94.8		%		80-120	31-JAN-12
Antimony (Sb)-Dissolved			102.3		%		80-120	31-JAN-12
Arsenic (As)-Dissolved			104.6		%		80-120	31-JAN-12
Barium (Ba)-Dissolved			102.8		%		80-120	31-JAN-12
Beryllium (Be)-Dissolved			97.3		%		80-120	31-JAN-12
Bismuth (Bi)-Dissolved			105.3		%		80-120	31-JAN-12
Boron (B)-Dissolved			97.4		%		80-120	31-JAN-12
Cadmium (Cd)-Dissolved			105.4		%		80-120	31-JAN-12
Calcium (Ca)-Dissolved			100.5		%		80-120	31-JAN-12
Chromium (Cr)-Dissolved			105.4		%		80-120	31-JAN-12
Cobalt (Co)-Dissolved			103.7		%		80-120	31-JAN-12
Copper (Cu)-Dissolved			102.0		%		80-120	31-JAN-12
Iron (Fe)-Dissolved			105.3		%		80-120	31-JAN-12
Lead (Pb)-Dissolved			103.8		%		80-120	31-JAN-12
Lithium (Li)-Dissolved			99.5		%		80-120	31-JAN-12
Magnesium (Mg)-Dissolved			100.3		%		80-120	31-JAN-12
Manganese (Mn)-Dissolved			102.5		%		80-120	31-JAN-12
Molybdenum (Mo)-Dissolved			107.0		%		80-120	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319497								
WG1422978-2 LCS								
Nickel (Ni)-Dissolved			105.1		%		80-120	31-JAN-12
Potassium (K)-Dissolved			101.4		%		80-120	31-JAN-12
Selenium (Se)-Dissolved			93.0		%		80-120	31-JAN-12
Silver (Ag)-Dissolved			95.1		%		80-120	31-JAN-12
Sodium (Na)-Dissolved			105.6		%		80-120	31-JAN-12
Strontium (Sr)-Dissolved			105.6		%		80-120	31-JAN-12
Tellurium (Te)-Dissolved			110.5		%		80-120	31-JAN-12
Thallium (Tl)-Dissolved			103.5		%		80-120	31-JAN-12
Tin (Sn)-Dissolved			106.2		%		80-120	31-JAN-12
Titanium (Ti)-Dissolved			103.9		%		80-120	31-JAN-12
Tungsten (W)-Dissolved			100.5		%		80-120	31-JAN-12
Uranium (U)-Dissolved			101.2		%		80-120	31-JAN-12
Vanadium (V)-Dissolved			103.7		%		80-120	31-JAN-12
Zinc (Zn)-Dissolved			103.0		%		80-120	31-JAN-12
Zirconium (Zr)-Dissolved			98.8		%		80-120	31-JAN-12
WG1422978-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	31-JAN-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	31-JAN-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	31-JAN-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	31-JAN-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	31-JAN-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	31-JAN-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	31-JAN-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	31-JAN-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	31-JAN-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	31-JAN-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319497								
WG1422978-1 MB								
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	31-JAN-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	31-JAN-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	31-JAN-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	31-JAN-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	31-JAN-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	31-JAN-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	31-JAN-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	31-JAN-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	31-JAN-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	31-JAN-12
WG1422978-4 MS		**L1108291-1**						
Aluminum (Al)-Dissolved			105.6		%		70-130	31-JAN-12
Antimony (Sb)-Dissolved			106.2		%		70-130	31-JAN-12
Arsenic (As)-Dissolved			111.7		%		70-130	31-JAN-12
Barium (Ba)-Dissolved			101.2		%		70-130	31-JAN-12
Beryllium (Be)-Dissolved			103.5		%		70-130	31-JAN-12
Bismuth (Bi)-Dissolved			96.3		%		70-130	31-JAN-12
Boron (B)-Dissolved			107.1		%		70-130	31-JAN-12
Cadmium (Cd)-Dissolved			127.1		%		70-130	31-JAN-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	31-JAN-12
Chromium (Cr)-Dissolved			109.2		%		70-130	31-JAN-12
Cobalt (Co)-Dissolved			107.4		%		70-130	31-JAN-12
Copper (Cu)-Dissolved			103.1		%		70-130	31-JAN-12
Iron (Fe)-Dissolved			106.1		%		70-130	31-JAN-12
Lead (Pb)-Dissolved			102.7		%		70-130	31-JAN-12
Lithium (Li)-Dissolved			106.0		%		70-130	31-JAN-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	31-JAN-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	31-JAN-12
Molybdenum (Mo)-Dissolved			102.3		%		70-130	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319497								
WG1422978-4 MS		**L1108291-1**						
Nickel (Ni)-Dissolved			102.2		%		70-130	31-JAN-12
Potassium (K)-Dissolved			106.3		%		70-130	31-JAN-12
Selenium (Se)-Dissolved			110.6		%		70-130	31-JAN-12
Silver (Ag)-Dissolved			107.8		%		70-130	31-JAN-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	31-JAN-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	31-JAN-12
Tellurium (Te)-Dissolved			120.5		%		70-130	31-JAN-12
Thallium (Tl)-Dissolved			102.8		%		70-130	31-JAN-12
Tin (Sn)-Dissolved			107.3		%		70-130	31-JAN-12
Titanium (Ti)-Dissolved			106.9		%		70-130	31-JAN-12
Tungsten (W)-Dissolved			103.6		%		70-130	31-JAN-12
Uranium (U)-Dissolved			109.9		%		70-130	31-JAN-12
Vanadium (V)-Dissolved			109.3		%		70-130	31-JAN-12
Zinc (Zn)-Dissolved			104.3		%		70-130	31-JAN-12
Zirconium (Zr)-Dissolved			102.8		%		70-130	31-JAN-12
Batch R2319991								
WG1423628-2 LCS								
Aluminum (Al)-Dissolved			94.5		%		80-120	01-FEB-12
Antimony (Sb)-Dissolved			95.4		%		80-120	01-FEB-12
Arsenic (As)-Dissolved			99.3		%		80-120	01-FEB-12
Barium (Ba)-Dissolved			93.4		%		80-120	01-FEB-12
Beryllium (Be)-Dissolved			106.8		%		80-120	01-FEB-12
Bismuth (Bi)-Dissolved			100.6		%		80-120	01-FEB-12
Boron (B)-Dissolved			97.7		%		80-120	01-FEB-12
Cadmium (Cd)-Dissolved			99.7		%		80-120	01-FEB-12
Calcium (Ca)-Dissolved			105.3		%		80-120	01-FEB-12
Chromium (Cr)-Dissolved			101.0		%		80-120	01-FEB-12
Cobalt (Co)-Dissolved			98.6		%		80-120	01-FEB-12
Copper (Cu)-Dissolved			94.4		%		80-120	01-FEB-12
Iron (Fe)-Dissolved			98.8		%		80-120	01-FEB-12
Lead (Pb)-Dissolved			98.4		%		80-120	01-FEB-12
Lithium (Li)-Dissolved			103.6		%		80-120	01-FEB-12
Magnesium (Mg)-Dissolved			108.2		%		80-120	01-FEB-12
Manganese (Mn)-Dissolved			106.5		%		80-120	01-FEB-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch	**R2319991**							
WG1423628-2	**LCS**							
Molybdenum (Mo)-Dissolved			99.8		%		80-120	01-FEB-12
Nickel (Ni)-Dissolved			101.7		%		80-120	01-FEB-12
Potassium (K)-Dissolved			97.4		%		80-120	01-FEB-12
Selenium (Se)-Dissolved			99.0		%		80-120	01-FEB-12
Silver (Ag)-Dissolved			91.6		%		80-120	01-FEB-12
Sodium (Na)-Dissolved			100.2		%		80-120	01-FEB-12
Strontium (Sr)-Dissolved			97.0		%		80-120	01-FEB-12
Tellurium (Te)-Dissolved			97.4		%		80-120	01-FEB-12
Thallium (Tl)-Dissolved			97.3		%		80-120	01-FEB-12
Tin (Sn)-Dissolved			99.9		%		80-120	01-FEB-12
Titanium (Ti)-Dissolved			102.2		%		80-120	01-FEB-12
Tungsten (W)-Dissolved			93.7		%		80-120	01-FEB-12
Uranium (U)-Dissolved			94.4		%		80-120	01-FEB-12
Vanadium (V)-Dissolved			103.7		%		80-120	01-FEB-12
Zinc (Zn)-Dissolved			98.6		%		80-120	01-FEB-12
Zirconium (Zr)-Dissolved			89.7		%		80-120	01-FEB-12
WG1423628-1	**MB**							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	01-FEB-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	01-FEB-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	01-FEB-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	01-FEB-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	01-FEB-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	01-FEB-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	01-FEB-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	01-FEB-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	01-FEB-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	01-FEB-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319991								
WG1423628-1 MB								
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	01-FEB-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	01-FEB-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	01-FEB-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	01-FEB-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	01-FEB-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	01-FEB-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	01-FEB-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	01-FEB-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	01-FEB-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	01-FEB-12
WG1423628-4 MS		**L1109056-4**						
Aluminum (Al)-Dissolved			96.6		%		70-130	01-FEB-12
Antimony (Sb)-Dissolved			108.4		%		70-130	01-FEB-12
Arsenic (As)-Dissolved			115.1		%		70-130	01-FEB-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Beryllium (Be)-Dissolved			91.5		%		70-130	01-FEB-12
Bismuth (Bi)-Dissolved			89.4		%		70-130	01-FEB-12
Boron (B)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Cadmium (Cd)-Dissolved			125.3		%		70-130	01-FEB-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Chromium (Cr)-Dissolved			101.0		%		70-130	01-FEB-12
Cobalt (Co)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Copper (Cu)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Iron (Fe)-Dissolved			92.9		%		70-130	01-FEB-12
Lead (Pb)-Dissolved			98.7		%		70-130	01-FEB-12
Lithium (Li)-Dissolved			110.0		%		70-130	01-FEB-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	01-FEB-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2319991								
WG1423628-4 MS		**L1109056-4**						
Molybdenum (Mo)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Nickel (Ni)-Dissolved			97.1		%		70-130	01-FEB-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Selenium (Se)-Dissolved			111.6		%		70-130	01-FEB-12
Silver (Ag)-Dissolved			101.8		%		70-130	01-FEB-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Tellurium (Te)-Dissolved			119.1		%		70-130	01-FEB-12
Thallium (Tl)-Dissolved			97.5		%		70-130	01-FEB-12
Tin (Sn)-Dissolved			104.6		%		70-130	01-FEB-12
Titanium (Ti)-Dissolved			109.3		%		70-130	01-FEB-12
Tungsten (W)-Dissolved			N/A	MS-B	%		-	01-FEB-12
Vanadium (V)-Dissolved			113.5		%		70-130	01-FEB-12
Zinc (Zn)-Dissolved			103.3		%		70-130	01-FEB-12
Zirconium (Zr)-Dissolved			99.4		%		70-130	01-FEB-12
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-7 DUP		**L1108291-1**						
Aluminum (Al)-Total		0.217	0.233		mg/L	6.9	20	31-JAN-12
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	31-JAN-12
Arsenic (As)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Barium (Ba)-Total		0.017	0.018		mg/L	3.6	20	31-JAN-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-JAN-12
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	31-JAN-12
Calcium (Ca)-Total		35.5	36.8		mg/L	3.6	20	31-JAN-12
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	31-JAN-12
Copper (Cu)-Total		<0.0010	0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Iron (Fe)-Total		1.23	1.31		mg/L	5.9	20	31-JAN-12
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-JAN-12
Magnesium (Mg)-Total		6.62	6.99		mg/L	5.5	20	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-7 DUP		**L1108291-1**						
Manganese (Mn)-Total		0.125	0.129		mg/L	3.1	20	31-JAN-12
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-JAN-12
Potassium (K)-Total		1.88	1.99		mg/L	5.3	20	31-JAN-12
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-JAN-12
Sodium (Na)-Total		7.61	8.19		mg/L	7.3	20	31-JAN-12
Strontium (Sr)-Total		0.0660	0.0697		mg/L	5.5	20	31-JAN-12
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	31-JAN-12
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Titanium (Ti)-Total		0.0107	0.0117		mg/L	8.8	20	31-JAN-12
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	31-JAN-12
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	31-JAN-12
Vanadium (V)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
Zinc (Zn)-Total		0.0040	0.0036		mg/L	10	20	31-JAN-12
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-JAN-12
WG1422376-2 LCS								
Aluminum (Al)-Total			93.7		%		80-120	31-JAN-12
Antimony (Sb)-Total			101.9		%		80-120	31-JAN-12
Arsenic (As)-Total			98.5		%		80-120	31-JAN-12
Barium (Ba)-Total			99.0		%		80-120	31-JAN-12
Beryllium (Be)-Total			95.4		%		80-120	31-JAN-12
Bismuth (Bi)-Total			100.0		%		80-120	31-JAN-12
Boron (B)-Total			96.9		%		80-120	31-JAN-12
Cadmium (Cd)-Total			102.0		%		80-120	31-JAN-12
Calcium (Ca)-Total			99.7		%		80-120	31-JAN-12
Chromium (Cr)-Total			100.9		%		80-120	31-JAN-12
Cobalt (Co)-Total			101.5		%		80-120	31-JAN-12
Copper (Cu)-Total			97.9		%		80-120	31-JAN-12
Iron (Fe)-Total			103.7		%		80-120	31-JAN-12
Lead (Pb)-Total			96.9		%		80-120	31-JAN-12
Lithium (Li)-Total			93.4		%		80-120	31-JAN-12
Magnesium (Mg)-Total			94.8		%		80-120	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-2 LCS								
Manganese (Mn)-Total			100.4		%		80-120	31-JAN-12
Molybdenum (Mo)-Total			101.8		%		80-120	31-JAN-12
Nickel (Ni)-Total			101.6		%		80-120	31-JAN-12
Potassium (K)-Total			98.4		%		80-120	31-JAN-12
Selenium (Se)-Total			91.4		%		80-120	31-JAN-12
Silver (Ag)-Total			93.6		%		80-120	31-JAN-12
Sodium (Na)-Total			101.1		%		80-120	31-JAN-12
Strontium (Sr)-Total			99.2		%		80-120	31-JAN-12
Tellurium (Te)-Total			105.4		%		80-120	31-JAN-12
Thallium (Tl)-Total			97.5		%		80-120	31-JAN-12
Tin (Sn)-Total			101.9		%		80-120	31-JAN-12
Titanium (Ti)-Total			100.2		%		80-120	31-JAN-12
Tungsten (W)-Total			97.1		%		80-120	31-JAN-12
Uranium (U)-Total			96.0		%		80-120	31-JAN-12
Vanadium (V)-Total			103.1		%		80-120	31-JAN-12
Zinc (Zn)-Total			97.1		%		80-120	31-JAN-12
Zirconium (Zr)-Total			95.2		%		80-120	31-JAN-12
WG1422376-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	31-JAN-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	31-JAN-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	31-JAN-12
Barium (Ba)-Total			<0.010		mg/L		0.01	31-JAN-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	31-JAN-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	31-JAN-12
Boron (B)-Total			<0.050		mg/L		0.05	31-JAN-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	31-JAN-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	31-JAN-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	31-JAN-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	31-JAN-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	31-JAN-12
Iron (Fe)-Total			<0.020		mg/L		0.02	31-JAN-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	31-JAN-12
Lithium (Li)-Total			<0.050		mg/L		0.05	31-JAN-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-1 MB								
Manganese (Mn)-Total			<0.0010		mg/L		0.001	31-JAN-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	31-JAN-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	31-JAN-12
Potassium (K)-Total			<0.50		mg/L		0.5	31-JAN-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	31-JAN-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	31-JAN-12
Sodium (Na)-Total			<0.10		mg/L		0.1	31-JAN-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	31-JAN-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	31-JAN-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	31-JAN-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	31-JAN-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	31-JAN-12
Tungsten (W)-Total			<0.010		mg/L		0.01	31-JAN-12
Uranium (U)-Total			<0.0050		mg/L		0.005	31-JAN-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	31-JAN-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	31-JAN-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	31-JAN-12
WG1422376-4 MS		**L1107698-10**						
Aluminum (Al)-Total			104.0		%		70-130	31-JAN-12
Antimony (Sb)-Total			105.5		%		70-130	31-JAN-12
Arsenic (As)-Total			110.1		%		70-130	31-JAN-12
Beryllium (Be)-Total			105.8		%		70-130	31-JAN-12
Bismuth (Bi)-Total			106.1		%		70-130	31-JAN-12
Boron (B)-Total			114.5		%		70-130	31-JAN-12
Cadmium (Cd)-Total			126.7		%		70-130	31-JAN-12
Calcium (Ca)-Total			N/A	MS-B	%		-	31-JAN-12
Chromium (Cr)-Total			110.3		%		70-130	31-JAN-12
Cobalt (Co)-Total			106.5		%		70-130	31-JAN-12
Copper (Cu)-Total			108.7		%		70-130	31-JAN-12
Iron (Fe)-Total			109.0		%		70-130	31-JAN-12
Lead (Pb)-Total			107.3		%		70-130	31-JAN-12
Lithium (Li)-Total			111.4		%		70-130	31-JAN-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	31-JAN-12
Manganese (Mn)-Total			106.0		%		70-130	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-4 MS		**L1107698-10**						
Molybdenum (Mo)-Total			111.0		%		70-130	31-JAN-12
Nickel (Ni)-Total			109.4		%		70-130	31-JAN-12
Potassium (K)-Total			107.8		%		70-130	31-JAN-12
Selenium (Se)-Total			97.7		%		70-130	31-JAN-12
Silver (Ag)-Total			108.3		%		70-130	31-JAN-12
Sodium (Na)-Total			109.2		%		70-130	31-JAN-12
Strontium (Sr)-Total			N/A	MS-B	%		-	31-JAN-12
Tellurium (Te)-Total			105.6		%		70-130	31-JAN-12
Thallium (Tl)-Total			103.9		%		70-130	31-JAN-12
Tin (Sn)-Total			107.2		%		70-130	31-JAN-12
Titanium (Ti)-Total			112.5		%		70-130	31-JAN-12
Tungsten (W)-Total			105.7		%		70-130	31-JAN-12
Uranium (U)-Total			109.9		%		70-130	31-JAN-12
Vanadium (V)-Total			108.9		%		70-130	31-JAN-12
Zinc (Zn)-Total			97.4		%		70-130	31-JAN-12
Zirconium (Zr)-Total			107.3		%		70-130	31-JAN-12
WG1422376-8 MS		**L1108291-1**						
Aluminum (Al)-Total			N/A	MS-B	%		-	31-JAN-12
Antimony (Sb)-Total			109.2		%		70-130	31-JAN-12
Arsenic (As)-Total			110.4		%		70-130	31-JAN-12
Barium (Ba)-Total			110.9		%		70-130	31-JAN-12
Beryllium (Be)-Total			107.7		%		70-130	31-JAN-12
Bismuth (Bi)-Total			107.4		%		70-130	31-JAN-12
Boron (B)-Total			122.0		%		70-130	31-JAN-12
Calcium (Ca)-Total			N/A	MS-B	%		-	31-JAN-12
Chromium (Cr)-Total			113.8		%		70-130	31-JAN-12
Cobalt (Co)-Total			112.9		%		70-130	31-JAN-12
Copper (Cu)-Total			112.4		%		70-130	31-JAN-12
Iron (Fe)-Total			107.7		%		70-130	31-JAN-12
Lead (Pb)-Total			109.2		%		70-130	31-JAN-12
Lithium (Li)-Total			120.8		%		70-130	31-JAN-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	31-JAN-12
Manganese (Mn)-Total			N/A	MS-B	%		-	31-JAN-12
Molybdenum (Mo)-Total			111.9		%		70-130	31-JAN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2319520								
WG1422376-8 MS		**L1108291-1**						
Nickel (Ni)-Total			110.3		%		70-130	31-JAN-12
Potassium (K)-Total			112.0		%		70-130	31-JAN-12
Selenium (Se)-Total			102.3		%		70-130	31-JAN-12
Silver (Ag)-Total			111.5		%		70-130	31-JAN-12
Sodium (Na)-Total			N/A	MS-B	%		-	31-JAN-12
Strontium (Sr)-Total			N/A	MS-B	%		-	31-JAN-12
Tellurium (Te)-Total			107.9		%		70-130	31-JAN-12
Thallium (Tl)-Total			104.5		%		70-130	31-JAN-12
Tin (Sn)-Total			112.8		%		70-130	31-JAN-12
Titanium (Ti)-Total			113.5		%		70-130	31-JAN-12
Tungsten (W)-Total			107.9		%		70-130	31-JAN-12
Uranium (U)-Total			117.8		%		70-130	31-JAN-12
Vanadium (V)-Total			112.2		%		70-130	31-JAN-12
Zinc (Zn)-Total			108.4		%		70-130	31-JAN-12
Zirconium (Zr)-Total			111.2		%		70-130	31-JAN-12
NH3-COL-TB	**Water**							
Batch R2319112								
WG1422965-2 LCS								
Ammonia, Total (as N)			96.0		%		85-115	31-JAN-12
WG1422965-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	31-JAN-12
WG1422965-4 MS		**L1107698-10**						
Ammonia, Total (as N)			85.7		%		75-125	31-JAN-12
NO2-IC-TB	**Water**							
Batch R2319683								
WG1422617-3 DUP		**L1108291-4**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	30-JAN-12
WG1422617-2 LCS								
Nitrite (as N)			96.7		%		85-115	30-JAN-12
WG1422617-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	30-JAN-12
WG1422617-4 MS		**L1108291-4**						
Nitrite (as N)			109.0		%		75-115	30-JAN-12
NO3-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2319683								
WG1422617-3 DUP		**L1108291-4**						
Nitrate (as N)		<0.030	<0.030	RPD-NA	mg/L	N/A	20	30-JAN-12
WG1422617-2 LCS								
Nitrate (as N)			99.8		%		85-115	30-JAN-12
WG1422617-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	30-JAN-12
WG1422617-4 MS		**L1108291-4**						
Nitrate (as N)			111.8		%		75-125	30-JAN-12
OGG-TOT-WT	**Water**							
Batch R2323556								
WG1427465-2 LCS								
Oil and Grease, Total			91.4		%		75-120	09-FEB-12
WG1427465-3 LCSD		**WG1427465-2**						
Oil and Grease, Total		91.4	84		%	8.3	45	09-FEB-12
WG1427465-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	09-FEB-12
P-T-COL-TB	**Water**							
Batch R2318454								
WG1422434-2 LCS								
Phosphorus (P)-Total			98.2		%		80-120	30-JAN-12
WG1422434-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	30-JAN-12
WG1422434-4 MS		**L1107980-1**						
Phosphorus (P)-Total			88.2		%		70-130	30-JAN-12
PH-CAP-TB	**Water**							
Batch R2318829								
WG1422377-2 LCS								
pH			5.98		pH		5.9-6.1	27-JAN-12
SO4-IC-TB	**Water**							
Batch R2319683								
WG1422617-3 DUP		**L1108291-4**						
Sulfate (SO4)		2.19	2.19		mg/L	0.046	20	30-JAN-12
WG1422617-2 LCS								
Sulfate (SO4)			103.1		%		85-115	30-JAN-12
WG1422617-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-JAN-12
WG1422617-4 MS		**L1108291-4**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2319683								
WG1422617-4 MS		**L1108291-4**						
Sulfate (SO4)			114.9		%		75-125	30-JAN-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2318039								
WG1422099-2 LCS								
Total Suspended Solids			95.8		%		85-115	28-JAN-12
WG1422099-1 MB								
Total Suspended Solids			<2.0		mg/L		2	28-JAN-12
Batch R2319507								
WG1423507-2 LCS								
Total Suspended Solids			96.0		%		85-115	01-FEB-12
WG1423507-1 MB								
Total Suspended Solids			<2.0		mg/L		2	01-FEB-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

L1108291-COFC

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1108291 COC # L1108479

Page 1 of 1

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	Treasury Metals	☒ Standard ☐ Other (specify):		☒ Regular (Default)
Contact:	Mac Potter	☒ PDF ☒ Excel ☐ Digital ☐ Fax		○ Priority (Specify Date Required →) Surcharges apply
Address:	899 Tree Nursery Rd	Email 1:	mac@treasurymetals.com	○ Emergency (1 Business Day) - 100% Surcharge
	Wabigoon ON P0V 2W0	Email 2:	ritchie@dstgroup.ca	○ For Emergency < 1 Day, ASAP or Weekend - Contact ALS
Phone:	807-223-6191 Fax:			
Invoice To	Same as Report ? (Yes) No (write address below)	Client / Project Information		Analysis Request
THE QUESTIONS BELOW MUST BE ANSWERED FOR WATER SAMPLES (circle Yes or No)		Job #:	M09706A01	Please indicate below Filtered, Preserved or both (F, P, F/P)
Are any samples taken from a regulated DW System?	Yes (No)	PO / AFE:	M02010 - P0115	
If yes, an authorized Drinking Water COC MUST be used for this submission.		LSD:	Goliath Project	
Is the water sampled intended to be potable for human consumption?	Yes (No)	Quota #:	Q32690	
Lab Work Order # (lab use only)		ALS Contact:	KAREN	Sampler: MP LR

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Alkalinity, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	TOT Cyanide	WAD Cyanide	CN-FREE-COL-VA	NH4, Total Phosphorus	OGG	Total Metals + Hg	Dissolved Metals + Hg	Hardness		Number of Containers
					P	P	P	P	P	P	P	P	P	F/P			
1	~~SW2~~ SW3	01 25/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
2	~~SW3~~ TL3	25/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
3	SW1	25/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
4	SW4	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
5	SW6	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
6	SW5	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
7	SW9	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	[illegible]	X		8
8	SW10 *	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X	*	9
9	SW7 *	27/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X	*	9
10	SW8 *	27/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X	*	9
11	SW103	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9
12	SW42	26/01/12	X	Water	X	X	X	X	X	X	X	X	X	X	X		9

Special Instructions / Regulations / Hazardous Details

Reg 153 Table 1 2 3 TCLP MISA (PWQO) OTHER (please specify): * No Nitric Acid preservative added to Total / Dissolved metals. Note one vile added to SW10

Circle one - Note drinking water samples MUST USE DW Chain of Custody

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 Yes / No ? If Yes add SIF
MACKENZIE POTTER <Original signed by>	25/01/12	9:00AM	<Original signed by>	27-JAN-12	15:05	°C	<Original signed by>	27-JAN-12	15:05	

GENF 18.01 Front

See SIF.

L1108291-COFC

Sample Integrity Form

This report summarizes some deficiencies found in your recent submission, and the actions that will be taken unless you contact us to make specific instructions.

Date Received:	Client:
27-JAN-12.	TREASURY METALS
Completed by (initial)	Submission ID: L# or Other Identifying Mark
LB	~~L1108147~~ LB L1108291.

1	Deficiency Found:	Without further instruction, We WILL:	2
	Samples under Regulation not circled yes or no	Proceed with samples as not from a regulated drinking water system and not intended for human consumption	
	Chain of Custody Questions Not Answered or Not on the Chain of Custody	Proceed with samples as not from a regulated drinking water system but intended for human consumption	
	Analyses requested not completed on Chain of Custody	Proceed to follow information on the chain of custody unless you specify otherwise	
	Sample was received with a temperature higher then 20°C (Microbiology)	Proceed to follow information on the bottle(s) unless you specify otherwise	
	COC information is incompleta or illegible	Proceed with analysis - Results may be qualified	
	COC not signed and dated by client	Preserve and proceed with analysis	
	Regulated Sample Type(s) not indicated on the Chain of Custody	Proceed with tha samples as regulated unless specified otherwise	
	Sample Description not clearly indicated on Chain of Custody	Advise you resample for deficient sample(s)	
	COC information does not match bottle label	Proceed with analysis of (remaining) sample(s)	
	Analysis Required not listed or clearly specified	Proceed with regular testing from previous submissions unless you specify otherwise	
	No COC accompanying the submission	**Further Comments/Specifics:**	
	Sample Bottle labeling issue (label is missing, blank, or doesn't match COC	Sample time not on COC or sample bottles. Will proceed with sample time as 00:00.	
	Wrong Sample Bottle used	"Travel Blank" not on COC. Will proceed with ananlysis.	
	Sample received after analytical hold time has been exceeded	"SW10", "SW7" & "SW8" was received unpreserved. Will preserve and proceed with analysis.	
	Filter and Preserve at Lab	"Dissolved mercury" submitted for "SW9" but crossed out on COC. Will proceed with analysis of dissolved mercury	
	Sample bottle found broken when received		
	Sample received with headspace		
	Insufficient number of bottles or sample volume provided		
	Sample Received Unpreserved		
	Bottles in shipment but not listed on chain of custody		
	Sample < Freezing Point (contains ice crystals or frozen)		
	Bottles listed on chain of custody but missing in shipment		
	← **If Checked HERE, you NEED to contact the laboratory for further discussion**	Samples received frozen - run and Code.	

For more information or to contact the laboratory: Login CSS 800-668-9878

ADDRESS 1081 Barton Street, Thunder Bay, Ontario, Canada P7B 5N3 | PHONE +1 807 623 6463 | FAX +1 807 623 7598
ALS CANADA LIMITED Part of the ALS Laboratory Group A Campbell Brothers Limited Company

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 09-APR-12
Report Date: 18-APR-12 16:05 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1132288

Project P.O. #: M02010-P0115
Job Reference: M09706A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1132288-1 WATER 05-APR-12 11:30 JCTA	L1132288-2 WATER 05-APR-12 09:30 SW8	L1132288-3 WATER 05-APR-12 10:00 SW7	L1132288-4 WATER 05-APR-12 11:00 SW9	L1132288-5 WATER 05-APR-12 08:30 SW10
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	59.2	47.9	87.9	72.0	50.0
	Hardness (as CaCO3) (mg/L)	24.2	18.3	36.3	32.2	21.5
	pH (pH)	6.95	6.84	7.64	7.17	6.94
	Total Suspended Solids (mg/L)	7.9	35.4	33.0	8.0	16.1
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.8	3.6	2.2	5.4	3.8
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	18.3	12.1	37.6	27.0	14.8
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	0.020	<0.020	<0.020
	Chloride (Cl) (mg/L)	0.61	0.18	0.16	0.23	0.24
	Nitrate (as N) (mg/L)	0.071	0.103	0.043	0.161	0.078
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0216	0.0347	0.0284	0.0149	0.0211
	Sulfate (SO4) (mg/L)	3.55	3.13	1.06	1.73	3.88
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.266	0.316	0.100	0.141	0.189
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.012	<0.010	<0.010
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	7.12	5.76	10.7	9.61	7.50
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	0.316	0.474	0.586	0.315	0.862
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	2.06	0.865	1.06	1.87	0.905
	Manganese (Mn)-Total (mg/L)	0.0108	0.0177	0.0767	0.0294	0.0302
	Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	0.60	<0.50	<0.50	1.04	<0.50
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1132288-6	L1132288-7	L1132288-8	L1132288-9	L1132288-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	04-APR-12	04-APR-12	04-APR-12	04-APR-12	04-APR-12
Sampled Time	16:00	15:30	15:00	14:15	14:00
Client ID	SW1	SW3	SW2	TL2A	TL3
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	59.0	111	139	88.0	64.3
Hardness (as CaCO3) (mg/L)	24.9	38.4	56.5	37.1	28.1
pH (pH)	7.08	7.53	7.56	7.22	7.16
Total Suspended Solids (mg/L)	2.6	2.7	5.9	122	44.6
Anions and Nutrients Acidity (as CaCO3) (mg/L)	4.0	3.4	5.6	5.4	2.4
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	20.6	34.1	50.0	33.0	20.7
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	0.021	<0.020
Chloride (Cl) (mg/L)	0.36	7.65	4.58	0.50	0.86
Nitrate (as N) (mg/L)	0.169	0.115	0.122	<0.030	0.135
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0176	0.0193	0.0829	0.0940	0.0534
Sulfate (SO4) (mg/L)	1.96	2.76	5.33	3.12	3.57
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.107	0.0779	0.982	1.77	0.882
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.015	0.019	0.012
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	0.000019	<0.000017
Calcium (Ca)-Total (mg/L)	6.21	11.8	18.2	9.10	6.92
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	0.0016	0.0034	0.0017
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.00103	0.00055
Copper (Cu)-Total (mg/L)	<0.0010	0.0010	0.0033	0.0074	0.0023
Iron (Fe)-Total (mg/L)	0.234	0.233	0.716	2.00	0.998
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	0.0018	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	1.43	2.10	3.58	3.14	2.07
Manganese (Mn)-Total (mg/L)	0.0105	0.0189	0.0154	0.0623	0.0355
Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	0.0027	<0.0020
Potassium (K)-Total (mg/L)	0.83	0.76	1.44	2.27	0.86
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1132288-11	L1132288-12	L1132288-13	L1132288-14	
Description	WATER	WATER	WATER	WATER	
Sampled Date	04-APR-12	04-APR-12	05-APR-12	04-APR-12	
Sampled Time	13:05	16:05	08:15	13:05	
Client ID	TL1A	SW1S	SW10S	TRAVEL BLANK	
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	43.2	58.5	<3.0	<3.0	
Hardness (as CaCO3) (mg/L)	17.6	25.0	<0.51	<0.51	
pH (pH)	6.69	7.11	5.46	5.51	
Total Suspended Solids (mg/L)	8.0	<2.0	<2.0	<2.0	
Anions and Nutrients Acidity (as CaCO3) (mg/L)	5.0	3.6	<2.0	<2.0	
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	10.7	21.2	<5.0	<5.0	
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	
Chloride (Cl) (mg/L)	0.44	0.38	<0.10	<0.10	
Nitrate (as N) (mg/L)	0.109	0.132	<0.030	<0.030	
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	
Phosphorus (P)-Total (mg/L)	0.0518	0.0172	<0.0050	<0.0050	
Sulfate (SO4) (mg/L)	3.60	1.97	<0.30	<0.30	
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
Total Metals Aluminum (Al)-Total (mg/L)	0.222	0.113	<0.0050	<0.0050	
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Barium (Ba)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	
Calcium (Ca)-Total (mg/L)	4.10	7.76	<0.20	<0.20	
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Iron (Fe)-Total (mg/L)	0.353	0.205	<0.020	<0.020	
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	
Magnesium (Mg)-Total (mg/L)	1.09	1.74	<0.020	<0.020	
Manganese (Mn)-Total (mg/L)	0.0075	0.0083	<0.0010	<0.0010	
Mercury (Hg)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Potassium (K)-Total (mg/L)	<0.50	0.69	<0.50	<0.50	
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1132288-1 WATER 05-APR-12 11:30 JCTA	L1132288-2 WATER 05-APR-12 09:30 SW8	L1132288-3 WATER 05-APR-12 10:00 SW7	L1132288-4 WATER 05-APR-12 11:00 SW9	L1132288-5 WATER 05-APR-12 08:30 SW10
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	1.27	0.82	0.57	1.44	1.00
	Strontium (Sr)-Total (mg/L)	0.0154	0.0097	0.0166	0.0162	0.0119
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0063	0.0112	0.0055	0.0038	0.0049
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030 RRV	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.119	0.164	0.0068	0.103	0.147
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	0.012	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	6.71 RRV	5.61 RRV	12.7	9.24 RRV	6.86 RRV
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	0.0011	0.0014	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.226	0.309	0.205	0.187	0.544
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	1.82 RRV	1.04	1.13	2.21	1.06
	Manganese (Mn)-Dissolved (mg/L)	0.0120	0.0147	0.0315	0.0140	0.0249
	Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	0.81	0.64	0.54	1.26	0.55
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.25 RRV	0.87 RRV	0.71	1.44 RRV	1.01 RRV
	Strontium (Sr)-Dissolved (mg/L)	0.0145 RRV	0.0115	0.0172	0.0180	0.0133

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1132288-6 WATER 04-APR-12 16:00 SW1	L1132288-7 WATER 04-APR-12 15:30 SW3	L1132288-8 WATER 04-APR-12 15:00 SW2	L1132288-9 WATER 04-APR-12 14:15 TL2A	L1132288-10 WATER 04-APR-12 14:00 TL3
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00083	<0.00010
	Sodium (Na)-Total (mg/L)	0.89	4.99	4.09	1.49	1.37
	Strontium (Sr)-Total (mg/L)	0.0117	0.0199	0.0256	0.0227	0.0165
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0033	0.0028	0.0306	0.0724	0.0339
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	0.0020	0.0032	0.0018
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	0.0045	0.0112	0.0044 RRV
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0583	0.0318	0.123	0.138	0.295
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017 RRV	<0.000017 RRV	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	7.35	11.3	15.8	10.0	7.74
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0012	0.0032	0.0015	0.0017
	Iron (Fe)-Dissolved (mg/L)	0.134	0.147	0.069	0.310	0.391
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	1.59	2.45	4.15	2.94	2.12
	Manganese (Mn)-Dissolved (mg/L)	0.0096	0.0166	0.0079	0.0226	0.0261
	Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	0.94	0.93	1.56	1.98	0.85
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010 RRV	<0.00010 RRV	<0.00010	<0.00010 RRV
	Sodium (Na)-Dissolved (mg/L)	1.07	4.89	3.79	1.72	1.47
	Strontium (Sr)-Dissolved (mg/L)	0.0132	0.0238	0.0287	0.0207	0.0156

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1132288-11 WATER 04-APR-12 13:05 TL1A	L1132288-12 WATER 04-APR-12 16:05 SW1S	L1132288-13 WATER 05-APR-12 08:15 SW10S	L1132288-14 WATER 04-APR-12 13:05 TRAVEL BLANK	
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Total (mg/L)	0.96	1.11	<0.10	<0.10	
	Strontium (Sr)-Total (mg/L)	0.0096	0.0144	<0.0010	<0.0010	
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Total (mg/L)	0.0063	0.0039	<0.0020	<0.0020	
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Total (mg/L)	<0.0030 RRV	<0.0030	<0.0030	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.128	0.0577	<0.0050	<0.0050	
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	
	Calcium (Ca)-Dissolved (mg/L)	4.98	7.41 RRV	<0.20	<0.20	
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Copper (Cu)-Dissolved (mg/L)	0.0014	<0.0010	<0.0010	<0.0010	
	Iron (Fe)-Dissolved (mg/L)	0.231	0.130	<0.020	<0.020	
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Magnesium (Mg)-Dissolved (mg/L)	1.25	1.58 RRV	<0.020	<0.020	
	Manganese (Mn)-Dissolved (mg/L)	0.0076	0.0100	<0.0010	<0.0010	
	Mercury (Hg)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Potassium (K)-Dissolved (mg/L)	0.53	0.93	<0.50	<0.50	
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	0.96 RRV	1.14 RRV	<0.10	<0.10	
	Strontium (Sr)-Dissolved (mg/L)	0.0105	0.0133 RRV	<0.0010	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1132288-1	L1132288-2	L1132288-3	L1132288-4	L1132288-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	05-APR-12	05-APR-12	05-APR-12	05-APR-12	05-APR-12
	Sampled Time	11:30	09:30	10:00	11:00	08:30
	Client ID	JCTA	SW8	SW7	SW9	SW10
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	0.0026	0.0027	<0.0020	<0.0020	0.0023
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0059	0.0120 RRV	0.0033	0.0062	0.0066
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1132288-6 WATER 04-APR-12 16:00 SW1	L1132288-7 WATER 04-APR-12 15:30 SW3	L1132288-8 WATER 04-APR-12 15:00 SW2	L1132288-9 WATER 04-APR-12 14:15 TL2A	L1132288-10 WATER 04-APR-12 14:00 TL3
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	0.0051	0.0028	0.0082
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	0.0012	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0086	0.0077	0.0114 RRV
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1132288-11	L1132288-12	L1132288-13	L1132288-14	
	Description	WATER	WATER	WATER	WATER	
	Sampled Date	04-APR-12	04-APR-12	05-APR-12	04-APR-12	
	Sampled Time	13:05	16:05	08:15	13:05	
	Client ID	TL1A	SW1S	SW10S	TRAVEL BLANK	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	0.0021	<0.0020	<0.0020	<0.0020	
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Dissolved (mg/L)	0.0130 RRV	0.0062	0.0040 RRV	<0.0030	
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	

* 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)
Matrix Spike	Ammonia, Total (as N)	MS-B	L1132288-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1132288-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-COL-VA	Water	Free Cyanide by Diffusion	ASTM D 4282

This analysis is carried out using procedures adapted from ASTM D 4282 Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion. ALS has adapted this method to use active (bubbling with air) diffusion instead of microdiffusion. Free cyanide is determined by sample diffusion at pH 6 and analysis using the chloramine-T colourimetric method.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE

Reference Information

HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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, BC, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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: L1132288 Report Date: 18-APR-12

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2348735								
WG1454322-3 DUP		**L1132288-1**						
Acidity (as CaCO3)		4.8	4.6		mg/L	4.3	20	10-APR-12
WG1454322-2 LCS								
Acidity (as CaCO3)			107.6		%		85-115	10-APR-12
WG1454322-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	10-APR-12
ALK-TOT-CAP-TB	**Water**							
Batch R2348484								
WG1453904-2 LCS								
Alkalinity, Total (as CaCO3)			95.6		%		85-115	09-APR-12
WG1453904-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	09-APR-12
CL-IC-TB	**Water**							
Batch R2348607								
WG1454238-2 LCS								
Chloride (Cl)			100.7		%		85-115	09-APR-12
WG1454238-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	09-APR-12
CN-FREE-COL-VA	**Water**							
Batch R2351617								
WG1457330-2 LCS								
Cyanide, Free			83.9		%		80-120	16-APR-12
WG1457330-3 LCS								
Cyanide, Free			96.1		%		80-120	16-APR-12
WG1457330-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	16-APR-12
CN-TOT-WT	**Water**							
Batch R2350219								
WG1455745-4 CVS								
Cyanide, Total			99.0		%		85-115	12-APR-12
WG1455745-3 LCS								
Cyanide, Total			90.4		%		80-120	12-APR-12
WG1455745-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	12-APR-12
CN-WAD-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-WT	**Water**							
Batch R2350215								
WG1455755-4 CVS								
Cyanide, Weak Acid Diss			99.0		%		85-115	12-APR-12
WG1455755-3 LCS								
Cyanide, Weak Acid Diss			109.4		%		80-120	12-APR-12
WG1455755-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	12-APR-12
EC-CAP-TB	**Water**							
Batch R2348484								
WG1453904-2 LCS								
Conductivity (EC)			104.0		%		90-110	09-APR-12
WG1453904-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	09-APR-12
HG-D-CVAF-TB	**Water**							
Batch R2349902								
WG1455558-4 DUP		**L1132288-3**						
Mercury (Hg)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-APR-12
WG1455558-2 LCS								
Mercury (Hg)-Dissolved			101.2		%		80-120	11-APR-12
WG1455558-1 MB								
Mercury (Hg)-Dissolved			<0.00010		mg/L		0.0001	11-APR-12
WG1455558-5 MS		**L1132288-3**						
Mercury (Hg)-Dissolved			95.7		%		70-130	11-APR-12
HG-T-CVAF-TB	**Water**							
Batch R2349929								
WG1455732-4 DUP		**L1132288-2**						
Mercury (Hg)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-APR-12
WG1455732-2 LCS								
Mercury (Hg)-Total			99.5		%		80-120	11-APR-12
WG1455732-1 MB								
Mercury (Hg)-Total			<0.00010		mg/L		0.0001	11-APR-12
WG1455732-5 MS		**L1132288-2**						
Mercury (Hg)-Total			108.8		%		70-130	11-APR-12
MET-D-MS-TB	**Water**							
Batch R2349387								
WG1454447-3 DUP		**L1132288-3**						
Aluminum (Al)-Dissolved		0.0068	0.0059		mg/L	13	20	10-APR-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	10-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2349387								
WG1454447-3 DUP		**L1132288-3**						
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Barium (Ba)-Dissolved		0.012	0.012		mg/L	0.50	20	10-APR-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	10-APR-12
Cadmium (Cd)-Dissolved		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	10-APR-12
Calcium (Ca)-Dissolved		12.7	13.0		mg/L	2.3	20	10-APR-12
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	10-APR-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Iron (Fe)-Dissolved		0.205	0.206		mg/L	0.53	20	10-APR-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	10-APR-12
Magnesium (Mg)-Dissolved		1.13	1.16		mg/L	2.4	20	10-APR-12
Manganese (Mn)-Dissolved		0.0315	0.0321		mg/L	1.9	20	10-APR-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	10-APR-12
Potassium (K)-Dissolved		0.54	0.55		mg/L	2.1	20	10-APR-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	10-APR-12
Sodium (Na)-Dissolved		0.71	0.73		mg/L	3.4	20	10-APR-12
Strontium (Sr)-Dissolved		0.0172	0.0173		mg/L	0.65	20	10-APR-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	10-APR-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	10-APR-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	10-APR-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	10-APR-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
Zinc (Zn)-Dissolved		0.0033	0.0032		mg/L	3.3	20	10-APR-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	10-APR-12
WG1454447-2 LCS								
Aluminum (Al)-Dissolved			100.3		%		80-120	10-APR-12
Antimony (Sb)-Dissolved			98.8		%		80-120	10-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2349387								
WG1454447-2 LCS								
Arsenic (As)-Dissolved			95.7		%		80-120	10-APR-12
Barium (Ba)-Dissolved			107.6		%		80-120	10-APR-12
Beryllium (Be)-Dissolved			109.8		%		80-120	10-APR-12
Bismuth (Bi)-Dissolved			112.1		%		80-120	10-APR-12
Boron (B)-Dissolved			95.5		%		80-120	10-APR-12
Cadmium (Cd)-Dissolved			115.1		%		80-120	10-APR-12
Calcium (Ca)-Dissolved			108.4		%		80-120	10-APR-12
Chromium (Cr)-Dissolved			113.8		%		80-120	10-APR-12
Cobalt (Co)-Dissolved			110.2		%		80-120	10-APR-12
Copper (Cu)-Dissolved			108.6		%		80-120	10-APR-12
Iron (Fe)-Dissolved			117.3		%		80-120	10-APR-12
Lead (Pb)-Dissolved			112.0		%		80-120	10-APR-12
Lithium (Li)-Dissolved			108.5		%		80-120	10-APR-12
Magnesium (Mg)-Dissolved			107.8		%		80-120	10-APR-12
Manganese (Mn)-Dissolved			114.8		%		80-120	10-APR-12
Molybdenum (Mo)-Dissolved			100.2		%		80-120	10-APR-12
Nickel (Ni)-Dissolved			110.7		%		80-120	10-APR-12
Potassium (K)-Dissolved			108.1		%		80-120	10-APR-12
Selenium (Se)-Dissolved			108.7		%		80-120	10-APR-12
Silver (Ag)-Dissolved			102.9		%		80-120	10-APR-12
Sodium (Na)-Dissolved			109.9		%		80-120	10-APR-12
Strontium (Sr)-Dissolved			108.2		%		80-120	10-APR-12
Tellurium (Te)-Dissolved			103.7		%		80-120	10-APR-12
Thallium (Tl)-Dissolved			114.0		%		80-120	10-APR-12
Tin (Sn)-Dissolved			102.6		%		80-120	10-APR-12
Titanium (Ti)-Dissolved			99.1		%		80-120	10-APR-12
Tungsten (W)-Dissolved			99.5		%		80-120	10-APR-12
Uranium (U)-Dissolved			103.8		%		80-120	10-APR-12
Vanadium (V)-Dissolved			111.1		%		80-120	10-APR-12
Zinc (Zn)-Dissolved			107.0		%		80-120	10-APR-12
Zirconium (Zr)-Dissolved			96.9		%		80-120	10-APR-12
WG1454447-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	10-APR-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	10-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2349387								
WG1454447-1 MB								
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	10-APR-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	10-APR-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	10-APR-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	10-APR-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	10-APR-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	10-APR-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	10-APR-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	10-APR-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	10-APR-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	10-APR-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	10-APR-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	10-APR-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	10-APR-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	10-APR-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	10-APR-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	10-APR-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	10-APR-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	10-APR-12
WG1454447-4 MS		**L1132288-3**						
Aluminum (Al)-Dissolved			96.1		%		70-130	10-APR-12
Antimony (Sb)-Dissolved			109.3		%		70-130	10-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2349387								
WG1454447-4 MS		**L1132288-3**						
Arsenic (As)-Dissolved			105.8		%		70-130	10-APR-12
Barium (Ba)-Dissolved			101.6		%		70-130	10-APR-12
Beryllium (Be)-Dissolved			108.8		%		70-130	10-APR-12
Bismuth (Bi)-Dissolved			88.7		%		70-130	10-APR-12
Boron (B)-Dissolved			115.0		%		70-130	10-APR-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	10-APR-12
Chromium (Cr)-Dissolved			102.1		%		70-130	10-APR-12
Cobalt (Co)-Dissolved			102.0		%		70-130	10-APR-12
Copper (Cu)-Dissolved			104.6		%		70-130	10-APR-12
Iron (Fe)-Dissolved			103.2		%		70-130	10-APR-12
Lead (Pb)-Dissolved			104.5		%		70-130	10-APR-12
Lithium (Li)-Dissolved			110.9		%		70-130	10-APR-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	10-APR-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	10-APR-12
Molybdenum (Mo)-Dissolved			99.1		%		70-130	10-APR-12
Nickel (Ni)-Dissolved			102.4		%		70-130	10-APR-12
Potassium (K)-Dissolved			104.1		%		70-130	10-APR-12
Silver (Ag)-Dissolved			107.1		%		70-130	10-APR-12
Sodium (Na)-Dissolved			102.8		%		70-130	10-APR-12
Strontium (Sr)-Dissolved			97.8		%		70-130	10-APR-12
Tellurium (Te)-Dissolved			123.6		%		70-130	10-APR-12
Thallium (Tl)-Dissolved			102.5		%		70-130	10-APR-12
Tin (Sn)-Dissolved			109.5		%		70-130	10-APR-12
Titanium (Ti)-Dissolved			103.6		%		70-130	10-APR-12
Tungsten (W)-Dissolved			104.6		%		70-130	10-APR-12
Uranium (U)-Dissolved			97.7		%		70-130	10-APR-12
Vanadium (V)-Dissolved			103.6		%		70-130	10-APR-12
Zinc (Zn)-Dissolved			105.3		%		70-130	10-APR-12
Zirconium (Zr)-Dissolved			103.9		%		70-130	10-APR-12
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-3 DUP		**L1132288-1**						
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	11-APR-12
Arsenic (As)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-3 DUP		**L1132288-1**						
Barium (Ba)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	11-APR-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	11-APR-12
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	11-APR-12
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	11-APR-12
Copper (Cu)-Total		<0.0010	0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Iron (Fe)-Total		0.316	0.370		mg/L	16	20	11-APR-12
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	11-APR-12
Manganese (Mn)-Total		0.0108	0.0128		mg/L	17	20	11-APR-12
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	11-APR-12
Potassium (K)-Total		0.60	0.70		mg/L	17	20	11-APR-12
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	11-APR-12
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	11-APR-12
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Titanium (Ti)-Total		0.0063	0.0083	J	mg/L	0.0020	0.004	11-APR-12
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	11-APR-12
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	11-APR-12
Vanadium (V)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	11-APR-12
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	11-APR-12
WG1454386-2 LCS								
Aluminum (Al)-Total			90.5		%		80-120	11-APR-12
Antimony (Sb)-Total			90.8		%		80-120	11-APR-12
Arsenic (As)-Total			93.0		%		80-120	11-APR-12
Barium (Ba)-Total			90.0		%		80-120	11-APR-12
Beryllium (Be)-Total			95.2		%		80-120	11-APR-12
Bismuth (Bi)-Total			99.98		%		80-120	11-APR-12
Boron (B)-Total			89.1		%		80-120	11-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-2 LCS								
Cadmium (Cd)-Total			100.1		%		80-120	11-APR-12
Calcium (Ca)-Total			93.5		%		80-120	11-APR-12
Chromium (Cr)-Total			92.3		%		80-120	11-APR-12
Cobalt (Co)-Total			97.7		%		80-120	11-APR-12
Copper (Cu)-Total			101.4		%		80-120	11-APR-12
Iron (Fe)-Total			100.1		%		80-120	11-APR-12
Lead (Pb)-Total			98.4		%		80-120	11-APR-12
Lithium (Li)-Total			103.9		%		80-120	11-APR-12
Magnesium (Mg)-Total			99.6		%		80-120	11-APR-12
Manganese (Mn)-Total			99.8		%		80-120	11-APR-12
Molybdenum (Mo)-Total			97.4		%		80-120	11-APR-12
Nickel (Ni)-Total			94.5		%		80-120	11-APR-12
Potassium (K)-Total			101.6		%		80-120	11-APR-12
Selenium (Se)-Total			101.7		%		80-120	11-APR-12
Silver (Ag)-Total			92.9		%		80-120	11-APR-12
Sodium (Na)-Total			101.1		%		80-120	11-APR-12
Strontium (Sr)-Total			102.2		%		80-120	11-APR-12
Tellurium (Te)-Total			93.7		%		80-120	11-APR-12
Thallium (Tl)-Total			105.0		%		80-120	11-APR-12
Tin (Sn)-Total			87.4		%		80-120	11-APR-12
Titanium (Ti)-Total			91.6		%		80-120	11-APR-12
Tungsten (W)-Total			86.5		%		80-120	11-APR-12
Uranium (U)-Total			94.7		%		80-120	11-APR-12
Vanadium (V)-Total			97.8		%		80-120	11-APR-12
Zinc (Zn)-Total			101.2		%		80-120	11-APR-12
Zirconium (Zr)-Total			91.5		%		80-120	11-APR-12
WG1454386-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	11-APR-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	11-APR-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	11-APR-12
Barium (Ba)-Total			<0.010		mg/L		0.01	11-APR-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	11-APR-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	11-APR-12
Boron (B)-Total			<0.050		mg/L		0.05	11-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-1 MB								
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	11-APR-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	11-APR-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	11-APR-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	11-APR-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	11-APR-12
Iron (Fe)-Total			<0.020		mg/L		0.02	11-APR-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	11-APR-12
Lithium (Li)-Total			<0.050		mg/L		0.05	11-APR-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	11-APR-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	11-APR-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	11-APR-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	11-APR-12
Potassium (K)-Total			<0.50		mg/L		0.5	11-APR-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	11-APR-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	11-APR-12
Sodium (Na)-Total			<0.10		mg/L		0.1	11-APR-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	11-APR-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	11-APR-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	11-APR-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	11-APR-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	11-APR-12
Tungsten (W)-Total			<0.010		mg/L		0.01	11-APR-12
Uranium (U)-Total			<0.0050		mg/L		0.005	11-APR-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	11-APR-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	11-APR-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	11-APR-12
WG1454386-4 MS		**L1132288-1**						
Antimony (Sb)-Total			113.2		%		70-130	11-APR-12
Arsenic (As)-Total			118.2		%		70-130	11-APR-12
Beryllium (Be)-Total			105.4		%		70-130	11-APR-12
Bismuth (Bi)-Total			105.1		%		70-130	11-APR-12
Boron (B)-Total			116.5		%		70-130	11-APR-12
Calcium (Ca)-Total			N/A	MS-B	%		-	11-APR-12
Chromium (Cr)-Total			106.7		%		70-130	11-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-4 MS		**L1132288-1**						
Cobalt (Co)-Total			111.4		%		70-130	11-APR-12
Copper (Cu)-Total			118.3		%		70-130	11-APR-12
Iron (Fe)-Total			118.4		%		70-130	11-APR-12
Lead (Pb)-Total			109.3		%		70-130	11-APR-12
Lithium (Li)-Total			117.2		%		70-130	11-APR-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	11-APR-12
Molybdenum (Mo)-Total			118.5		%		70-130	11-APR-12
Nickel (Ni)-Total			102.9		%		70-130	11-APR-12
Potassium (K)-Total			119.8		%		70-130	11-APR-12
Selenium (Se)-Total			109.6		%		70-130	11-APR-12
Silver (Ag)-Total			108.7		%		70-130	11-APR-12
Tellurium (Te)-Total			107.9		%		70-130	11-APR-12
Thallium (Tl)-Total			103.8		%		70-130	11-APR-12
Tin (Sn)-Total			110.7		%		70-130	11-APR-12
Titanium (Ti)-Total			120.0		%		70-130	11-APR-12
Tungsten (W)-Total			107.9		%		70-130	11-APR-12
Uranium (U)-Total			112.4		%		70-130	11-APR-12
Vanadium (V)-Total			115.8		%		70-130	11-APR-12
Zinc (Zn)-Total			108.0		%		70-130	11-APR-12
Zirconium (Zr)-Total			119.9		%		70-130	11-APR-12
WG1454386-6 MS		**L1132469-4**						
Antimony (Sb)-Total			117.6		%		70-130	11-APR-12
Arsenic (As)-Total			128.5		%		70-130	11-APR-12
Barium (Ba)-Total			N/A	MS-B	%		-	11-APR-12
Beryllium (Be)-Total			99.6		%		70-130	11-APR-12
Bismuth (Bi)-Total			93.1		%		70-130	11-APR-12
Boron (B)-Total			N/A	MS-B	%		-	11-APR-12
Cadmium (Cd)-Total			129.0		%		70-130	11-APR-12
Calcium (Ca)-Total			N/A	MS-B	%		-	11-APR-12
Chromium (Cr)-Total			109.4		%		70-130	11-APR-12
Cobalt (Co)-Total			N/A	MS-B	%		-	11-APR-12
Copper (Cu)-Total			N/A	MS-B	%		-	11-APR-12
Iron (Fe)-Total			110.8		%		70-130	11-APR-12
Lead (Pb)-Total			104.3		%		70-130	11-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2350645								
WG1454386-6 MS		**L1132469-4**						
Magnesium (Mg)-Total			N/A	MS-B	%		-	11-APR-12
Manganese (Mn)-Total			N/A	MS-B	%		-	11-APR-12
Nickel (Ni)-Total			112.9		%		70-130	11-APR-12
Potassium (K)-Total			N/A	MS-B	%		-	11-APR-12
Selenium (Se)-Total			127.3		%		70-130	11-APR-12
Silver (Ag)-Total			99.1		%		70-130	11-APR-12
Sodium (Na)-Total			N/A	MS-B	%		-	11-APR-12
Strontium (Sr)-Total			N/A	MS-B	%		-	11-APR-12
Tellurium (Te)-Total			116.8		%		70-130	11-APR-12
Thallium (Tl)-Total			97.2		%		70-130	11-APR-12
Tin (Sn)-Total			108.5		%		70-130	11-APR-12
Titanium (Ti)-Total			122.6		%		70-130	11-APR-12
Vanadium (V)-Total			118.9		%		70-130	11-APR-12
Zinc (Zn)-Total			110.1		%		70-130	11-APR-12
Zirconium (Zr)-Total			115.6		%		70-130	11-APR-12
Batch R2352195								
WG1454386-3 DUP		**L1132288-1**						
Aluminum (Al)-Total		0.266	0.278		mg/L	4.5	20	16-APR-12
Calcium (Ca)-Total		7.12	7.04		mg/L	1.2	20	16-APR-12
Magnesium (Mg)-Total		2.06	2.06		mg/L	0.025	20	16-APR-12
Sodium (Na)-Total		1.27	1.26		mg/L	1.3	20	16-APR-12
Strontium (Sr)-Total		0.0154	0.0151		mg/L	1.6	20	16-APR-12
WG1454386-8 LCS								
Aluminum (Al)-Total			96.9		%		80-120	16-APR-12
Antimony (Sb)-Total			99.5		%		80-120	16-APR-12
Arsenic (As)-Total			96.8		%		80-120	16-APR-12
Barium (Ba)-Total			100.5		%		80-120	16-APR-12
Beryllium (Be)-Total			103.0		%		80-120	16-APR-12
Bismuth (Bi)-Total			114.4		%		80-120	16-APR-12
Boron (B)-Total			101.2		%		80-120	16-APR-12
Cadmium (Cd)-Total			112.2		%		80-120	16-APR-12
Calcium (Ca)-Total			107.3		%		80-120	16-APR-12
Chromium (Cr)-Total			112.4		%		80-120	16-APR-12
Cobalt (Co)-Total			108.4		%		80-120	16-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2352195								
WG1454386-8 LCS								
Copper (Cu)-Total			109.0		%		80-120	16-APR-12
Iron (Fe)-Total			112.0		%		80-120	16-APR-12
Lead (Pb)-Total			114.4		%		80-120	16-APR-12
Lithium (Li)-Total			110.9		%		80-120	16-APR-12
Magnesium (Mg)-Total			115.2		%		80-120	16-APR-12
Manganese (Mn)-Total			115.6		%		80-120	16-APR-12
Molybdenum (Mo)-Total			98.6		%		80-120	16-APR-12
Nickel (Ni)-Total			110.6		%		80-120	16-APR-12
Potassium (K)-Total			106.9		%		80-120	16-APR-12
Selenium (Se)-Total			96.8		%		80-120	16-APR-12
Silver (Ag)-Total			101.2		%		80-120	16-APR-12
Sodium (Na)-Total			108.2		%		80-120	16-APR-12
Strontium (Sr)-Total			107.0		%		80-120	16-APR-12
Tellurium (Te)-Total			106.3		%		80-120	16-APR-12
Thallium (Tl)-Total			114.8		%		80-120	16-APR-12
Tin (Sn)-Total			98.0		%		80-120	16-APR-12
Titanium (Ti)-Total			100.3		%		80-120	16-APR-12
Tungsten (W)-Total			100.2		%		80-120	16-APR-12
Uranium (U)-Total			102.3		%		80-120	16-APR-12
Vanadium (V)-Total			111.5		%		80-120	16-APR-12
Zinc (Zn)-Total			109.8		%		80-120	16-APR-12
Zirconium (Zr)-Total			91.9		%		80-120	16-APR-12
WG1454386-7 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	16-APR-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	16-APR-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	16-APR-12
Barium (Ba)-Total			<0.010		mg/L		0.01	16-APR-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	16-APR-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	16-APR-12
Boron (B)-Total			<0.050		mg/L		0.05	16-APR-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	16-APR-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	16-APR-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	16-APR-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	16-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2352195								
WG1454386-7 MB								
Copper (Cu)-Total			<0.0010		mg/L		0.001	16-APR-12
Iron (Fe)-Total			<0.020		mg/L		0.02	16-APR-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	16-APR-12
Lithium (Li)-Total			<0.050		mg/L		0.05	16-APR-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	16-APR-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	16-APR-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	16-APR-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	16-APR-12
Potassium (K)-Total			<0.50		mg/L		0.5	16-APR-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	16-APR-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	16-APR-12
Sodium (Na)-Total			<0.10		mg/L		0.1	16-APR-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	16-APR-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	16-APR-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	16-APR-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	16-APR-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	16-APR-12
Tungsten (W)-Total			<0.010		mg/L		0.01	16-APR-12
Uranium (U)-Total			<0.0050		mg/L		0.005	16-APR-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	16-APR-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	16-APR-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	16-APR-12
NH3-COL-TB	**Water**							
Batch R2348767								
WG1454264-2 LCS								
Ammonia, Total (as N)			93.1		%		85-115	10-APR-12
WG1454264-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	10-APR-12
WG1454264-4 MS		**L1132022-1**						
Ammonia, Total (as N)			N/A	MS-B	%		-	10-APR-12
Batch R2350518								
WG1455392-2 LCS								
Ammonia, Total (as N)			98.9		%		85-115	12-APR-12
WG1455392-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-APR-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2350518								
WG1455392-4 MS		**L1132873-1**						
Ammonia, Total (as N)			100.9		%		75-125	12-APR-12
WG1455392-6 MS		**L1132873-33**						
Ammonia, Total (as N)			94.8		%		75-125	12-APR-12
WG1455392-8 MS		**L1133465-10**						
Ammonia, Total (as N)			87.9		%		75-125	12-APR-12
NO2-IC-TB	**Water**							
Batch R2348607								
WG1454238-2 LCS								
Nitrite (as N)			100.9		%		85-115	09-APR-12
WG1454238-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	09-APR-12
NO3-IC-TB	**Water**							
Batch R2348607								
WG1454238-2 LCS								
Nitrate (as N)			100.6		%		85-115	09-APR-12
WG1454238-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	09-APR-12
OGG-TOT-WT	**Water**							
Batch R2352433								
WG1458159-2 LCS								
Oil and Grease, Total			101.3		%		75-120	18-APR-12
WG1458159-3 LCSD		**WG1458159-2**						
Oil and Grease, Total		101.3	103		%	1.2	45	18-APR-12
WG1458159-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	18-APR-12
Batch R2352534								
WG1457870-2 LCS								
Oil and Grease, Total			84.3		%		75-120	17-APR-12
WG1457870-3 LCSD		**WG1457870-2**						
Oil and Grease, Total		84.3	81		%	4.2	45	17-APR-12
WG1457870-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	17-APR-12
P-T-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2349911								
WG1454881-3 DUP		**L1132288-5**						
Phosphorus (P)-Total		0.0211	0.0201		mg/L	4.8	20	11-APR-12
WG1454881-2 LCS								
Phosphorus (P)-Total			99.1		%		80-120	11-APR-12
WG1454881-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	11-APR-12
WG1454881-4 MS		**L1132288-5**						
Phosphorus (P)-Total			93.1		%		70-130	11-APR-12
PH-CAP-TB	**Water**							
Batch R2348484								
WG1453904-2 LCS								
pH			5.99		pH		5.9-6.1	09-APR-12
SO4-IC-TB	**Water**							
Batch R2348607								
WG1454238-2 LCS								
Sulfate (SO4)			102.4		%		85-115	09-APR-12
WG1454238-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	09-APR-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2349173								
WG1454317-3 DUP		**L1132288-9**						
Total Suspended Solids		122	126		mg/L	3.4	20	10-APR-12
WG1454317-2 LCS								
Total Suspended Solids			96.4		%		85-115	10-APR-12
WG1454317-1 MB								
Total Suspended Solids			<2.0		mg/L		2	10-APR-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Conductivity (EC)							
	6	04-APR-12 16:00	09-APR-12 16:40	4	5	days	EHTR
	7	04-APR-12 15:30	09-APR-12 16:40	4	5	days	EHTR
	8	04-APR-12 15:00	09-APR-12 16:40	4	5	days	EHTR
	9	04-APR-12 14:15	09-APR-12 16:40	4	5	days	EHTR
	10	04-APR-12 14:00	09-APR-12 16:40	4	5	days	EHTR
	11	04-APR-12 13:05	09-APR-12 16:40	4	5	days	EHTR
	12	04-APR-12 16:05	09-APR-12 16:40	4	5	days	EHTR
	14	04-APR-12 13:05	09-APR-12 16:40	4	5	days	EHTR
pH							
	6	04-APR-12 16:00	09-APR-12 16:40	4	5	days	EHTR
	7	04-APR-12 15:30	09-APR-12 16:40	4	5	days	EHTR
	8	04-APR-12 15:00	09-APR-12 16:40	4	5	days	EHTR
	9	04-APR-12 14:15	09-APR-12 16:40	4	5	days	EHTR
	10	04-APR-12 14:00	09-APR-12 16:40	4	5	days	EHTR
	11	04-APR-12 13:05	09-APR-12 16:40	4	5	days	EHTR
	12	04-APR-12 16:05	09-APR-12 16:40	4	5	days	EHTR
	14	04-APR-12 13:05	09-APR-12 16:40	4	5	days	EHTR

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 L1132288 were received on 09-APR-12 14:15.

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.

L11322B8-COFC

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # L11322B8

Page ___ of ___

Report to		Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	Treasury Metals	☑ Standard ☐ Other (specify):	◉ Regular (Default)
Contact:	Mac Potter	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (Specify Date Required →) Surcharges apply
Address:	899 Tree Nursery Rd	Email 1: mac@treasurymetals.com	○ Emergency (1 Business Day) - 100% Surcharge
	Wabigoon ON P0V 2W0	Email 2: kritchie@alsglobal.com	○ For Emergency < 1 Day, ASAP or Weekend - Contact ALS
Phone:	807-223-6191 Fax:		
Invoice To	Same as Report ? (Yes) No (write address below)	Client / Project Information	Analysis Request

THE QUESTIONS BELOW MUST BE ANSWERED FOR WATER SAMPLES (circle Yes or No)

Are any samples taken from a regulated DW System? Yes (No)

If yes, an authorized Drinking Water COC MUST be used for this submission.

Is the water sampled intended to be potable for human consumption? Yes (No)

Job #: M09706A01

PO / AFE: M02010 - P0115

LSD: Goliath Project

Quote #: O32690

Lab Work Order # (lab use only):

ALS Contact: Karen R

Sampler: MP KK

Please Indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Alkalinity, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	TOT Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	NH4, Total Phosphorus (P)	OGG (P)	Total Metals + Hg (P)	Dissolved Metals + Hg (FP)	Hardness		Number of Containers
1	JCTa	05/04/12	11 30	Water	X	X	X	X	X	X	X	X	X	X	X		9
2	SW8	05/04/12	9 30	Water	X	X	X	X	X	X	X	X	X	X	X		9
3	SW7	05/04/12	10 00	Water	X	X	X	X	X	X	X	X	X	X	X		9
4	SW9	05/04/12	11 00	Water	X	X	X	X	X	X	X	X	X	X	X		9
5	SW10	05/04/12	8 30	Weter	X	X	X	X	X	X	X	X	X	X	X		9
6	SW1	04/04/12	4 00	Water	X	X	X	X	X	X	X	X	X	X	X		9
7	SW3	04/04/12	5 20	Water	X	X	X	X	X	X	X	X	X	X	X		9
8	SW2	04/04/12	3 00	Water	X	X	X	X	X	X	X	X	X	X	X		9
9	TL2a	04/04/12	2 15	Weter	X	X	X	X	X	X	X	X	X	X	X		9
10	TL3	04/04/12	2 00	Water	X	X	X	X	X	X	X	X	X	X	X		9
11	TL1a	04/04/12	1 05	Weter	X	X	X	X	X	X	X	X	X	X	X		9
12	SW15	04/04/12	4 05	Water	X	X	X	X	X	X	X	X	X	X	X		9

Special Instructions / Regulations / Hazardous Details

Reg 153 Table 1 2 3 TCLP MISA (PWQO) OTHER (please specify): SW105 05/04/12 815 9 + Travel Blank 9 RAN OUT OF COC SHEETS, WILL PHONE TO CONFIRM WITH KAREN R

Circle one - Note drinking water samples MUST USE DW Chain of Custody

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: Mackenzie Potter <Original signed by>	Date: 05/04/12	Time: 12 30	Received by: <Original signed by>	Date: 09-APR-12	Time: 14:15	Verified by: <Original signed by>	Date: 09-APR-12	Time: 14:15	Observations: Yes (No)? If Yes add SIF

C1 - 9.5 C3 - 11.2
C2 - 12.4

GENF 18.01 Front

L1132286-COFC

Sample Integrity Form

This report summarizes some deficiencies found in your recent submission, and the actions that will be taken unless you contact us to make specific instructions.

Date Received:	Client:
09-APR-17	Treasury Metals
Completed by (Initial) <Original signed by>	Submission ID: L# or Other Identifying Mark L1132286

1	Deficiency Found:	Without further instruction, We WILL:	2
	Samples under Regulation not circled yes or no	Proceed with samples as not from a regulated drinking water system and not intended for human consumption	
	Chain of Custody Questions Not Answered or Not on the Chain of Custody	Proceed with samples as not from a regulated drinking water system but intended for human consumption	
	Analyses requested not completed on Chain of Custody	Proceed to follow information on the chain of custody unless you specify otherwise	
	Sample was received with a temperature higher then 20°C (Microbiology)	Proceed to follow information on the bottle(s) unless you specify otherwise	
	COC information is incomplete or illegible	Proceed with analysis - Results may be qualified	
	COC not signed and dated by client	Preserve and proceed with analysis	
	Regulated Sample Type(s) not indicated on the Chain of Custody	Proceed with the samples as regulated unless specified otherwise	
	Sample Description not clearly indicated on Chain of Custody	Advise you resample for deficient sample(s)	
	COC information does not match bottle label	Proceed with analysis of (remaining) sample(s)	
	Analysis Required not listed or clearly specified	Proceed with regular testing from previous submissions unless you specify otherwise	
	No COC accompanying the submission	**Further Comments/Specifics:**	
	Sample Bottle labeling issue (isbel is missing, blank, or doesn't match COC	Samples exceeded hold time. Will proceed with analysis - results may be qualified	
	Wrong Sample Bottle used		
	Sample received after anolytical hold time has been exceeded		
	Filter and Preserve at Lab		
	Sample bottle found broken when received		
	Sample received with headspace		
	Insufficient number of bottles or ssmple volume provided		
	Sample Received Unpreserved		
	Bottles in shipment but not listed on chain of custody		
	Sample < Freezing Point (contains Ice crystals or frozen)		
	Bottles listed on chain of custody but missing in shipment		
	← **If Checked HERE, you NEED to contact the ieboretory for further diecussion**		

For more information or to contact the leboratory: Login CSS 800-688-9878

ADDRESS 1081 Barton Street, Thunder Bay, Ontario, Canada P7B 5N3 | PHONE +1 807 623 6463 | FAX +1 807 623 7598
ALS CANADA LIMITED Part of the ALS Laboratory Group A Campbell Brothers Limited Company

TREASURY METALS INC.
ATTN: Mac Potter
899 Tree Nursery Rd
Wabigoon ON P0V 2W0

Date Received: 30-APR-12
Report Date: 09-MAY-12 14:22 (MT)
Version: FINAL

Client Phone: 807-223-6191

Certificate of Analysis

Lab Work Order #: L1140620

Project P.O. #: M0210-P0115
Job Reference: M0906A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1140620-1	L1140620-2	L1140620-3	L1140620-4	L1140620-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	26-APR-12	26-APR-12	26-APR-12	26-APR-12	26-APR-12
Sampled Time	12:20	12:50	13:36	14:05	14:45
Client ID	TL2A	TL1A	TL3	SW2	SW3
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	107	46.3	89.3	135	147
Hardness (as CaCO3) (mg/L)	51.7	19.5	41.3	67.6	53.0
pH (pH)	7.37	6.74	7.42	7.66	7.47
Total Suspended Solids (mg/L)	59.8	3.3	2.3	59.8	2.1
Anions and Nutrients Acidity (as CaCO3) (mg/L)	6.2	4.8	2.8	3.4	3.4
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	43.4	13.7	33.8	58.2	43.0
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.50	0.44	1.30	2.16	13.8
Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0404	0.0079	0.0103	0.0920	0.0152
Sulfate (SO4) (mg/L)	3.08	2.94	3.71	2.70	3.24
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.390	0.112	0.107	0.509	0.156
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	0.014	<0.010	<0.010	0.021	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	0.000020	<0.000017
Calcium (Ca)-Total (mg/L)	14.4	5.53	11.1	18.5	15.2
Chromium (Cr)-Total (mg/L)	0.0013	<0.0010	<0.0010	0.0013	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.00064	<0.00050
Copper (Cu)-Total (mg/L)	0.0022	<0.0010	0.0011	0.0035	0.0012
Iron (Fe)-Total (mg/L)	0.735	0.286	0.227	0.933	0.271
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	4.72	1.53	3.06	5.59	3.84
Manganese (Mn)-Total (mg/L)	0.0506	0.0302	0.0192	0.0965	0.0113
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	0.0022	<0.0020
Potassium (K)-Total (mg/L)	2.50	<0.50	1.03	1.93	1.18
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1140620-6	L1140620-7	L1140620-8	L1140620-9	L1140620-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	26-APR-12	27-APR-12	27-APR-12	27-APR-12	27-APR-12
Sampled Time	15:40	07:30	07:50	08:20	09:00
Client ID	SW1	SW7	SW8	SW10	SW9
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	80.8	109	77.7	91.0	153
Hardness (as CaCO3) (mg/L)	38.3	49.6	36.8	43.5	75.6
pH (pH)	7.41	7.73	7.42	7.52	7.59
Total Suspended Solids (mg/L)	3.3	7.6	3.1	<2.0	2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	2.8	2.6	2.4	3.0	4.6
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	32.9	49.7	27.7	36.2	72.0
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.020
Chloride (Cl) (mg/L)	0.32	0.16	0.21	0.20	0.27
Nitrate (as N) (mg/L)	<0.030	0.044	0.188	0.056	0.094
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0063	0.0081	0.0114	0.0051	0.0081
Sulfate (SO4) (mg/L)	2.07	1.31	4.87	3.56	1.32
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0660	0.0334	0.160	0.0688	0.0639
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	<0.010	0.014	<0.010	<0.010	0.014
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	11.4	17.7	10.7	13.8	22.9
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Iron (Fe)-Total (mg/L)	0.248	0.392	0.482	0.685	0.122
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	2.28	1.77	2.15	2.19	4.54
Manganese (Mn)-Total (mg/L)	0.0515	0.0623	0.0211	0.0413	0.0283
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	0.98	0.56	0.62	0.55	1.56
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1140620-11	L1140620-12	L1140620-13	L1140620-14	
Description	WATER	WATER	WATER	WATER	
Sampled Date	26-APR-12	27-APR-12	27-APR-12	26-APR-12	
Sampled Time	13:00	09:00	10:46	12:30	
Client ID	TL100	JCTA	SW11	TRAVEL BLANK	
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	45.0	75.7	37.4	<3.0	
Hardness (as CaCO3) (mg/L)	19.3	34.2	16.5	<0.51	
pH (pH)	6.80	7.24	5.76	5.36	
Total Suspended Solids (mg/L)	<2.0	<2.0	36.2	<2.0	
Anions and Nutrients Acidity (as CaCO3) (mg/L)	5.2	3.2	9.6	<2.0	
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	13.7	28.1	6.0	<5.0	
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	
Chloride (Cl) (mg/L)	0.43	0.77	0.38	<0.10	
Nitrate (as N) (mg/L)	<0.030	<0.030	0.040	<0.030	
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	
Phosphorus (P)-Total (mg/L)	0.0074	0.0104	0.0312	<0.0050	
Sulfate (SO4) (mg/L)	2.88	3.33	3.47	<0.30	
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
Total Metals Aluminum (Al)-Total (mg/L)	0.118	0.140	1.21	<0.0050	
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.013	<0.010	
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	0.000031	<0.000017	
Calcium (Ca)-Total (mg/L)	5.30	9.71	5.27	<0.20	
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	0.0024	<0.0010	
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	0.00073	<0.00050	
Copper (Cu)-Total (mg/L)	<0.0010	0.0011	0.0020	<0.0010	
Iron (Fe)-Total (mg/L)	0.265	0.305	1.50	<0.020	
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	
Magnesium (Mg)-Total (mg/L)	1.41	2.75	1.54	<0.020	
Manganese (Mn)-Total (mg/L)	0.0276	0.0339	0.0437	<0.0010	
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Potassium (K)-Total (mg/L)	<0.50	1.03	<0.50	<0.50	
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1140620-1	L1140620-2	L1140620-3	L1140620-4	L1140620-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	26-APR-12	26-APR-12	26-APR-12	26-APR-12	26-APR-12
	Sampled Time	12:20	12:50	13:36	14:05	14:45
	Client ID	TL2A	TL1A	TL3	SW2	SW3
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	2.63	1.16	1.89 RRV	2.39	8.82
	Strontium (Sr)-Total (mg/L)	0.0312	0.0130	0.0243	0.0357	0.0347
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0119	0.0022	0.0031	0.0161	0.0056
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	0.0013	<0.0010	<0.0010 RRV	0.0019	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0031	<0.0030	<0.0030	0.0073	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0884	0.0850	0.0587	0.0484	0.0264
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	0.013	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	0.000037	0.000021	0.000025	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	13.7	5.38	11.2	18.2	15.0
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	0.0012	0.0011	0.0019	0.0023	0.0012
	Iron (Fe)-Dissolved (mg/L)	0.303	0.170	0.099	0.155	0.057
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	4.25	1.47	3.28	5.39	3.79
	Manganese (Mn)-Dissolved (mg/L)	0.0190	0.0253	0.0179	0.0539	0.0061
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000038
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	2.37	0.52	1.11	1.92	1.16
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	2.48	1.16	2.98 RRV	2.46	8.97
	Strontium (Sr)-Dissolved (mg/L)	0.0299	0.0122	0.0249	0.0340	0.0333

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1140620-6	L1140620-7	L1140620-8	L1140620-9	L1140620-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	26-APR-12	27-APR-12	27-APR-12	27-APR-12	27-APR-12
	Sampled Time	15:40	07:30	07:50	08:20	09:00
	Client ID	SW1	SW7	SW8	SW10	SW9
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	1.41	1.03	1.24	1.48	2.51
	Strontium (Sr)-Total (mg/L)	0.0204	0.0243	0.0215	0.0241	0.0396
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0028	<0.0020	0.0062	<0.0020	<0.0020
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0178	<0.0050	0.0916	0.0600	0.0461
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.013	<0.010	<0.010	0.014
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	0.000024	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	11.6	17.1	11.2	14.0	23.1
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.055	0.138	0.281	0.488	<0.020
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	2.28	1.68	2.16	2.11	4.34
	Manganese (Mn)-Dissolved (mg/L)	0.0441	0.0530	0.0181	0.0406	0.0236
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	1.04	0.54	0.66	0.58	1.57
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.46	1.00	1.26	1.46	2.46
	Strontium (Sr)-Dissolved (mg/L)	0.0203	0.0229	0.0215	0.0233	0.0387

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1140620-11	L1140620-12	L1140620-13	L1140620-14	
Description	WATER	WATER	WATER	WATER	
Sampled Date	26-APR-12	27-APR-12	27-APR-12	26-APR-12	
Sampled Time	13:00	09:00	10:46	12:30	
Client ID	TL100	JCTA	SW11	TRAVEL BLANK	
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
Sodium (Na)-Total (mg/L)	1.07	1.78	1.09	<0.10	
Strontium (Sr)-Total (mg/L)	0.0123	0.0210	0.0134	<0.0010	
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Titanium (Ti)-Total (mg/L)	0.0024	0.0040	0.0433	<0.0020	
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	0.0025	<0.0010	
Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030 RRV	0.0053	<0.0030	
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	0.0825	0.0601	0.309	<0.0050	
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	0.000027	<0.000017	
Calcium (Ca)-Dissolved (mg/L)	5.45	9.48	4.88	<0.20	
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Iron (Fe)-Dissolved (mg/L)	0.094	0.111	0.626	<0.020	
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
Magnesium (Mg)-Dissolved (mg/L)	1.37	2.55	1.04	<0.020	
Manganese (Mn)-Dissolved (mg/L)	0.0246	0.0308	0.0325	<0.0010	
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
Potassium (K)-Dissolved (mg/L)	<0.50	0.99	<0.50	<0.50	
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
Sodium (Na)-Dissolved (mg/L)	1.07	1.72	1.01	<0.10	
Strontium (Sr)-Dissolved (mg/L)	0.0121	0.0199	0.0110	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1140620-1	L1140620-2	L1140620-3	L1140620-4	L1140620-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	26-APR-12	26-APR-12	26-APR-12	26-APR-12	26-APR-12
	Sampled Time	12:20	12:50	13:36	14:05	14:45
	Client ID	TL2A	TL1A	TL3	SW2	SW3
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0041	0.0057	0.0132 RRV	0.0089	0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1140620-6 WATER 26-APR-12 15:40 SW1	L1140620-7 WATER 27-APR-12 07:30 SW7	L1140620-8 WATER 27-APR-12 07:50 SW8	L1140620-9 WATER 27-APR-12 08:20 SW10	L1140620-10 WATER 27-APR-12 09:00 SW9
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0032	<0.0030	<0.0030	0.0045	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1140620-11	L1140620-12	L1140620-13	L1140620-14	
	Description	WATER	WATER	WATER	WATER	
	Sampled Date	26-APR-12	27-APR-12	27-APR-12	26-APR-12	
	Sampled Time	13:00	09:00	10:46	12:30	
	Client ID	TL100	JCTA	SW11	TRAVEL BLANK	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	0.0050	<0.0020	
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Dissolved (mg/L)	0.0059	0.0118 RRV	0.0108	<0.0030	
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0		<2.0	

* 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)
Matrix Spike	Sulfate (SO4)	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cadmium (Cd)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Cobalt (Co)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Nickel (Ni)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Copper (Cu)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1140620-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-COL-VA	Water	Free Cyanide by Diffusion	ASTM D 4282
This analysis is carried out using procedures adapted from ASTM D 4282 Standard Test Method for Determination of Free Cyanide in Water and Wastewater by Microdiffusion. ALS has adapted this method to use active (bubbling with air) diffusion instead of microdiffusion. Free cyanide is determined by sample diffusion at pH 6 and analysis using the chloramine-T colourimetric method.			
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Reference Information

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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, BC, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
899 Tree Nursery Rd
Wabigoon ON P0V 2W0
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2361060								
WG1466675-2 LCS								
Acidity (as CaCO3)			108.0		%		85-115	04-MAY-12
WG1466675-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-MAY-12
ALK-TOT-CAP-TB	**Water**							
Batch R2358472								
WG1465008-2 LCS								
Alkalinity, Total (as CaCO3)			97.6		%		85-115	01-MAY-12
WG1465008-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	01-MAY-12
CL-IC-TB	**Water**							
Batch R2358945								
WG1464939-2 LCS								
Chloride (Cl)			102.3		%		90-110	30-APR-12
WG1464939-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	30-APR-12
WG1464939-4 MS		**L1140501-12**						
Chloride (Cl)			100.3		%		75-125	30-APR-12
CN-FREE-COL-VA	**Water**							
Batch R2359817								
WG1465886-4 DUP		**L1140620-1**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-MAY-12
WG1465886-2 LCS								
Cyanide, Free			81.3		%		80-120	03-MAY-12
WG1465886-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	03-MAY-12
Batch R2360602								
WG1466978-2 LCS								
Cyanide, Free			85.5		%		80-120	04-MAY-12
WG1466978-3 LCS								
Cyanide, Free			85.0		%		80-120	04-MAY-12
WG1466978-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	04-MAY-12
CN-TOT-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-TOT-WT	**Water**							
Batch R2361268								
WG1467662-4 CVS								
Cyanide, Total			100.5		%		85-115	07-MAY-12
WG1467662-3 LCS								
Cyanide, Total			104.6		%		80-120	07-MAY-12
WG1467662-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	07-MAY-12
CN-WAD-WT	**Water**							
Batch R2361467								
WG1467905-4 CVS								
Cyanide, Weak Acid Diss			90.5		%		85-115	07-MAY-12
WG1467905-2 DUP		**L1140620-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	07-MAY-12
WG1467905-3 LCS								
Cyanide, Weak Acid Diss			104.7		%		80-120	07-MAY-12
WG1467905-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	07-MAY-12
EC-CAP-TB	**Water**							
Batch R2358472								
WG1465008-2 LCS								
Conductivity (EC)			103.6		%		90-110	01-MAY-12
WG1465008-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	01-MAY-12
HG-D-CVAF-TB	**Water**							
Batch R2360256								
WG1466890-6 DUP		**L1140620-3**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	03-MAY-12
WG1466890-2 LCS								
Mercury (Hg)-Dissolved			100.5		%		80-120	03-MAY-12
WG1466890-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	03-MAY-12
WG1466890-5 MS		**L1139537-7**						
Mercury (Hg)-Dissolved			100.1		%		70-130	03-MAY-12
WG1466890-7 MS		**L1140620-3**						
Mercury (Hg)-Dissolved			113.8		%		70-130	03-MAY-12
HG-T-CVAF-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2361319								
WG1467933-4 DUP		**L1140620-8**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	07-MAY-12
WG1467933-2 LCS								
Mercury (Hg)-Total			96.6		%		80-120	07-MAY-12
WG1467933-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	07-MAY-12
WG1467933-5 MS		**L1140620-8**						
Mercury (Hg)-Total			99.6		%		70-130	07-MAY-12
MET-D-MS-TB	**Water**							
Batch R2361326								
WG1466935-2 LCS								
Aluminum (Al)-Dissolved			95.2		%		80-120	04-MAY-12
Antimony (Sb)-Dissolved			103.6		%		80-120	04-MAY-12
Arsenic (As)-Dissolved			106.5		%		80-120	04-MAY-12
Barium (Ba)-Dissolved			100.9		%		80-120	04-MAY-12
Beryllium (Be)-Dissolved			101.6		%		80-120	04-MAY-12
Bismuth (Bi)-Dissolved			102.5		%		80-120	04-MAY-12
Boron (B)-Dissolved			104.6		%		80-120	04-MAY-12
Cadmium (Cd)-Dissolved			107.9		%		80-120	04-MAY-12
Calcium (Ca)-Dissolved			97.5		%		80-120	04-MAY-12
Chromium (Cr)-Dissolved			104.4		%		80-120	04-MAY-12
Cobalt (Co)-Dissolved			99.3		%		80-120	04-MAY-12
Copper (Cu)-Dissolved			95.4		%		80-120	04-MAY-12
Iron (Fe)-Dissolved			94.9		%		80-120	04-MAY-12
Lead (Pb)-Dissolved			101.2		%		80-120	04-MAY-12
Lithium (Li)-Dissolved			102.0		%		80-120	04-MAY-12
Magnesium (Mg)-Dissolved			108.9		%		80-120	04-MAY-12
Manganese (Mn)-Dissolved			100.6		%		80-120	04-MAY-12
Molybdenum (Mo)-Dissolved			106.6		%		80-120	04-MAY-12
Nickel (Ni)-Dissolved			100.2		%		80-120	04-MAY-12
Potassium (K)-Dissolved			101.4		%		80-120	04-MAY-12
Selenium (Se)-Dissolved			109.6		%		80-120	04-MAY-12
Silver (Ag)-Dissolved			97.8		%		80-120	04-MAY-12
Sodium (Na)-Dissolved			108.3		%		80-120	04-MAY-12
Strontium (Sr)-Dissolved			99.6		%		80-120	04-MAY-12
Tellurium (Te)-Dissolved			102.5		%		80-120	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2361326								
WG1466935-2 LCS								
Thallium (Tl)-Dissolved			103.2		%		80-120	04-MAY-12
Tin (Sn)-Dissolved			107.8		%		80-120	04-MAY-12
Titanium (Ti)-Dissolved			101.0		%		80-120	04-MAY-12
Tungsten (W)-Dissolved			100.5		%		80-120	04-MAY-12
Uranium (U)-Dissolved			98.3		%		80-120	04-MAY-12
Vanadium (V)-Dissolved			102.4		%		80-120	04-MAY-12
Zinc (Zn)-Dissolved			88.6		%		80-120	04-MAY-12
Zirconium (Zr)-Dissolved			99.1		%		80-120	04-MAY-12
WG1466935-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-MAY-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-MAY-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-MAY-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-MAY-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-MAY-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-MAY-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-MAY-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-MAY-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-MAY-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-MAY-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-MAY-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-MAY-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-MAY-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-MAY-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2361326								
WG1466935-1 MB								
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-MAY-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-MAY-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-MAY-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-MAY-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-MAY-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-MAY-12
WG1466935-4 MS		**L1140914-4**						
Aluminum (Al)-Dissolved			93.6		%		70-130	04-MAY-12
Antimony (Sb)-Dissolved			103.7		%		70-130	04-MAY-12
Arsenic (As)-Dissolved			107.3		%		70-130	04-MAY-12
Barium (Ba)-Dissolved			99.4		%		70-130	04-MAY-12
Beryllium (Be)-Dissolved			95.8		%		70-130	04-MAY-12
Bismuth (Bi)-Dissolved			86.6		%		70-130	04-MAY-12
Boron (B)-Dissolved			94.9		%		70-130	04-MAY-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Chromium (Cr)-Dissolved			104.3		%		70-130	04-MAY-12
Cobalt (Co)-Dissolved			100.9		%		70-130	04-MAY-12
Copper (Cu)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Iron (Fe)-Dissolved			98.6		%		70-130	04-MAY-12
Lead (Pb)-Dissolved			103.7		%		70-130	04-MAY-12
Lithium (Li)-Dissolved			93.3		%		70-130	04-MAY-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Manganese (Mn)-Dissolved			104.4		%		70-130	04-MAY-12
Molybdenum (Mo)-Dissolved			95.3		%		70-130	04-MAY-12
Nickel (Ni)-Dissolved			99.6		%		70-130	04-MAY-12
Potassium (K)-Dissolved			105.8		%		70-130	04-MAY-12
Selenium (Se)-Dissolved			100.9		%		70-130	04-MAY-12
Silver (Ag)-Dissolved			102.6		%		70-130	04-MAY-12
Sodium (Na)-Dissolved			95.7		%		70-130	04-MAY-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Tellurium (Te)-Dissolved			109.4		%		70-130	04-MAY-12
Thallium (Tl)-Dissolved			97.1		%		70-130	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2361326								
WG1466935-4 MS		**L1140914-4**						
Tin (Sn)-Dissolved			104.0		%		70-130	04-MAY-12
Titanium (Ti)-Dissolved			95.6		%		70-130	04-MAY-12
Tungsten (W)-Dissolved			95.3		%		70-130	04-MAY-12
Uranium (U)-Dissolved			97.2		%		70-130	04-MAY-12
Vanadium (V)-Dissolved			104.3		%		70-130	04-MAY-12
Zinc (Zn)-Dissolved			96.1		%		70-130	04-MAY-12
Zirconium (Zr)-Dissolved			94.9		%		70-130	04-MAY-12
WG1466935-6 MS		**L1141530-9**						
Aluminum (Al)-Dissolved			96.3		%		70-130	04-MAY-12
Antimony (Sb)-Dissolved			102.2		%		70-130	04-MAY-12
Arsenic (As)-Dissolved			110.9		%		70-130	04-MAY-12
Barium (Ba)-Dissolved			99.0		%		70-130	04-MAY-12
Beryllium (Be)-Dissolved			99.6		%		70-130	04-MAY-12
Bismuth (Bi)-Dissolved			85.9		%		70-130	04-MAY-12
Boron (B)-Dissolved			106.3		%		70-130	04-MAY-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Chromium (Cr)-Dissolved			104.5		%		70-130	04-MAY-12
Cobalt (Co)-Dissolved			103.1		%		70-130	04-MAY-12
Copper (Cu)-Dissolved			96.4		%		70-130	04-MAY-12
Iron (Fe)-Dissolved			101.1		%		70-130	04-MAY-12
Lead (Pb)-Dissolved			99.4		%		70-130	04-MAY-12
Lithium (Li)-Dissolved			99.4		%		70-130	04-MAY-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Manganese (Mn)-Dissolved			105.4		%		70-130	04-MAY-12
Molybdenum (Mo)-Dissolved			95.7		%		70-130	04-MAY-12
Nickel (Ni)-Dissolved			95.9		%		70-130	04-MAY-12
Potassium (K)-Dissolved			108.8		%		70-130	04-MAY-12
Selenium (Se)-Dissolved			119.5		%		70-130	04-MAY-12
Silver (Ag)-Dissolved			100.9		%		70-130	04-MAY-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	04-MAY-12
Tellurium (Te)-Dissolved			111.4		%		70-130	04-MAY-12
Thallium (Tl)-Dissolved			96.9		%		70-130	04-MAY-12
Tin (Sn)-Dissolved			104.6		%		70-130	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2361326								
WG1466935-6 MS		**L1141530-9**						
Titanium (Ti)-Dissolved			94.7		%		70-130	04-MAY-12
Tungsten (W)-Dissolved			95.8		%		70-130	04-MAY-12
Uranium (U)-Dissolved			103.9		%		70-130	04-MAY-12
Vanadium (V)-Dissolved			105.5		%		70-130	04-MAY-12
Zinc (Zn)-Dissolved			97.9		%		70-130	04-MAY-12
Zirconium (Zr)-Dissolved			94.1		%		70-130	04-MAY-12
Batch R2361779								
WG1467955-2 LCS								
Zinc (Zn)-Dissolved			105.0		%		80-120	07-MAY-12
WG1467955-1 MB								
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	07-MAY-12
WG1467955-4 MS		**L1141543-5**						
Zinc (Zn)-Dissolved			104.7		%		70-130	07-MAY-12
MET-T-MS-TB	**Water**							
Batch R2361283								
WG1464774-2 LCS								
Aluminum (Al)-Total			100.6		%		80-120	04-MAY-12
Antimony (Sb)-Total			95.5		%		80-120	04-MAY-12
Arsenic (As)-Total			99.5		%		80-120	04-MAY-12
Barium (Ba)-Total			107.8		%		80-120	04-MAY-12
Beryllium (Be)-Total			110.6		%		80-120	04-MAY-12
Bismuth (Bi)-Total			112.5		%		80-120	04-MAY-12
Boron (B)-Total			88.8		%		80-120	04-MAY-12
Cadmium (Cd)-Total			112.3		%		80-120	04-MAY-12
Calcium (Ca)-Total			108.2		%		80-120	04-MAY-12
Chromium (Cr)-Total			112.3		%		80-120	04-MAY-12
Cobalt (Co)-Total			108.6		%		80-120	04-MAY-12
Copper (Cu)-Total			107.2		%		80-120	04-MAY-12
Iron (Fe)-Total			106.4		%		80-120	04-MAY-12
Lead (Pb)-Total			110.9		%		80-120	04-MAY-12
Lithium (Li)-Total			103.8		%		80-120	04-MAY-12
Magnesium (Mg)-Total			111.5		%		80-120	04-MAY-12
Manganese (Mn)-Total			108.3		%		80-120	04-MAY-12
Molybdenum (Mo)-Total			99.8		%		80-120	04-MAY-12
Nickel (Ni)-Total			108.2		%		80-120	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2361283								
WG1464774-2 LCS								
Potassium (K)-Total			111.6		%		80-120	04-MAY-12
Selenium (Se)-Total			96.2		%		80-120	04-MAY-12
Silver (Ag)-Total			103.2		%		80-120	04-MAY-12
Sodium (Na)-Total			114.7		%		80-120	04-MAY-12
Strontium (Sr)-Total			114.3		%		80-120	04-MAY-12
Tellurium (Te)-Total			101.5		%		80-120	04-MAY-12
Thallium (Tl)-Total			112.6		%		80-120	04-MAY-12
Tin (Sn)-Total			97.2		%		80-120	04-MAY-12
Titanium (Ti)-Total			95.2		%		80-120	04-MAY-12
Tungsten (W)-Total			94.5		%		80-120	04-MAY-12
Uranium (U)-Total			106.0		%		80-120	04-MAY-12
Vanadium (V)-Total			109.1		%		80-120	04-MAY-12
Zinc (Zn)-Total			106.9		%		80-120	04-MAY-12
Zirconium (Zr)-Total			96.6		%		80-120	04-MAY-12
WG1464774-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	04-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	04-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	04-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	04-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	04-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	04-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	04-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	04-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	04-MAY-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	04-MAY-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	04-MAY-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	04-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	04-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	04-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	04-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	04-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	04-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2361283								
WG1464774-1 MB								
Potassium (K)-Total			<0.50		mg/L		0.5	04-MAY-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	04-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	04-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	04-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	04-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	04-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	04-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	04-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	04-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	04-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	04-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	04-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	04-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	04-MAY-12
WG1464774-4 MS		**L1140914-5**						
Aluminum (Al)-Total			N/A	MS-B	%		-	04-MAY-12
Antimony (Sb)-Total			102.1		%		70-130	04-MAY-12
Arsenic (As)-Total			123.9		%		70-130	04-MAY-12
Barium (Ba)-Total			101.8		%		70-130	04-MAY-12
Beryllium (Be)-Total			94.5		%		70-130	04-MAY-12
Bismuth (Bi)-Total			95.3		%		70-130	04-MAY-12
Boron (B)-Total			101.7		%		70-130	04-MAY-12
Cadmium (Cd)-Total			N/A	MS-B	%		-	04-MAY-12
Calcium (Ca)-Total			N/A	MS-B	%		-	04-MAY-12
Chromium (Cr)-Total			97.8		%		70-130	04-MAY-12
Cobalt (Co)-Total			N/A	MS-B	%		-	04-MAY-12
Copper (Cu)-Total			N/A	MS-B	%		-	04-MAY-12
Iron (Fe)-Total			N/A	MS-B	%		-	04-MAY-12
Lead (Pb)-Total			104.8		%		70-130	04-MAY-12
Lithium (Li)-Total			125.1		%		70-130	04-MAY-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	04-MAY-12
Manganese (Mn)-Total			N/A	MS-B	%		-	04-MAY-12
Molybdenum (Mo)-Total			112.4		%		70-130	04-MAY-12
Nickel (Ni)-Total			N/A	MS-B	%		-	04-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2361283								
WG1464774-4 MS		**L1140914-5**						
Potassium (K)-Total			108.6		%		70-130	04-MAY-12
Silver (Ag)-Total			101.2		%		70-130	04-MAY-12
Sodium (Na)-Total			N/A	MS-B	%		-	04-MAY-12
Strontium (Sr)-Total			N/A	MS-B	%		-	04-MAY-12
Tellurium (Te)-Total			117.8		%		70-130	04-MAY-12
Thallium (Tl)-Total			101.2		%		70-130	04-MAY-12
Tin (Sn)-Total			101.9		%		70-130	04-MAY-12
Titanium (Ti)-Total			91.4		%		70-130	04-MAY-12
Tungsten (W)-Total			98.1		%		70-130	04-MAY-12
Uranium (U)-Total			123.4		%		70-130	04-MAY-12
Vanadium (V)-Total			99.0		%		70-130	04-MAY-12
Zirconium (Zr)-Total			108.3		%		70-130	04-MAY-12
Batch R2361829								
WG1464774-6 LCS								
Aluminum (Al)-Total			98.0		%		80-120	07-MAY-12
Antimony (Sb)-Total			101.3		%		80-120	07-MAY-12
Arsenic (As)-Total			109.2		%		80-120	07-MAY-12
Barium (Ba)-Total			101.0		%		80-120	07-MAY-12
Beryllium (Be)-Total			108.0		%		80-120	07-MAY-12
Bismuth (Bi)-Total			106.9		%		80-120	07-MAY-12
Boron (B)-Total			102.0		%		80-120	07-MAY-12
Cadmium (Cd)-Total			105.1		%		80-120	07-MAY-12
Calcium (Ca)-Total			104.7		%		80-120	07-MAY-12
Chromium (Cr)-Total			108.6		%		80-120	07-MAY-12
Cobalt (Co)-Total			102.4		%		80-120	07-MAY-12
Copper (Cu)-Total			103.1		%		80-120	07-MAY-12
Iron (Fe)-Total			93.9		%		80-120	07-MAY-12
Lead (Pb)-Total			105.4		%		80-120	07-MAY-12
Lithium (Li)-Total			103.0		%		80-120	07-MAY-12
Magnesium (Mg)-Total			102.8		%		80-120	07-MAY-12
Manganese (Mn)-Total			105.8		%		80-120	07-MAY-12
Molybdenum (Mo)-Total			108.1		%		80-120	07-MAY-12
Nickel (Ni)-Total			107.8		%		80-120	07-MAY-12
Potassium (K)-Total			104.6		%		80-120	07-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2361829								
WG1464774-6 LCS								
Selenium (Se)-Total			117.5		%		80-120	07-MAY-12
Silver (Ag)-Total			98.1		%		80-120	07-MAY-12
Sodium (Na)-Total			104.0		%		80-120	07-MAY-12
Strontium (Sr)-Total			106.4		%		80-120	07-MAY-12
Tellurium (Te)-Total			105.6		%		80-120	07-MAY-12
Thallium (Tl)-Total			105.5		%		80-120	07-MAY-12
Tin (Sn)-Total			107.6		%		80-120	07-MAY-12
Titanium (Ti)-Total			105.8		%		80-120	07-MAY-12
Tungsten (W)-Total			102.0		%		80-120	07-MAY-12
Uranium (U)-Total			102.8		%		80-120	07-MAY-12
Vanadium (V)-Total			105.2		%		80-120	07-MAY-12
Zinc (Zn)-Total			105.0		%		80-120	07-MAY-12
Zirconium (Zr)-Total			102.0		%		80-120	07-MAY-12
WG1464774-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	07-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	07-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	07-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	07-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	07-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	07-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	07-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	07-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	07-MAY-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	07-MAY-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	07-MAY-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	07-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	07-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	07-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	07-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	07-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	07-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	07-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	07-MAY-12
Potassium (K)-Total			<0.50		mg/L		0.5	07-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2361829								
WG1464774-5 MB								
Selenium (Se)-Total			<0.0010		mg/L		0.001	07-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	07-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	07-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	07-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	07-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	07-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	07-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	07-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	07-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	07-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	07-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	07-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	07-MAY-12
NH3-COL-TB	**Water**							
Batch R2358735								
WG1464744-5 DUP		**L1140620-2**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	01-MAY-12
WG1464744-2 LCS								
Ammonia, Total (as N)			96.7		%		85-115	01-MAY-12
WG1464744-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	01-MAY-12
WG1464744-4 MS		**L1140001-1**						
Ammonia, Total (as N)			93.9		%		75-125	01-MAY-12
WG1464744-6 MS		**L1140620-2**						
Ammonia, Total (as N)			84.9		%		75-125	01-MAY-12
NO2-IC-TB	**Water**							
Batch R2358945								
WG1464939-2 LCS								
Nitrite (as N)			99.5		%		90-110	30-APR-12
WG1464939-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	30-APR-12
WG1464939-4 MS		**L1140501-12**						
Nitrite (as N)			95.9		%		75-115	30-APR-12
NO3-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2358945								
WG1464939-2 LCS								
Nitrate (as N)			102.3		%		90-110	30-APR-12
WG1464939-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	30-APR-12
WG1464939-4 MS		**L1140501-12**						
Nitrate (as N)			99.4		%		75-125	30-APR-12
OGG-TOT-WT	**Water**							
Batch R2361322								
WG1467580-2 LCS								
Oil and Grease, Total			92.4		%		75-120	07-MAY-12
WG1467580-3 LCSD		**WG1467580-2**						
Oil and Grease, Total		92.4	91		%	1.5	45	07-MAY-12
WG1467580-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	07-MAY-12
Batch R2361956								
WG1468102-2 LCS								
Oil and Grease, Total			86.0		%		75-120	08-MAY-12
WG1468102-3 LCSD		**WG1468102-2**						
Oil and Grease, Total		86.0	86		%	0.2	45	08-MAY-12
WG1468102-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	08-MAY-12
P-T-COL-TB	**Water**							
Batch R2359812								
WG1465487-5 DUP		**L1140620-10**						
Phosphorus (P)-Total		0.0081	0.0072		mg/L	11	20	02-MAY-12
WG1465487-2 LCS								
Phosphorus (P)-Total			91.3		%		80-120	02-MAY-12
WG1465487-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	02-MAY-12
PH-CAP-TB	**Water**							
Batch R2358472								
WG1465008-2 LCS								
pH			6.00		pH		5.9-6.1	01-MAY-12
SO4-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2358945								
WG1464939-2 LCS								
Sulfate (SO4)			104.2		%		90-110	30-APR-12
WG1464939-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-APR-12
WG1464939-4 MS		**L1140501-12**						
Sulfate (SO4)			N/A	MS-B	%		-	30-APR-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2358918								
WG1464678-2 LCS								
Total Suspended Solids			104.4		%		85-115	01-MAY-12
WG1464678-1 MB								
Total Suspended Solids			<2.0		mg/L		2	01-MAY-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Conductivity (EC)							
	1	26-APR-12 12:20	01-MAY-12 09:15	4	5	days	EHTR
	2	26-APR-12 12:50	01-MAY-12 09:15	4	5	days	EHTL
	3	26-APR-12 13:36	01-MAY-12 09:15	4	5	days	EHTL
	4	26-APR-12 14:05	01-MAY-12 09:15	4	5	days	EHTL
	5	26-APR-12 14:45	01-MAY-12 09:15	4	5	days	EHTL
	6	26-APR-12 15:40	01-MAY-12 09:15	4	5	days	EHTL
	11	26-APR-12 13:00	01-MAY-12 09:15	4	5	days	EHTL
	14	26-APR-12 12:30	01-MAY-12 09:15	4	5	days	EHTL
pH							
	1	26-APR-12 12:20	01-MAY-12 09:15	4	5	days	EHTR
	2	26-APR-12 12:50	01-MAY-12 09:15	4	5	days	EHTL
	3	26-APR-12 13:36	01-MAY-12 09:15	4	5	days	EHTL
	4	26-APR-12 14:05	01-MAY-12 09:15	4	5	days	EHTL
	5	26-APR-12 14:45	01-MAY-12 09:15	4	5	days	EHTL
	6	26-APR-12 15:40	01-MAY-12 09:15	4	5	days	EHTL
	11	26-APR-12 13:00	01-MAY-12 09:15	4	5	days	EHTL
	14	26-APR-12 12:30	01-MAY-12 09:15	4	5	days	EHTL

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 L1140620 were received on 30-APR-12 12:00.

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.

L1140620

ALS Environmental
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ampbell Brothers Limited Company www.alsglobal.com

L1140620-COFC

Company:	Treasury Metals		Regulatory Information	Both questions below must answered for water samples	
Contact:	Mac Potter		☐ O. Reg 153 (O. Reg 511 Amend) Table: ___	Are any samples taken from a regulated DW System?	☐ Yes ☒ No
Address:	899 Tree Nursery Rd		Record of Site Condition ☐ Yes ☐ No	If yes, an authorized DW COC must be used.	
	Wabigoon ON P0V 2W0		PWQO ☒ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption?	☐ Yes ☒ No
Phone:	807-223-6191	Fax:	Guideline Required:		
Email:	mac@treasurymetals.com, lritchie@dbtgroup.com		TCLP Regulation 558 ☐ Other:	Analysis Request	
Project:	Job M0906A01	PO: M0210-P0115	Service Requested	Please Indicate below Filtered, Preserved or both (F, P, F/P)	
Quote #	Q32690	LSD Goliath Project	☒ Regular TAT (7 Days)		
Invoice To:		Same as Report: ☑ Yes ☐ No	☐ Priority TAT 50% Surcharge (3-5 Days)		
Company:			☐ Emergency TAT 100% Surcharge (1-2 Days)		
Contact:			Specify Date Required:		
Address:			All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.		
Email:					
Account Manager	Karen R.	Sampler: Mac Potter			

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk., pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
					P	P	P	P	P	P	P	F/P					
1	TL2a	26/04/12	12:30	Water	x	x	x	x	x	x	x	x	x	x	x		9
2	TL1a	26/04/12	12:50	Water	x	x	x	x	x	x	x	x	x	x	x		9
3	TL3	26/04/12	1:36	Water	x	x	x	x	x	x	x	x	x	x	x		9
4	SW2	26/04/12	2:05	Water	x	x	x	x	x	x	x	x	x	x	x		9
5	SW3	26/04/12	2:45	Water	x	x	x	x	x	x	x	x	x	x	x		9
6	SW1	26/04/12	3:40	Water	x	x	x	x	x	x	x	x	x	x	x		9
7	SW7	27/04/12	7:30	Water	x	x	x	x	x	x	x	x	x	x	x		9
8	SW8	27/04/12	7:50	Water	x	x	x	x	x	x	x	x	x	x	x		9
9	SW10	27/04/12	8:20	Water	x	x	x	x	x	x	x	x	x	x	x		9
10	SW9	27/04/12	9:00	Water	x	x	x	x	x	x	x	x	x	x	x		9
11	TL100	26/04/12	1:00	Water	x	x	x	x	x	x	x	x	x	x	x		9

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by:	Date & Time	Received by:	Date & Time	Temp	Cooling Initiated	Verified by:	Date & Time	Observations: Yes / No? If Yes add SIF
Mac Potter	27/04/12 1:00 pm		30/04/12 10:00	10.3	☑ Yes ☐ No			

<Original signed by> <Original signed by>

*Complete all portions of this ... delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission.

Please contact the lab to confirm TATs. Ar... suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

ALS Environmen

L1140620-COFC

L1140620

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Campbell Brothers Limited Company www.alsglobal.com

Company:	Treasury Metals	Regulatory Information	Both questions below must answered for water samples
Contact:	Mac Potter	☐ O. Reg 153 (O. Reg 511 Amend) Table:____	Are any samples taken from a regulated DW System? ☐ Yes ☒ No
Address:	899 Tree Nursery Rd	Record of Site Condition ☐ Yes ☐ No	If yes, an authorized DW COC must be used.
	Wabigoon ON P0V 2W0	PWQO ☒ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption? ☐ Yes ☒ No
Phone:	807-223-6191 Fax:	Guideline Required:	
Email:	mac@treasurymetals.com	TCLP Regulation 558 ☐ Other:	Analysis Request
Project:	Job M0906A01 PO: M0210-P0115	Service Requested	Please indicate below Filtered, Preserved or both (F, P, F/P)
Quote #	Q32690 LSD Goliath Project	☒ Regular TAT (7 Days)	
Invoice To:	Same as Report: ☑ Yes ☐ No	☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:		☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:		Specify Date Required:	
Address:		All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:			
Account Manager	Karen R.	Sampler: Mac Potter	

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk., pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
					P	P	C	C	P	P	F/P						
12	JCTa	27/04/12	9:00	Water	x	x	x	x	x	x	x	x	x	x	x		9
13	SW11	27/04/12	10:40	Water	x	x	x	x	x	x	x	x	x	x	x		8
14	Travel Blank	—	—	Water	x	x	x	x	x	x	x	x	x	x	x		9
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		

Special Instructions / Comments

* 066 of SW11 broke on route to next location. No field blank as not enough water sent

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: Mac Potter <Original signed by>	Date & Time 27/04/12 1 pm	Received by:	Date & Time	Temp	Cooling initiated ☐ Yes ☐ No	Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF

**Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

S | Environmental (Thunder Bay)

Sample Integrity Form

This report summarizes some deficiencies found in your recent submission, and the actions that will be taken unless you contact us to make specific instructions.

Date Received:	Client:
30-APR-12	Treasury Metals
Completed by (initial): <Original signed by>	Submission ID: L# or Other Identifying Mark: L1140620

1	Deficiency Found:	Without further instruction, we WILL:	2
	No COC accompanying the submission	Proceed with regular testing from previous submissions, unless specified otherwise	
	COC information is incomplete or illegible	Proceed with samples as regulated	
	Analysis requested not listed or clearly specified	Proceed with samples as not regulated and not intended for consumption	
	Applicable regulation not indicated	Proceed with samples as not regulated and intended for consumption	
	Regulated sample type not indicated	Proceed with information from COC	
	COC not signed/dated by client	Proceed with information from bottles	
	COC information does not match bottle labels	Proceed with analysis - results may be qualified	
	Bottle labels missing or blank	Preserve and/or filter at lab and proceed with analysis	
	Sample received unpreserved or incorrectly preserved	Advise you resample for deficient samples	
	Sample received unfiltered	Hold samples without analysis pending further information - please contact the lab.	
	Sample received with headspace	Further Comments/Specifics:	
	Sample received after analytical hold time has been exceeded	No OGG bottle for "SW11". Unable to proceed with analysis	
	Bottles listed on COC but not received		
	Bottles received but not listed on COC		
	Insufficient number of bottles or sample volume		
	Wrong sample bottle used		
	Bottle found broken when received		
	Sample received with temperature below freezing point, containing ice crystals, or frozen		
	Microbiology sample received with temperature above 20°C		
	Other deficiency (see comments)		
	← *If Checked HERE, you NEED to contact the laboratory for further discussion*		

For more information please contact the laboratory.

TREASURY METALS INC.
ATTN: Mac Potter
899 Tree Nursery Road
Wabigoon ON P0V 2W0

Date Received: 17-MAY-12
Report Date: 01-JUN-12 09:41 (MT)
Version: FINAL

Client Phone: 807-223-6191

Certificate of Analysis

Lab Work Order #: L1148845

Project P.O. #: M0210-P0115
Job Reference: M0906A01
C of C Numbers:
Legal Site Desc:

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-1	L1148845-2	L1148845-3	L1148845-5	L1148845-6
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
Sampled Time	09:00	08:30	10:00	10:55	11:45
Client ID	SW3	SW2-1	TL3	JCTA	TL1A
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	182	165	136	108	58.6
Hardness (as CaCO3) (mg/L)	67.6	86.7	64.7	51.1	27.0
pH (pH)	7.71	7.86	7.70	7.52	7.07
Total Suspended Solids (mg/L)	5.9	84.0	<2.0	4.5	<2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	2.8	6.4	2.4	2.2	2.2
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	53.4	76.9	56.7	45.7	22.3
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.027
Chloride (Cl) (mg/L)	16.9	1.39	1.67	0.97	0.26
Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0191	0.0809	0.0123	0.0247	0.0094
Sulfate (SO4) (mg/L)	3.56	1.41	3.10	2.47	1.54
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0915	1.18	0.125	0.331	0.110
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	<0.010	0.024	0.010	0.012	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	0.000020	<0.000017	<0.000017	0.000020
Calcium (Ca)-Total (mg/L)	18.8	20.5	16.4	14.1	7.65
Chromium (Cr)-Total (mg/L)	<0.0010	0.0028	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	0.00089	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	0.0013	0.0034	0.0016	0.0012	<0.0010
Iron (Fe)-Total (mg/L)	0.212	1.71	0.301	0.704	0.383
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	3.79	6.10	4.53	3.93	1.96
Manganese (Mn)-Total (mg/L)	0.0167	0.0779	0.0238	0.100	0.0643
Mercury (Hg)-Total (mg/L)	0.000017	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	0.0029	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	1.13	1.64	1.19	1.20	<0.50
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-7	L1148845-8	L1148845-9	L1148845-10	L1148845-11
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
Sampled Time	13:15	14:45	15:15	15:50	16:35
Client ID	TL2A	SW8	SW7	SW10	SW11
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	138	108	135	131	42.0
Hardness (as CaCO3) (mg/L)	71.8	51.4	66.3	62.8	24.4
pH (pH)	7.54	7.68	7.95	7.83	6.36
Total Suspended Solids (mg/L)	252	8.3	2.8	<2.0	9.2
Anions and Nutrients Acidity (as CaCO3) (mg/L)	3.8	2.2	2.6	2.4	5.2
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	60.4	41.8	62.5	57.2	10.2
Ammonia, Total (as N) (mg/L)	0.029	0.022	0.030	<0.020	0.020
Chloride (Cl) (mg/L)	0.42	0.25	0.17	0.21	0.44
Nitrate (as N) (mg/L)	0.034	0.168	0.059	0.064	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.133	0.0283	0.0088	0.0057	0.0231
Sulfate (SO4) (mg/L)	2.40	5.81	1.61	2.87	1.72
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	1.27	0.0846	0.0363	0.0378	0.654
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	0.0012	<0.0010	<0.0010	<0.0010	0.0011
Barium (Ba)-Total (mg/L)	0.021	<0.010	0.016	0.011	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	0.000039	<0.000017	<0.000017	<0.000017	0.000050
Calcium (Ca)-Total (mg/L)	18.2	14.5	21.2	19.3	6.62
Chromium (Cr)-Total (mg/L)	0.0028	<0.0010	<0.0010	<0.0010	0.0016
Cobalt (Co)-Total (mg/L)	0.00095	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	0.0087	0.0011	<0.0010	<0.0010	0.0015
Iron (Fe)-Total (mg/L)	1.42	0.518	0.350	0.790	1.17
Lead (Pb)-Total (mg/L)	0.0043	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	5.61	2.76	2.13	2.84	1.52
Manganese (Mn)-Total (mg/L)	0.150 RRV	0.0220	0.0727	0.0463	0.0328
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	0.0027	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	3.00	0.78	0.67	0.71	<0.50
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-12	L1148845-13	L1148845-14	L1148845-15	L1148845-16
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	15-MAY-12	16-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
Sampled Time	17:35	09:55	11:40	11:05	09:00
Client ID	SW9	SW4	SW5	SW6	SW33
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	248	114	120	120	182
Hardness (as CaCO3) (mg/L)	129	50.1	51.6	51.6	67.6
pH (pH)	7.96	7.83	7.94	7.97	7.62
Total Suspended Solids (mg/L)	<2.0	7.3	<2.0	2.9	4.5
Anions and Nutrients Acidity (as CaCO3) (mg/L)	2.8	2.2	2.2	2.2	2.4
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	126	45.3	45.8	45.8	53.2
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.34	3.12	4.22	4.15	17.0
Nitrate (as N) (mg/L)	0.072	<0.030	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0064	0.0227	0.0070	0.0522	0.0071
Sulfate (SO4) (mg/L)	0.88	1.79	2.93	2.91	3.55
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0353	0.816	0.0234	0.0261	0.0901
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	0.023	0.013	<0.010	<0.010	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	0.000051	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	39.6	14.8	14.3	12.8	17.5
Chromium (Cr)-Total (mg/L)	<0.0010	0.0015	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0043	0.0011	0.0012	0.0013
Iron (Fe)-Total (mg/L)	0.137	0.788	0.037	0.036	0.193
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	6.77	2.93	3.16	2.84	4.28
Manganese (Mn)-Total (mg/L)	0.0572	0.0182	0.0042	0.0039	0.0163
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	1.98	1.50	0.98	0.95	1.19
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-17	L1148845-18	L1148845-19		
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE		
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12		
Sampled Time	09:00		08:30		
Client ID	FIELD BLANK	TRAVEL BLANK	SW2-2		
Grouping	**Analyte**				
WATER					
Physical Tests	Conductivity (EC) (uS/cm)	<3.0	<3.0	103	
	Hardness (as CaCO3) (mg/L)	<0.51	<0.51	51.1	
	pH (pH)	5.43	5.75	7.56	
	Total Suspended Solids (mg/L)	<2.0	<2.0	19.0	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	6.6	
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	<5.0	46.1	
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	
	Chloride (Cl) (mg/L)	<0.10	<0.10	0.24	
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	
	Phosphorus (P)-Total (mg/L)	<0.0050	<0.0050	<0.0050	
	Sulfate (SO4) (mg/L)	<0.30	<0.30	1.57	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0050	<0.0050	0.400	
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.012	
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	
	Calcium (Ca)-Total (mg/L)	<0.20	<0.20	15.2	
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Iron (Fe)-Total (mg/L)	<0.020	<0.020	0.841	
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	
	Magnesium (Mg)-Total (mg/L)	<0.020	<0.020	2.82	
	Manganese (Mn)-Total (mg/L)	<0.0010	<0.0010	0.230	
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	
	Potassium (K)-Total (mg/L)	<0.50	<0.50	1.07	
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-1	L1148845-2	L1148845-3	L1148845-5	L1148845-6
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
Sampled Time	09:00	08:30	10:00	10:55	11:45
Client ID	SW3	SW2-1	TL3	JCTA	TL1A
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	9.03	2.19	2.48	2.27	1.35
Strontium (Sr)-Total (mg/L)	0.0384	0.0390	0.0354	0.0321	0.0179
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0041	0.0500	0.0046	0.0136	0.0024
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	0.0029	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total (mg/L)	<0.0030	0.0082	<0.0030	<0.0030	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	0.0130	0.0476	0.0231	0.0352	0.0696
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	<0.010	0.014	<0.010	<0.010	<0.010
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Dissolved (mg/L)	19.5 RRV	23.9	17.9	14.2	7.67
Chromium (Cr)-Dissolved (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	0.0011	0.0020	0.0013	<0.0010	<0.0010
Iron (Fe)-Dissolved (mg/L)	<0.020	0.182	0.023	0.136	0.159
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	4.60	6.58	4.82	3.82	1.91
Manganese (Mn)-Dissolved (mg/L)	0.0093	0.0514	0.0209	0.0595	0.0561
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	1.33	1.68	1.26	1.17	<0.50
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	10.5	2.49	2.69	2.27	1.36
Strontium (Sr)-Dissolved (mg/L)	0.0466	0.0411	0.0374	0.0300	0.0175

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-7	L1148845-8	L1148845-9	L1148845-10	L1148845-11
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
Sampled Time	13:15	14:45	15:15	15:50	16:35
Client ID	TL2A	SW8	SW7	SW10	SW11
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	0.00072	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	2.96	1.50	1.32	1.76	1.24
Strontium (Sr)-Total (mg/L)	0.0408	0.0280	0.0304	0.0328	0.0155
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0420	0.0029	<0.0020	<0.0020	0.0175
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	0.0024	0.0010	<0.0010	<0.0010	0.0015
Zinc (Zn)-Total (mg/L)	0.0153	0.0035	0.0039	0.0038	0.0070
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	0.0502	0.0597	0.0054	0.0283	0.487
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	0.0012	<0.0010	<0.0010	<0.0010	0.0011
Barium (Ba)-Dissolved (mg/L)	0.012	<0.010	0.015	0.011	<0.010
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	0.000032
Calcium (Ca)-Dissolved (mg/L)	19.6	15.7	22.8	20.3	7.29
Chromium (Cr)-Dissolved (mg/L)	0.0012	<0.0010	<0.0010	<0.0010	0.0014
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	0.0021	<0.0010	<0.0010	<0.0010	0.0011
Iron (Fe)-Dissolved (mg/L)	0.278	0.375	0.096	0.728	0.881
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	5.59	2.96	2.24	2.95	1.50
Manganese (Mn)-Dissolved (mg/L)	0.188 RRV	0.0205	0.0681	0.0528	0.0297
Mercury (Hg)-Dissolved (mg/L)	<0.000010	0.000013	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	2.95	0.84	0.72	0.78	<0.50
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	3.04	1.60	1.39	1.83	1.32
Strontium (Sr)-Dissolved (mg/L)	0.0403	0.0298	0.0323	0.0335	0.0153

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1148845-12 SURFACEWATE 15-MAY-12 17:35 SW9	L1148845-13 SURFACEWATE 16-MAY-12 09:55 SW4	L1148845-14 SURFACEWATE 15-MAY-12 11:40 SW5	L1148845-15 SURFACEWATE 15-MAY-12 11:05 SW6	L1148845-16 SURFACEWATE 15-MAY-12 09:00 SW33
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	3.54	3.50	3.33	3.08	9.79
	Strontium (Sr)-Total (mg/L)	0.0671	0.0271	0.0278	0.0248	0.0445
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.0020	0.0277	<0.0020	<0.0020	0.0037
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0382	<0.0030	0.0050	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	0.0021	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0199	0.0088	<0.0050	<0.0050	0.0130
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.021	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	40.5	15.4	15.2	15.2	19.4
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0015	0.0011	0.0011	0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	<0.020	<0.020	0.048
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	6.83	2.84	3.29	3.30	4.66
	Manganese (Mn)-Dissolved (mg/L)	0.0488	0.0011	<0.0010	<0.0010	0.0104
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	2.08	0.84	1.09	1.10	1.33
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	3.55	2.93	3.47	3.53	10.6
	Strontium (Sr)-Dissolved (mg/L)	0.0672	0.0255	0.0280	0.0278	0.0464

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1148845-17	L1148845-18	L1148845-19		
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE		
Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12		
Sampled Time	09:00		08:30		
Client ID	FIELD BLANK	TRAVEL BLANK	SW2-2		
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
Sodium (Na)-Total (mg/L)	<0.10	<0.10	1.67		
Strontium (Sr)-Total (mg/L)	<0.0010	<0.0010	0.0286		
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Titanium (Ti)-Total (mg/L)	<0.0020	<0.0020	0.0175		
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030		
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	<0.0050	<0.0050	0.0074		
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060		
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017		
Calcium (Ca)-Dissolved (mg/L)	<0.20	<0.20	15.8		
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	0.175		
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
Magnesium (Mg)-Dissolved (mg/L)	<0.020	<0.020	2.81		
Manganese (Mn)-Dissolved (mg/L)	<0.0010	<0.0010	0.172		
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	1.08		
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
Sodium (Na)-Dissolved (mg/L)	0.17 RRV	<0.10	1.70		
Strontium (Sr)-Dissolved (mg/L)	<0.0010	<0.0010	0.0278		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1148845-1 SURFACEWATE 15-MAY-12 09:00 SW3	L1148845-2 SURFACEWATE 15-MAY-12 08:30 SW2-1	L1148845-3 SURFACEWATE 15-MAY-12 10:00 TL3	L1148845-5 SURFACEWATE 15-MAY-12 10:55 JCTA	L1148845-6 SURFACEWATE 15-MAY-12 11:45 TL1A
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0031	0.0070	<0.0030	0.0036	0.0053
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1148845-7 SURFACEWATE 15-MAY-12 13:15 TL2A	L1148845-8 SURFACEWATE 15-MAY-12 14:45 SW8	L1148845-9 SURFACEWATE 15-MAY-12 15:15 SW7	L1148845-10 SURFACEWATE 15-MAY-12 15:50 SW10	L1148845-11 SURFACEWATE 15-MAY-12 16:35 SW11
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	0.0096
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0013
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0076	<0.0030	0.0126
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1148845-12	L1148845-13	L1148845-14	L1148845-15	L1148845-16
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
	Sampled Date	15-MAY-12	16-MAY-12	15-MAY-12	15-MAY-12	15-MAY-12
	Sampled Time	17:35	09:55	11:40	11:05	09:00
	Client ID	SW9	SW4	SW5	SW6	SW33
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0031	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1148845-17	L1148845-18	L1148845-19		
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE		
	Sampled Date	15-MAY-12	15-MAY-12	15-MAY-12		
	Sampled Time	09:00		08:30		
	Client ID	FIELD BLANK	TRAVEL BLANK	SW2-2		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	0.0072 RRV	<0.0030	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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)
Matrix Spike	Phosphorus (P)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sulfate (SO4)	MS-B	L1148845-6
Matrix Spike	Barium (Ba)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1148845-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -19, -2, -3, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration

Reference Information

CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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, BC, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
899 Tree Nursery Road
Wabigoon ON P0V 2W0
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2372187								
WG1477856-2 LCS								
Acidity (as CaCO3)			99.2		%		85-115	25-MAY-12
WG1477856-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	25-MAY-12
ALK-TOT-CAP-TB	**Water**							
Batch R2367981								
WG1474530-3 DUP		**L1148845-9**						
Alkalinity, Total (as CaCO3)		62.5	62.3		mg/L CaCO3	0.3	20	18-MAY-12
WG1474530-2 LCS								
Alkalinity, Total (as CaCO3)			98.4		%		85-115	18-MAY-12
WG1474530-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	18-MAY-12
CL-IC-TB	**Water**							
Batch R2368662								
WG1475776-2 LCS								
Chloride (Cl)			99.6		%		90-110	18-MAY-12
WG1475776-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	18-MAY-12
WG1475776-4 MS		**L1148887-3**						
Chloride (Cl)			94.0		%		75-125	18-MAY-12
WG1475776-6 MS		**L1149368-11**						
Chloride (Cl)			103.2		%		75-125	18-MAY-12
Batch R2370560								
WG1476446-2 LCS								
Chloride (Cl)			97.1		%		90-110	22-MAY-12
WG1476446-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	22-MAY-12
WG1476446-4 MS		**L1149338-8**						
Chloride (Cl)			100.8		%		75-125	22-MAY-12
WG1476446-6 MS		**L1150036-4**						
Chloride (Cl)			101.4		%		75-125	22-MAY-12
CN-FREE-CFA-VA	**Water**							
Batch R2373158								
WG1479201-7 DUP		**L1148845-13**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-MAY-12
WG1479201-2 LCS								
Cyanide, Free			99.5		%		80-120	28-MAY-12
WG1479201-5 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2373158								
WG1479201-5 LCS								
Cyanide, Free			100.3		%		80-120	28-MAY-12
WG1479201-6 LCS								
Cyanide, Free			99.6		%		80-120	28-MAY-12
WG1479201-9 LCS								
Cyanide, Free			100.8		%		80-120	28-MAY-12
WG1479201-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-MAY-12
WG1479201-10 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-MAY-12
WG1479201-4 MS		**L1149558-3**						
Cyanide, Free			97.8		%		70-130	28-MAY-12
WG1479201-8 MS		**L1148845-13**						
Cyanide, Free			98.3		%		70-130	28-MAY-12
CN-TOT-WT	**Water**							
Batch R2372474								
WG1478810-4 CVS								
Cyanide, Total			100.0		%		85-115	28-MAY-12
WG1478810-2 DUP		**L1148845-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-MAY-12
WG1478810-5 DUP		**L1148845-19**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-MAY-12
WG1478810-3 LCS								
Cyanide, Total			98.4		%		80-120	28-MAY-12
WG1478810-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	28-MAY-12
CN-WAD-WT	**Water**							
Batch R2372488								
WG1478952-4 CVS								
Cyanide, Weak Acid Diss			106.0		%		85-115	28-MAY-12
WG1478952-5 DUP		**L1148845-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-MAY-12
WG1478952-6 DUP		**L1148845-19**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-MAY-12
WG1478952-3 LCS								
Cyanide, Weak Acid Diss			107.2		%		80-120	28-MAY-12
WG1478952-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	28-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2367981								
WG1474530-3 DUP		**L1148845-9**						
Conductivity (EC)		135	136		uS/cm	0.4	10	18-MAY-12
WG1474530-2 LCS								
Conductivity (EC)			102.2		%		90-110	18-MAY-12
WG1474530-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	18-MAY-12
HG-D-CVAF-TB	**Water**							
Batch R2369039								
WG1476155-4 DUP		**L1148845-19**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	22-MAY-12
WG1476155-2 LCS								
Mercury (Hg)-Dissolved			99.9		%		80-120	22-MAY-12
WG1476155-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	22-MAY-12
WG1476155-5 MS		**L1148845-19**						
Mercury (Hg)-Dissolved			103.8		%		70-130	22-MAY-12
HG-T-CVAF-TB	**Water**							
Batch R2369046								
WG1476149-6 DUP		**L1148845-12**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	22-MAY-12
WG1476149-2 LCS								
Mercury (Hg)-Total			99.9		%		80-120	22-MAY-12
WG1476149-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	22-MAY-12
WG1476149-7 MS		**L1148845-12**						
Mercury (Hg)-Total			94.2		%		70-130	22-MAY-12
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-2 LCS								
Aluminum (Al)-Dissolved			95.9		%		80-120	25-MAY-12
Antimony (Sb)-Dissolved			103.7		%		80-120	25-MAY-12
Arsenic (As)-Dissolved			105.4		%		80-120	25-MAY-12
Barium (Ba)-Dissolved			95.8		%		80-120	25-MAY-12
Beryllium (Be)-Dissolved			93.5		%		80-120	25-MAY-12
Bismuth (Bi)-Dissolved			100.6		%		80-120	25-MAY-12
Boron (B)-Dissolved			94.9		%		80-120	25-MAY-12
Cadmium (Cd)-Dissolved			102.8		%		80-120	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-2 LCS								
Calcium (Ca)-Dissolved			102.2		%		80-120	25-MAY-12
Chromium (Cr)-Dissolved			102.5		%		80-120	25-MAY-12
Cobalt (Co)-Dissolved			100.0		%		80-120	25-MAY-12
Copper (Cu)-Dissolved			96.2		%		80-120	25-MAY-12
Iron (Fe)-Dissolved			101.6		%		80-120	25-MAY-12
Lead (Pb)-Dissolved			102.1		%		80-120	25-MAY-12
Lithium (Li)-Dissolved			95.8		%		80-120	25-MAY-12
Magnesium (Mg)-Dissolved			100.4		%		80-120	25-MAY-12
Manganese (Mn)-Dissolved			101.0		%		80-120	25-MAY-12
Molybdenum (Mo)-Dissolved			99.3		%		80-120	25-MAY-12
Nickel (Ni)-Dissolved			100.5		%		80-120	25-MAY-12
Potassium (K)-Dissolved			105.3		%		80-120	25-MAY-12
Selenium (Se)-Dissolved			110.4		%		80-120	25-MAY-12
Silver (Ag)-Dissolved			94.7		%		80-120	25-MAY-12
Sodium (Na)-Dissolved			101.8		%		80-120	25-MAY-12
Strontium (Sr)-Dissolved			99.0		%		80-120	25-MAY-12
Tellurium (Te)-Dissolved			110.0		%		80-120	25-MAY-12
Thallium (Tl)-Dissolved			101.8		%		80-120	25-MAY-12
Tin (Sn)-Dissolved			103.7		%		80-120	25-MAY-12
Titanium (Ti)-Dissolved			103.8		%		80-120	25-MAY-12
Tungsten (W)-Dissolved			99.1		%		80-120	25-MAY-12
Uranium (U)-Dissolved			96.5		%		80-120	25-MAY-12
Vanadium (V)-Dissolved			102.0		%		80-120	25-MAY-12
Zinc (Zn)-Dissolved			101.0		%		80-120	25-MAY-12
Zirconium (Zr)-Dissolved			93.2		%		80-120	25-MAY-12
WG1477922-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	25-MAY-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	25-MAY-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	25-MAY-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	25-MAY-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-1 MB								
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	25-MAY-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	25-MAY-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	25-MAY-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	25-MAY-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	25-MAY-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	25-MAY-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	25-MAY-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	25-MAY-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	25-MAY-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	25-MAY-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	25-MAY-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	25-MAY-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	25-MAY-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	25-MAY-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	25-MAY-12
WG1477922-4 MS		**L1148887-1**						
Aluminum (Al)-Dissolved			111.4		%		70-130	25-MAY-12
Antimony (Sb)-Dissolved			112.2		%		70-130	25-MAY-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Beryllium (Be)-Dissolved			121.1		%		70-130	25-MAY-12
Bismuth (Bi)-Dissolved			97.2		%		70-130	25-MAY-12
Boron (B)-Dissolved			129.6		%		70-130	25-MAY-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Chromium (Cr)-Dissolved			117.0		%		70-130	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-4 MS		**L1148887-1**						
Cobalt (Co)-Dissolved			113.4		%		70-130	25-MAY-12
Copper (Cu)-Dissolved			106.7		%		70-130	25-MAY-12
Iron (Fe)-Dissolved			116.7		%		70-130	25-MAY-12
Lead (Pb)-Dissolved			112.3		%		70-130	25-MAY-12
Lithium (Li)-Dissolved			128.1		%		70-130	25-MAY-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Molybdenum (Mo)-Dissolved			110.6		%		70-130	25-MAY-12
Nickel (Ni)-Dissolved			110.2		%		70-130	25-MAY-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Silver (Ag)-Dissolved			74.0		%		70-130	25-MAY-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Thallium (Tl)-Dissolved			109.2		%		70-130	25-MAY-12
Tin (Sn)-Dissolved			108.9		%		70-130	25-MAY-12
Titanium (Ti)-Dissolved			110.9		%		70-130	25-MAY-12
Tungsten (W)-Dissolved			114.0		%		70-130	25-MAY-12
Vanadium (V)-Dissolved			119.4		%		70-130	25-MAY-12
Zinc (Zn)-Dissolved			116.2		%		70-130	25-MAY-12
Zirconium (Zr)-Dissolved			109.9		%		70-130	25-MAY-12
WG1477922-6 MS		**L1149251-4**						
Aluminum (Al)-Dissolved			99.1		%		70-130	25-MAY-12
Antimony (Sb)-Dissolved			103.4		%		70-130	25-MAY-12
Arsenic (As)-Dissolved			106.5		%		70-130	25-MAY-12
Barium (Ba)-Dissolved			128.3		%		70-130	25-MAY-12
Beryllium (Be)-Dissolved			106.0		%		70-130	25-MAY-12
Bismuth (Bi)-Dissolved			88.6		%		70-130	25-MAY-12
Boron (B)-Dissolved			107.4		%		70-130	25-MAY-12
Cadmium (Cd)-Dissolved			128.9		%		70-130	25-MAY-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Chromium (Cr)-Dissolved			105.7		%		70-130	25-MAY-12
Cobalt (Co)-Dissolved			105.7		%		70-130	25-MAY-12
Copper (Cu)-Dissolved			103.1		%		70-130	25-MAY-12
Iron (Fe)-Dissolved			105.1		%		70-130	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-6 MS		**L1149251-4**						
Lead (Pb)-Dissolved			104.8		%		70-130	25-MAY-12
Lithium (Li)-Dissolved			111.4		%		70-130	25-MAY-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Manganese (Mn)-Dissolved			104.5		%		70-130	25-MAY-12
Molybdenum (Mo)-Dissolved			99.0		%		70-130	25-MAY-12
Nickel (Ni)-Dissolved			101.6		%		70-130	25-MAY-12
Potassium (K)-Dissolved			107.0		%		70-130	25-MAY-12
Selenium (Se)-Dissolved			107.5		%		70-130	25-MAY-12
Silver (Ag)-Dissolved			106.2		%		70-130	25-MAY-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Tellurium (Te)-Dissolved			108.0		%		70-130	25-MAY-12
Thallium (Tl)-Dissolved			101.6		%		70-130	25-MAY-12
Tin (Sn)-Dissolved			104.7		%		70-130	25-MAY-12
Titanium (Ti)-Dissolved			100.9		%		70-130	25-MAY-12
Tungsten (W)-Dissolved			99.1		%		70-130	25-MAY-12
Uranium (U)-Dissolved			103.3		%		70-130	25-MAY-12
Vanadium (V)-Dissolved			107.0		%		70-130	25-MAY-12
Zinc (Zn)-Dissolved			106.7		%		70-130	25-MAY-12
Zirconium (Zr)-Dissolved			98.7		%		70-130	25-MAY-12
WG1477922-8 MS		**L1149368-9**						
Aluminum (Al)-Dissolved			96.7		%		70-130	25-MAY-12
Antimony (Sb)-Dissolved			102.1		%		70-130	25-MAY-12
Arsenic (As)-Dissolved			112.4		%		70-130	25-MAY-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Beryllium (Be)-Dissolved			99.6		%		70-130	25-MAY-12
Bismuth (Bi)-Dissolved			83.1		%		70-130	25-MAY-12
Boron (B)-Dissolved			102.2		%		70-130	25-MAY-12
Cadmium (Cd)-Dissolved			124.6		%		70-130	25-MAY-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Chromium (Cr)-Dissolved			104.5		%		70-130	25-MAY-12
Cobalt (Co)-Dissolved			99.0		%		70-130	25-MAY-12
Copper (Cu)-Dissolved			94.9		%		70-130	25-MAY-12
Iron (Fe)-Dissolved			95.8		%		70-130	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2372702								
WG1477922-8 MS		**L1149368-9**						
Lead (Pb)-Dissolved			97.3		%		70-130	25-MAY-12
Lithium (Li)-Dissolved			102.9		%		70-130	25-MAY-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Manganese (Mn)-Dissolved			99.96		%		70-130	25-MAY-12
Molybdenum (Mo)-Dissolved			93.2		%		70-130	25-MAY-12
Nickel (Ni)-Dissolved			94.4		%		70-130	25-MAY-12
Potassium (K)-Dissolved			103.3		%		70-130	25-MAY-12
Selenium (Se)-Dissolved			126.6		%		70-130	25-MAY-12
Silver (Ag)-Dissolved			95.6		%		70-130	25-MAY-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	25-MAY-12
Tellurium (Te)-Dissolved			111.5		%		70-130	25-MAY-12
Thallium (Tl)-Dissolved			93.9		%		70-130	25-MAY-12
Tin (Sn)-Dissolved			98.7		%		70-130	25-MAY-12
Titanium (Ti)-Dissolved			106.9		%		70-130	25-MAY-12
Tungsten (W)-Dissolved			96.6		%		70-130	25-MAY-12
Uranium (U)-Dissolved			108.6		%		70-130	25-MAY-12
Vanadium (V)-Dissolved			104.7		%		70-130	25-MAY-12
Zinc (Zn)-Dissolved			100.8		%		70-130	25-MAY-12
Zirconium (Zr)-Dissolved			95.9		%		70-130	25-MAY-12
MET-T-MS-TB	**Water**							
Batch R2369667								
WG1474412-2 LCS								
Aluminum (Al)-Total			86.1		%		80-120	23-MAY-12
Antimony (Sb)-Total			93.8		%		80-120	23-MAY-12
Arsenic (As)-Total			101.4		%		80-120	23-MAY-12
Barium (Ba)-Total			92.7		%		80-120	23-MAY-12
Beryllium (Be)-Total			89.9		%		80-120	23-MAY-12
Bismuth (Bi)-Total			99.1		%		80-120	23-MAY-12
Boron (B)-Total			89.0		%		80-120	23-MAY-12
Cadmium (Cd)-Total			95.8		%		80-120	23-MAY-12
Calcium (Ca)-Total			95.6		%		80-120	23-MAY-12
Chromium (Cr)-Total			94.1		%		80-120	23-MAY-12
Cobalt (Co)-Total			91.8		%		80-120	23-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2369667								
WG1474412-2 LCS								
Copper (Cu)-Total			89.3		%		80-120	23-MAY-12
Iron (Fe)-Total			83.4		%		80-120	23-MAY-12
Lead (Pb)-Total			96.6		%		80-120	23-MAY-12
Lithium (Li)-Total			93.0		%		80-120	23-MAY-12
Magnesium (Mg)-Total			91.1		%		80-120	23-MAY-12
Manganese (Mn)-Total			95.4		%		80-120	23-MAY-12
Molybdenum (Mo)-Total			97.4		%		80-120	23-MAY-12
Nickel (Ni)-Total			93.6		%		80-120	23-MAY-12
Potassium (K)-Total			95.3		%		80-120	23-MAY-12
Selenium (Se)-Total			103.4		%		80-120	23-MAY-12
Silver (Ag)-Total			93.0		%		80-120	23-MAY-12
Sodium (Na)-Total			95.4		%		80-120	23-MAY-12
Strontium (Sr)-Total			92.9		%		80-120	23-MAY-12
Tellurium (Te)-Total			97.8		%		80-120	23-MAY-12
Thallium (Tl)-Total			101.0		%		80-120	23-MAY-12
Tin (Sn)-Total			92.3		%		80-120	23-MAY-12
Titanium (Ti)-Total			98.7		%		80-120	23-MAY-12
Tungsten (W)-Total			96.1		%		80-120	23-MAY-12
Uranium (U)-Total			98.8		%		80-120	23-MAY-12
Vanadium (V)-Total			94.6		%		80-120	23-MAY-12
Zinc (Zn)-Total			92.6		%		80-120	23-MAY-12
Zirconium (Zr)-Total			91.3		%		80-120	23-MAY-12
WG1474412-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	23-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	23-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	23-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	23-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	23-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	23-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	23-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	23-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	23-MAY-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	23-MAY-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	23-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2369667								
WG1474412-1 MB								
Copper (Cu)-Total			<0.0010		mg/L		0.001	23-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	23-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	23-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	23-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	23-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	23-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	23-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	23-MAY-12
Potassium (K)-Total			<0.50		mg/L		0.5	23-MAY-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	23-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	23-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	23-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	23-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	23-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	23-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	23-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	23-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	23-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	23-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	23-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	23-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	23-MAY-12
Batch R2371806								
WG1474412-8 LCS								
Aluminum (Al)-Total			96.1		%		80-120	24-MAY-12
Antimony (Sb)-Total			103.2		%		80-120	24-MAY-12
Arsenic (As)-Total			102.8		%		80-120	24-MAY-12
Barium (Ba)-Total			100.7		%		80-120	24-MAY-12
Beryllium (Be)-Total			109.0		%		80-120	24-MAY-12
Bismuth (Bi)-Total			105.6		%		80-120	24-MAY-12
Boron (B)-Total			90.3		%		80-120	24-MAY-12
Cadmium (Cd)-Total			104.2		%		80-120	24-MAY-12
Calcium (Ca)-Total			98.4		%		80-120	24-MAY-12
Chromium (Cr)-Total			100.5		%		80-120	24-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2371806								
WG1474412-8 LCS								
Cobalt (Co)-Total			101.4		%		80-120	24-MAY-12
Copper (Cu)-Total			94.6		%		80-120	24-MAY-12
Iron (Fe)-Total			107.7		%		80-120	24-MAY-12
Lead (Pb)-Total			102.9		%		80-120	24-MAY-12
Lithium (Li)-Total			103.5		%		80-120	24-MAY-12
Magnesium (Mg)-Total			102.4		%		80-120	24-MAY-12
Manganese (Mn)-Total			106.2		%		80-120	24-MAY-12
Molybdenum (Mo)-Total			104.1		%		80-120	24-MAY-12
Nickel (Ni)-Total			100.6		%		80-120	24-MAY-12
Potassium (K)-Total			98.4		%		80-120	24-MAY-12
Selenium (Se)-Total			118.9		%		80-120	24-MAY-12
Silver (Ag)-Total			94.7		%		80-120	24-MAY-12
Sodium (Na)-Total			101.2		%		80-120	24-MAY-12
Strontium (Sr)-Total			101.1		%		80-120	24-MAY-12
Tellurium (Te)-Total			109.8		%		80-120	24-MAY-12
Thallium (Tl)-Total			106.6		%		80-120	24-MAY-12
Tin (Sn)-Total			106.2		%		80-120	24-MAY-12
Titanium (Ti)-Total			103.4		%		80-120	24-MAY-12
Tungsten (W)-Total			100.2		%		80-120	24-MAY-12
Uranium (U)-Total			99.8		%		80-120	24-MAY-12
Vanadium (V)-Total			100.4		%		80-120	24-MAY-12
Zinc (Zn)-Total			97.0		%		80-120	24-MAY-12
Zirconium (Zr)-Total			96.2		%		80-120	24-MAY-12
WG1474412-7 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	24-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	24-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	24-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	24-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	24-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	24-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	24-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	24-MAY-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	24-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2371806								
WG1474412-7 MB								
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	24-MAY-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	24-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	24-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	24-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	24-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	24-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	24-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	24-MAY-12
Potassium (K)-Total			<0.50		mg/L		0.5	24-MAY-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	24-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	24-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	24-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	24-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	24-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	24-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	24-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	24-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	24-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	24-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	24-MAY-12
WG1474412-6 MS		**L1148914-2**						
Aluminum (Al)-Total			95.6		%		70-130	24-MAY-12
Antimony (Sb)-Total			96.8		%		70-130	24-MAY-12
Arsenic (As)-Total			101.1		%		70-130	24-MAY-12
Barium (Ba)-Total			N/A	MS-B	%		-	24-MAY-12
Beryllium (Be)-Total			112.6		%		70-130	24-MAY-12
Bismuth (Bi)-Total			101.0		%		70-130	24-MAY-12
Boron (B)-Total			106.7		%		70-130	24-MAY-12
Cadmium (Cd)-Total			127.2		%		70-130	24-MAY-12
Calcium (Ca)-Total			N/A	MS-B	%		-	24-MAY-12
Chromium (Cr)-Total			100.7		%		70-130	24-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2371806								
WG1474412-6 MS		**L1148914-2**						
Cobalt (Co)-Total			99.6		%		70-130	24-MAY-12
Copper (Cu)-Total			93.5		%		70-130	24-MAY-12
Iron (Fe)-Total			N/A	MS-B	%		-	24-MAY-12
Lead (Pb)-Total			101.3		%		70-130	24-MAY-12
Lithium (Li)-Total			126.6		%		70-130	24-MAY-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	24-MAY-12
Manganese (Mn)-Total			N/A	MS-B	%		-	24-MAY-12
Molybdenum (Mo)-Total			92.3		%		70-130	24-MAY-12
Nickel (Ni)-Total			95.8		%		70-130	24-MAY-12
Potassium (K)-Total			95.3		%		70-130	24-MAY-12
Selenium (Se)-Total			106.8		%		70-130	24-MAY-12
Silver (Ag)-Total			104.0		%		70-130	24-MAY-12
Sodium (Na)-Total			N/A	MS-B	%		-	24-MAY-12
Strontium (Sr)-Total			N/A	MS-B	%		-	24-MAY-12
Tellurium (Te)-Total			104.0		%		70-130	24-MAY-12
Thallium (Tl)-Total			100.4		%		70-130	24-MAY-12
Tin (Sn)-Total			100.7		%		70-130	24-MAY-12
Titanium (Ti)-Total			97.8		%		70-130	24-MAY-12
Tungsten (W)-Total			111.2		%		70-130	24-MAY-12
Uranium (U)-Total			111.7		%		70-130	24-MAY-12
Vanadium (V)-Total			103.6		%		70-130	24-MAY-12
Zinc (Zn)-Total			96.3		%		70-130	24-MAY-12
Zirconium (Zr)-Total			87.9		%		70-130	24-MAY-12
Batch R2372627								
WG1474412-10 LCS								
Aluminum (Al)-Total			102.0		%		80-120	25-MAY-12
Antimony (Sb)-Total			109.3		%		80-120	25-MAY-12
Arsenic (As)-Total			111.5		%		80-120	25-MAY-12
Barium (Ba)-Total			102.4		%		80-120	25-MAY-12
Beryllium (Be)-Total			107.2		%		80-120	25-MAY-12
Bismuth (Bi)-Total			109.5		%		80-120	25-MAY-12
Boron (B)-Total			101.9		%		80-120	25-MAY-12
Cadmium (Cd)-Total			109.5		%		80-120	25-MAY-12
Calcium (Ca)-Total			107.9		%		80-120	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2372627								
WG1474412-10 LCS								
Chromium (Cr)-Total			107.5		%		80-120	25-MAY-12
Cobalt (Co)-Total			106.1		%		80-120	25-MAY-12
Copper (Cu)-Total			103.0		%		80-120	25-MAY-12
Iron (Fe)-Total			109.8		%		80-120	25-MAY-12
Lead (Pb)-Total			109.2		%		80-120	25-MAY-12
Lithium (Li)-Total			105.0		%		80-120	25-MAY-12
Magnesium (Mg)-Total			107.4		%		80-120	25-MAY-12
Manganese (Mn)-Total			106.7		%		80-120	25-MAY-12
Molybdenum (Mo)-Total			105.9		%		80-120	25-MAY-12
Nickel (Ni)-Total			105.6		%		80-120	25-MAY-12
Potassium (K)-Total			110.2		%		80-120	25-MAY-12
Selenium (Se)-Total			116.7		%		80-120	25-MAY-12
Silver (Ag)-Total			102.5		%		80-120	25-MAY-12
Sodium (Na)-Total			108.9		%		80-120	25-MAY-12
Strontium (Sr)-Total			104.5		%		80-120	25-MAY-12
Tellurium (Te)-Total			115.1		%		80-120	25-MAY-12
Thallium (Tl)-Total			109.6		%		80-120	25-MAY-12
Tin (Sn)-Total			111.2		%		80-120	25-MAY-12
Titanium (Ti)-Total			113.0		%		80-120	25-MAY-12
Tungsten (W)-Total			107.0		%		80-120	25-MAY-12
Uranium (U)-Total			102.0		%		80-120	25-MAY-12
Vanadium (V)-Total			107.7		%		80-120	25-MAY-12
Zinc (Zn)-Total			107.4		%		80-120	25-MAY-12
Zirconium (Zr)-Total			102.7		%		80-120	25-MAY-12
WG1474412-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	25-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	25-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	25-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	25-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	25-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	25-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	25-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	25-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	25-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2372627								
WG1474412-9 MB								
Chromium (Cr)-Total			<0.0010		mg/L		0.001	25-MAY-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	25-MAY-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	25-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	25-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	25-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	25-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	25-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	25-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	25-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	25-MAY-12
Potassium (K)-Total			<0.50		mg/L		0.5	25-MAY-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	25-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	25-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	25-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	25-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	25-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	25-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	25-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	25-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	25-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	25-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	25-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	25-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	25-MAY-12
Batch R2373571								
WG1474412-12 LCS								
Aluminum (Al)-Total			94.4		%		80-120	29-MAY-12
Antimony (Sb)-Total			102.4		%		80-120	29-MAY-12
Arsenic (As)-Total			110.0		%		80-120	29-MAY-12
Barium (Ba)-Total			102.7		%		80-120	29-MAY-12
Beryllium (Be)-Total			102.2		%		80-120	29-MAY-12
Bismuth (Bi)-Total			110.6		%		80-120	29-MAY-12
Boron (B)-Total			104.9		%		80-120	29-MAY-12
Cadmium (Cd)-Total			106.7		%		80-120	29-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2373571								
WG1474412-12 LCS								
Calcium (Ca)-Total			98.1		%		80-120	29-MAY-12
Chromium (Cr)-Total			105.3		%		80-120	29-MAY-12
Cobalt (Co)-Total			105.5		%		80-120	29-MAY-12
Copper (Cu)-Total			100.2		%		80-120	29-MAY-12
Lead (Pb)-Total			105.3		%		80-120	29-MAY-12
Lithium (Li)-Total			109.4		%		80-120	29-MAY-12
Magnesium (Mg)-Total			104.3		%		80-120	29-MAY-12
Manganese (Mn)-Total			109.8		%		80-120	29-MAY-12
Molybdenum (Mo)-Total			110.3		%		80-120	29-MAY-12
Nickel (Ni)-Total			107.9		%		80-120	29-MAY-12
Potassium (K)-Total			97.8		%		80-120	29-MAY-12
Selenium (Se)-Total			118.5		%		80-120	29-MAY-12
Silver (Ag)-Total			98.3		%		80-120	29-MAY-12
Sodium (Na)-Total			106.2		%		80-120	29-MAY-12
Strontium (Sr)-Total			104.4		%		80-120	29-MAY-12
Tellurium (Te)-Total			109.8		%		80-120	29-MAY-12
Thallium (Tl)-Total			103.3		%		80-120	29-MAY-12
Tin (Sn)-Total			109.2		%		80-120	29-MAY-12
Titanium (Ti)-Total			109.4		%		80-120	29-MAY-12
Tungsten (W)-Total			102.0		%		80-120	29-MAY-12
Uranium (U)-Total			95.3		%		80-120	29-MAY-12
Vanadium (V)-Total			111.0		%		80-120	29-MAY-12
Zinc (Zn)-Total			103.5		%		80-120	29-MAY-12
Zirconium (Zr)-Total			103.7		%		80-120	29-MAY-12
WG1474412-11 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	29-MAY-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	29-MAY-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	29-MAY-12
Barium (Ba)-Total			<0.010		mg/L		0.01	29-MAY-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-MAY-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	29-MAY-12
Boron (B)-Total			<0.050		mg/L		0.05	29-MAY-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	29-MAY-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	29-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2373571								
WG1474412-11 MB								
Chromium (Cr)-Total			<0.0010		mg/L		0.001	29-MAY-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	29-MAY-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-MAY-12
Iron (Fe)-Total			<0.020		mg/L		0.02	29-MAY-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	29-MAY-12
Lithium (Li)-Total			<0.050		mg/L		0.05	29-MAY-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	29-MAY-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	29-MAY-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	29-MAY-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	29-MAY-12
Potassium (K)-Total			<0.50		mg/L		0.5	29-MAY-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	29-MAY-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-MAY-12
Sodium (Na)-Total			<0.10		mg/L		0.1	29-MAY-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	29-MAY-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	29-MAY-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	29-MAY-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	29-MAY-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	29-MAY-12
Tungsten (W)-Total			<0.010		mg/L		0.01	29-MAY-12
Uranium (U)-Total			<0.0050		mg/L		0.005	29-MAY-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	29-MAY-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	29-MAY-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	29-MAY-12
NH3-COL-TB	**Water**							
Batch R2368011								
WG1475070-3 DUP		**L1148845-10**						
Ammonia, Total (as N)		<0.020	0.025	RPD-NA	mg/L	N/A	20	19-MAY-12
WG1475070-2 LCS								
Ammonia, Total (as N)			90.9		%		85-115	19-MAY-12
WG1475070-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	19-MAY-12
WG1475070-4 MS		**L1148845-10**						
Ammonia, Total (as N)			79.4		%		75-125	19-MAY-12
WG1475070-6 MS		**L1149229-2**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2368011								
WG1475070-6 MS		**L1149229-2**						
Ammonia, Total (as N)			83.5		%		75-125	19-MAY-12
Batch R2371341								
WG1477017-2 LCS								
Ammonia, Total (as N)			90.8		%		85-115	24-MAY-12
WG1477017-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	24-MAY-12
WG1477017-4 MS		**L1149368-2**						
Ammonia, Total (as N)			75.9		%		75-125	24-MAY-12
WG1477017-6 MS		**L1150036-12**						
Ammonia, Total (as N)			103.4		%		75-125	24-MAY-12
WG1477017-8 MS		**L1150076-17**						
Ammonia, Total (as N)			97.3		%		75-125	24-MAY-12
NO2-IC-TB	**Water**							
Batch R2368662								
WG1475776-2 LCS								
Nitrite (as N)			97.9		%		90-110	18-MAY-12
WG1475776-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	18-MAY-12
WG1475776-4 MS		**L1148887-3**						
Nitrite (as N)			91.5		%		75-115	18-MAY-12
WG1475776-6 MS		**L1149368-11**						
Nitrite (as N)			102.2		%		75-115	18-MAY-12
Batch R2370560								
WG1476446-2 LCS								
Nitrite (as N)			96.0		%		90-110	22-MAY-12
WG1476446-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	22-MAY-12
WG1476446-6 MS		**L1150036-4**						
Nitrite (as N)			100.2		%		75-115	22-MAY-12
NO3-IC-TB	**Water**							
Batch R2368662								
WG1475776-2 LCS								
Nitrate (as N)			99.3		%		90-110	18-MAY-12
WG1475776-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	18-MAY-12
WG1475776-4 MS		**L1148887-3**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2368662								
WG1475776-4 MS		**L1148887-3**						
Nitrate (as N)			91.8		%		75-125	18-MAY-12
WG1475776-6 MS		**L1149368-11**						
Nitrate (as N)			101.6		%		75-125	18-MAY-12
Batch R2370560								
WG1476446-2 LCS								
Nitrate (as N)			96.9		%		90-110	22-MAY-12
WG1476446-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	22-MAY-12
WG1476446-6 MS		**L1150036-4**						
Nitrate (as N)			99.96		%		75-125	22-MAY-12
OGG-TOT-WT	**Water**							
Batch R2371509								
WG1477982-2 LCS								
Oil and Grease, Total			89.0		%		75-120	25-MAY-12
WG1477982-3 LCSD		**WG1477982-2**						
Oil and Grease, Total		89.0	89		%	0.4	45	25-MAY-12
WG1477982-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	25-MAY-12
Batch R2372511								
WG1478483-2 LCS								
Oil and Grease, Total			88.8		%		75-120	27-MAY-12
WG1478483-3 LCSD		**WG1478483-2**						
Oil and Grease, Total		88.8	87		%	2.0	45	27-MAY-12
WG1478483-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	27-MAY-12
P-T-COL-TB	**Water**							
Batch R2368623								
WG1474500-2 LCS								
Phosphorus (P)-Total			99.2		%		80-120	18-MAY-12
WG1474500-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	18-MAY-12
WG1474500-4 MS		**L1148200-4**						
Phosphorus (P)-Total			87.1		%		70-130	18-MAY-12
WG1474500-6 MS		**L1148639-3**						
Phosphorus (P)-Total			N/A	MS-B	%		-	18-MAY-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2370687								
WG1476320-2 LCS								
Phosphorus (P)-Total			97.5		%		80-120	23-MAY-12
WG1476320-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	23-MAY-12
WG1476320-4 MS		**L1150076-16**						
Phosphorus (P)-Total			103.3		%		70-130	23-MAY-12
PH-CAP-TB	**Water**							
Batch R2367981								
WG1474530-3 DUP		**L1148845-9**						
pH		7.95	7.93	J	pH	0.02	0.2	18-MAY-12
WG1474530-2 LCS								
pH			6.00		pH		5.9-6.1	18-MAY-12
SO4-IC-TB	**Water**							
Batch R2368662								
WG1475776-2 LCS								
Sulfate (SO4)			101.7		%		90-110	18-MAY-12
WG1475776-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	18-MAY-12
WG1475776-4 MS		**L1148887-3**						
Sulfate (SO4)			93.9		%		75-125	18-MAY-12
WG1475776-6 MS		**L1149368-11**						
Sulfate (SO4)			104.6		%		75-125	18-MAY-12
Batch R2370560								
WG1476446-2 LCS								
Sulfate (SO4)			99.1		%		90-110	22-MAY-12
WG1476446-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	22-MAY-12
WG1476446-4 MS		**L1149338-8**						
Sulfate (SO4)			101.2		%		75-125	22-MAY-12
WG1476446-6 MS		**L1150036-4**						
Sulfate (SO4)			N/A	MS-B	%		-	22-MAY-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2369984								
WG1475457-3 DUP		**L1148845-7**						
Total Suspended Solids		252	254		mg/L	1.0	20	22-MAY-12
WG1475457-4 DUP		**L1148845-11**						
Total Suspended Solids		9.2	10.2		mg/L	10	20	22-MAY-12
WG1475457-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-TB	**Water**							
Batch R2369984								
WG1475457-2 LCS								
Total Suspended Solids			95.4		%		85-115	22-MAY-12
WG1475457-1 MB								
Total Suspended Solids			<2.0		mg/L		2	22-MAY-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Leachable Anions & Nutrients							
Anions by Ion Chromatography							
	6	15-MAY-12 11:45	22-MAY-12 16:36	5	7	days	EHT
Anions by Ion Chromatography							
	6	15-MAY-12 11:45	22-MAY-12 16:36	5	7	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 L1148845 were received on 17-MAY-12 12:30.

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.

ALS Environmental
Ontario P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
A Campbell Brothers Limited Company www.alsglobal.com

L1148845

Company:	Treasury Metals
Contact:	Mac Potter
Address:	899 Tree Nursery Rd
	Wabigoon ON P0V 2W0
Phone:	807-223-6191 Fax:
Email:	mac@treasurymetals.com
Project:	Job M0906A01 PO: M0210-P0115
Quote #	Q32690 LSD Goliath Project
Invoice To:	Same as Report: ☑ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	Karen R.
Sampler:	Mac Potter, Chris Rollins

Regulatory Information

- ☒ O. Reg 153 (O. Reg 511 Amend) Table: ____
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☒ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☒ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk., pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (F/P)	Hardness		Number of Containers
1	SW3	15/05/12	9:00	Water	X	X	X	X	X	X	X	X	X	X	X		9
2	SW2	15/05/12	8:30		X	X	X	X	X	X	X	X	X	X	X		1
3	TL3	15/05/12	10:00		X	X	X	X	X	X	X	X	X	X	X		
4	~~SW2~~ SW1	15/05/12	10:30		X	X	X	X	X	X	X	X	X	X	X		
5	TCTa	15/05/12	10:55		X	X	X	X	X	X	X	X	X	X	X		
6	TL1a	15/05/12	11:45		X	X	X	X	X	X	X	X	X	X	X		
7	TL2a	15/05/12	1:15		X	X	X	X	X	X	X	X	X	X	X		
8	SW8	15/05/12	2:45		X	X	X	X	X	X	X	X	X	X	X		
9	SW7	15/05/12	3:15		X	X	X	X	X	X	X	X	X	X	X		
10	SW10	15/05/12	3:50		X	X	X	X	X	X	X	X	X	X	X		
11	SW11	15/05/12	4:35		X	X	X	X	X	X	X	X	X	X	X		

Special Instructions / Comments

* ALL DISSOLVED PRESERVED WITH NITRIC ACID, AS RECOMMENDED BY KAREN R.

SEE SIF

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				VERIFICATION (lab use only)		
Released by: MACKENZIE OTTE <Original signed by>	Date & Time 16/05/12	Received by: <Original signed by>	Date & Time 17-MAY-12 12:30	Temp 7.6	Cooling Initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time 17-MAY-12 13:00	Observations: Yes / No ? If yes add SIF

ALS Environment

L11488845-COFC

Ontario P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
A Campbell Brothers Limited Company www.alsglobal.com

Company:	Treasury Metals
Contact:	Mac Potter
Address:	899 Tree Nursery Rd
	Wabigoon ON P0V 2W0
Phone:	807-223-6191 Fax:
Email:	mac@treasurymetals.com
Project:	Job M0906A01 PO: M0210-P0115
Quote #	Q32690 LSD Goliath Project
Invoice To:	Same as Report: ☑ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	Karen R.
Sampler:	Mac Potter, Chris Rollings

Regulatory Information

- ☑ O. Reg 153 (O. Reg 511 Amend) Table:
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
					F	P	F	P	P	F	P	P	F	F/P			
12	SW9	15/05/12	5:35	Water	X	X	X	X	X	X	X	X	X	X	X		9
13	SW4	16/05/12	9:55		X	X	X	X	X	X	X	X	X	X	X		
14	SW5	16/05/12	11:40		X	X	X	X	X	X	X	X	X	X	X		
15	SW6	16/05/12	11:05		X	X	X	X	X	X	X	X	X	X	X		
16	SW133	15/05/12	9:00		X	X	X	X	X	X	X	X	X	X	X		
17	Field Blank	15/05/12	9:10		X	X	X	X	X	X	X	X	X	X	X		
18	Travel Blank	~~15~~	—		X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		

Special Instructions / Comments

* SSE PAGE 1

SHIPMENT RELEASE (client use)

Released by:	Date & Time
MACKENZIE POTTER <Original signed by>	16/05/2012

SHIPMENT RECEPTION (lab use only)

Received by:	Date & Time	Temp	Cooling Initiated
			☐ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 22-JUN-12
Report Date: 05-JUL-12 08:44 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1166467

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers: L1166467
Legal Site Desc:

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1166467-1 WATER 21-JUN-12 10:15 SW4	L1166467-2 WATER 21-JUN-12 11:30 SW6	L1166467-3 WATER 21-JUN-12 11:30 SW66	L1166467-4 WATER 21-JUN-12 11:45 SW5	L1166467-5 WATER 20-JUN-12 13:40 SW11
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	108	115	115	115	32.7
	Hardness (as CaCO3) (mg/L)	42	48	47	48	18
	pH (pH)	7.62	7.76	7.75	7.77	5.20
	Total Suspended Solids (mg/L)	8.3	2.6	<2.0	2.1	8.6
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.0	4.0	3.4	2.2	14.6
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	43.0	44.3	44.3	44.3	<5.0
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Chloride (Cl) (mg/L)	3.17	4.20	4.22	4.14	<0.10
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	0.087
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0273	0.0068	0.0071	0.0071	0.0142
	Sulfate (SO4) (mg/L)	1.74	2.85	2.80	2.76	0.38
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	0.0020
	Cyanide, Total (mg/L)	0.0030	0.0059	0.0049	0.0053	0.0066
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.224	0.024	0.021	0.023	0.885
	Antimony (Sb)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0011
	Barium (Ba)-Total (mg/L)	0.010	<0.010	<0.010	<0.010	0.011
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	0.0012	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Total (mg/L)	13.1	13.5	12.9	13.2	5.36
	Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00162
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00061
	Copper (Cu)-Total (mg/L)	0.0018	0.0011	0.0010	<0.0010	0.0013
	Iron (Fe)-Total (mg/L)	0.298	<0.050	<0.050	<0.050	1.84
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	2.32	2.70	2.55	2.62	1.22
	Manganese (Mn)-Total (mg/L)	0.0127	0.0038	0.0037	0.0026	0.0367
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Silicon (Si)-Total (mg/L)	1.1	<1.0	<1.0	<1.0	4.1

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1166467-6 WATER 20-JUN-12 14:10 SW9	L1166467-7 WATER 20-JUN-12 11:30 SW8	L1166467-8 WATER 20-JUN-12 10:00 TL1A	L1166467-9 WATER 20-JUN-12 10:10 TL2A	L1166467-10 WATER 20-JUN-12 08:20 TL3
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	96.8	48.3	55.6	114	81.5
	Hardness (as CaCO3) (mg/L)	51	27	31	63	44
	pH (pH)	7.08	6.97	6.74	6.95	7.16
	Total Suspended Solids (mg/L)	2.0	49.5	5.3	4.9	10.7
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.4	3.4	4.8	7.2	3.0
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	43.3	18.3	22.3	50.2	34.5
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.029
	Chloride (Cl) (mg/L)	<0.10	<0.10	0.19	0.15	0.44
	Nitrate (as N) (mg/L)	<0.030	0.046	<0.030	<0.030	<0.030
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0089	0.0203	0.0366	0.0360	0.0222
	Sulfate (SO4) (mg/L)	<0.30	1.42	0.44	0.68	0.66
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	0.0059	0.0056	0.0065	0.0063	0.0055
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.142	0.500	0.211	0.197	0.253
	Antimony (Sb)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Arsenic (As)-Total (mg/L)	<0.0010	0.0010	<0.0010	0.0011	<0.0010
	Barium (Ba)-Total (mg/L)	0.011	0.012	<0.010	0.014	0.011
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Total (mg/L)	14.8	9.06	9.09	16.4	12.5
	Chromium (Cr)-Total (mg/L)	<0.00050	0.00113	0.00051	<0.00050	0.00057
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	0.00054	0.00058	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	0.0021	<0.0010	0.0011	0.0015
	Iron (Fe)-Total (mg/L)	0.316	1.16	1.13	1.04	0.825
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Total (mg/L)	3.28	1.45	2.20	4.85	3.24
	Manganese (Mn)-Total (mg/L)	0.0261	0.0495	0.137	0.194	0.0403
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<1.0	<1.0	<1.0	1.3	<1.0
	Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	0.00052	<0.00040	0.00046
	Silicon (Si)-Total (mg/L)	4.3	3.4	3.3	2.7	3.5

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1166467-11	L1166467-12	L1166467-13	L1166467-14	L1166467-15
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12
Sampled Time	09:35	08:10	09:00	07:10	11:00
Client ID	JCTA	SW2	SW1	SW3	SW7
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	75.1	132	87.4	127	107
Hardness (as CaCO3) (mg/L)	42	67	43	49	52
pH (pH)	7.00	7.41	7.02	6.98	7.61
Total Suspended Solids (mg/L)	4.3	92.7	3.9	2.7	22.2
Anions and Nutrients Acidity (as CaCO3) (mg/L)	3.8	3.0	4.0	4.8	3.0
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	31.4	58.4	38.5	40.7	50.0
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.32	1.95	0.14	9.19	<0.10
Nitrate (as N) (mg/L)	<0.030	0.031	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0149	0.0984	0.0095	0.0176	0.0156
Sulfate (SO4) (mg/L)	0.57	0.58	0.63	2.03	0.39
Cyanides Cyanide, Weak Acid Diss (mg/L)	0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	0.0065	0.0060	0.0067	0.0060	0.0049
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.164	0.654	0.063	0.065	0.130
Antimony (Sb)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	<0.010	0.025	<0.010	<0.010	0.018
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Calcium (Ca)-Total (mg/L)	11.1	18.3	13.2	13.8	18.4
Chromium (Cr)-Total (mg/L)	<0.00050	0.00158	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Total (mg/L)	<0.00050	0.00102	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0028	<0.0010	0.0010	<0.0010
Iron (Fe)-Total (mg/L)	0.872	1.77	0.490	0.296	0.509
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Total (mg/L)	2.64	4.83	2.16	3.22	1.48
Manganese (Mn)-Total (mg/L)	0.0695	0.157	0.0597	0.0362	0.0832
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	0.0023	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	<1.0	1.0	<1.0	<1.0	<1.0
Selenium (Se)-Total (mg/L)	0.00044	<0.00040	<0.00040	<0.00040	<0.00040
Silicon (Si)-Total (mg/L)	3.0	3.6	3.1	1.9	3.7

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1166467-16	L1166467-17	L1166467-18		
Description	WATER	WATER	WATER		
Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12		
Sampled Time	12:00	16:00	07:10		
Client ID	SW10	FIELD BLANK	TRAVEL BLANK		
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	47.5	<3.0	<3.0		
Hardness (as CaCO3) (mg/L)	27	<10	<10		
pH (pH)	6.75	5.70	5.44		
Total Suspended Solids (mg/L)	31.5	<2.0	<2.0		
Anions and Nutrients Acidity (as CaCO3) (mg/L)	4.2	<2.0	<2.0		
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	18.4	<5.0	<5.0		
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020		
Chloride (Cl) (mg/L)	<0.10	<0.10	<0.10		
Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030		
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020		
Phosphorus (P)-Total (mg/L)	0.0111	<0.0050	<0.0050		
Sulfate (SO4) (mg/L)	0.83	<0.30	<0.30		
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020		
Cyanide, Total (mg/L)	0.0058	<0.0020	<0.002		
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050		
Total Metals Aluminum (Al)-Total (mg/L)	0.335	<0.010	<0.010		
Antimony (Sb)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Barium (Ba)-Total (mg/L)	0.012	<0.010	<0.010		
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Bismuth (Bi)-Total (mg/L)	0.0014	<0.0010	<0.0010		
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050		
Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090		
Calcium (Ca)-Total (mg/L)	9.08	<0.50	<0.50		
Chromium (Cr)-Total (mg/L)	0.00083	<0.00050	<0.00050		
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050		
Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Iron (Fe)-Total (mg/L)	1.33	<0.050	<0.050		
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Magnesium (Mg)-Total (mg/L)	1.24	<0.50	<0.50		
Manganese (Mn)-Total (mg/L)	0.0300	<0.0010	<0.0010		
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020		
Potassium (K)-Total (mg/L)	<1.0	<1.0	<1.0		
Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	<0.00040		
Silicon (Si)-Total (mg/L)	3.9	<1.0	<1.0		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-1	L1166467-2	L1166467-3	L1166467-4	L1166467-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	21-JUN-12	21-JUN-12	21-JUN-12	21-JUN-12	20-JUN-12
	Sampled Time	10:15	11:30	11:30	11:45	13:40
	Client ID	SW4	SW6	SW66	SW5	SW11
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	2.42	2.85	2.70	2.78	0.88
	Strontium (Sr)-Total (mg/L)	0.0246	0.0276	0.0271	0.0264	0.0150
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0066	<0.0020	<0.0020	<0.0020	0.0312
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0017
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	0.0060
	Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.011	<0.010	<0.010	<0.010	0.546
	Antimony (Sb)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Dissolved (mg/L)	13.2	13.9	13.6	13.9	5.17
	Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	0.0034	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	1.25
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	2.52	3.18	3.05	3.19	1.13
	Manganese (Mn)-Dissolved (mg/L)	0.0016	0.0025	0.0021	<0.0010	0.0309
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
	Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	0.00054
	Silicon (Si)-Dissolved (mg/L)	1.2	<1.0	<1.0	<1.0	3.8
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	2.51	3.27	3.23	3.33	0.93
	Strontium (Sr)-Dissolved (mg/L)	0.0237	0.0274	0.0264	0.0274	0.0133

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-6	L1166467-7	L1166467-8	L1166467-9	L1166467-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12
	Sampled Time	14:10	11:30	10:00	10:10	08:20
	Client ID	SW9	SW8	TL1A	TL2A	TL3
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	1.57	0.86	1.09	2.11	1.48
	Strontium (Sr)-Total (mg/L)	0.0329	0.0207	0.0204	0.0373	0.0271
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0029	0.0122	0.0050	0.0068	0.0074
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0023	<0.0010	<0.0010	0.0011
	Zinc (Zn)-Total (mg/L)	0.0035	0.0036	<0.0030	0.0039	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.150	0.272	0.187	0.112	0.122
	Antimony (Sb)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0012	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.012	<0.010	<0.010	0.013	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Dissolved (mg/L)	14.7	8.45	8.81	17.1	12.4
	Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	0.00051	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0012	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.211	0.559	0.740	0.494	0.491
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)	3.59	1.46	2.14	4.90	3.20
	Manganese (Mn)-Dissolved (mg/L)	0.0179	0.0187	0.116	0.0772	0.0179
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	<1.0	<1.0	<1.0	1.3	<1.0
	Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Silicon (Si)-Dissolved (mg/L)	5.2	3.7	3.5	2.9	3.7
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.72	0.93	1.05	2.15	1.46
	Strontium (Sr)-Dissolved (mg/L)	0.0330	0.0183	0.0216	0.0391	0.0281

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1166467-11	L1166467-12	L1166467-13	L1166467-14	L1166467-15
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12
Sampled Time	09:35	08:10	09:00	07:10	11:00
Client ID	JCTA	SW2	SW1	SW3	SW7
Grouping / **Analyte**					
WATER					
Total Metals					
Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	1.21	2.27	1.12	6.01	0.77
Strontium (Sr)-Total (mg/L)	0.0269	0.0366	0.0258	0.0318	0.0286
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0046	0.0194	0.0022	0.0020	0.0074
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	0.0028	<0.0010	<0.0010	<0.0010
Zinc (Zn)-Total (mg/L)	0.0031	0.0076	<0.0030	<0.0030	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals					
Aluminum (Al)-Dissolved (mg/L)	0.138	0.072	0.027	0.027	<0.010
Antimony (Sb)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	<0.010	0.013	<0.010	<0.010	0.017
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Calcium (Ca)-Dissolved (mg/L)	11.7	18.5	13.5	13.8	18.2
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	<0.0010
Iron (Fe)-Dissolved (mg/L)	0.590	0.559	0.228	0.146	0.070
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Magnesium (Mg)-Dissolved (mg/L)	3.03	5.12	2.32	3.42	1.54
Manganese (Mn)-Dissolved (mg/L)	0.0551	0.0675	0.0399	0.0270	0.0200
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved (mg/L)	<1.0	1.1	<1.0	<1.0	<1.0
Selenium (Se)-Dissolved (mg/L)	0.00043	<0.00040	<0.00040	<0.00040	<0.00040
Silicon (Si)-Dissolved (mg/L)	3.6	3.6	3.6	2.1	4.2
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	1.40	2.57	1.23	6.43	0.83
Strontium (Sr)-Dissolved (mg/L)	0.0267	0.0348	0.0260	0.0312	0.0271

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-16	L1166467-17	L1166467-18		
	Description	WATER	WATER	WATER		
	Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12		
	Sampled Time	12:00	16:00	07:10		
	Client ID	SW10	FIELD BLANK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Total (mg/L)	0.96	<0.50	<0.50		
	Strontium (Sr)-Total (mg/L)	0.0206	<0.0010	<0.0010		
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Total (mg/L)	0.0059	<0.0020	<0.0020		
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Total (mg/L)	0.0011	<0.0010	<0.0010		
	Zinc (Zn)-Total (mg/L)	0.0051	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	0.0058	<0.0040	<0.0040		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.331	<0.010	<0.010		
	Antimony (Sb)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Dissolved (mg/L)	0.012	<0.010	<0.010		
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090		
	Calcium (Ca)-Dissolved (mg/L)	8.81	<0.50	<0.50		
	Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Iron (Fe)-Dissolved (mg/L)	0.964	<0.050	<0.050		
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Magnesium (Mg)-Dissolved (mg/L)	1.28	<0.50	<0.50		
	Manganese (Mn)-Dissolved (mg/L)	0.0237	<0.0010	<0.0010		
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Potassium (K)-Dissolved (mg/L)	<1.0	<1.0	<1.0		
	Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040		
	Silicon (Si)-Dissolved (mg/L)	4.6	<1.0	<1.0		
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Dissolved (mg/L)	1.00	<0.50	<0.50		
	Strontium (Sr)-Dissolved (mg/L)	0.0194	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-1	L1166467-2	L1166467-3	L1166467-4	L1166467-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	21-JUN-12	21-JUN-12	21-JUN-12	21-JUN-12	20-JUN-12
	Sampled Time	10:15	11:30	11:30	11:45	13:40
	Client ID	SW4	SW6	SW66	SW5	SW11
Grouping	**Analyte**					
WATER						
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	0.0091
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	0.0087
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-6	L1166467-7	L1166467-8	L1166467-9	L1166467-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12	20-JUN-12
	Sampled Time	14:10	11:30	10:00	10:10	08:20
	Client ID	SW9	SW8	TL1A	TL2A	TL3
Grouping	**Analyte**					
WATER						
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	0.0022	0.0035	0.0037	0.0023	0.0022
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0042	<0.0030	0.0032	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1166467-11 WATER 20-JUN-12 09:35 JCTA	L1166467-12 WATER 20-JUN-12 08:10 SW2	L1166467-13 WATER 20-JUN-12 09:00 SW1	L1166467-14 WATER 20-JUN-12 07:10 SW3	L1166467-15 WATER 20-JUN-12 11:00 SW7
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	0.0024	0.0027	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0035	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1166467-16	L1166467-17	L1166467-18		
	Description	WATER	WATER	WATER		
	Sampled Date	20-JUN-12	20-JUN-12	20-JUN-12		
	Sampled Time	12:00	16:00	07:10		
	Client ID	SW10	FIELD BLANK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	0.0038	<0.0020	<0.0020		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	0.0037	<0.0030	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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	DLM	L1166467-1, -2, -3, -4
Duplicate	Strontium (Sr)-Total	DLM	L1166467-1, -2, -3, -4
Duplicate	Cyanide, Free	DLM	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1166467-11, -12, -13, -14, -15, -16, -17, -18, -5, -6, -7
Matrix Spike	Silicon (Si)-Total	MS-B	L1166467-11, -12, -13, -14, -15, -16, -17, -18, -5, -6, -7
Matrix Spike	Aluminum (Al)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Boron (B)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Manganese (Mn)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Molybdenum (Mo)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Potassium (K)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Silicon (Si)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Sodium (Na)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Strontium (Sr)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Zinc (Zn)-Total	MS-B	L1166467-1, -2, -3, -4
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1166467-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
ETL-HARDNESS-CALC-WT	Water	Hardness (as CaCO3)	APHA 2340 B

Reference Information

HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-DIS-WT	Water	Metal Scan-Dissolved	EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

MET-TOT-WT	Water	Metal Scan-Total	EPA 200.8

The concentration of metals is determined on an unfiltered aqueous sample. The sample is digested with nitric acid and then analyzed directly by ICP-MS.

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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, BC, CANADA
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

L1166467

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2392041								
WG1500767-4 DUP		**L1166467-16**						
Acidity (as CaCO3)		4.2	4.0		mg/L	4.9	20	04-JUL-12
WG1500767-2 LCS								
Acidity (as CaCO3)			105.6		%		85-115	04-JUL-12
WG1500767-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-JUL-12
ALK-TOT-CAP-TB	**Water**							
Batch R2388109								
WG1495137-2 LCS								
Alkalinity, Total (as CaCO3)			94.8		%		85-115	22-JUN-12
WG1495137-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	22-JUN-12
Batch R2388817								
WG1495316-3 DUP		**L1166467-15**						
Alkalinity, Total (as CaCO3)		50.0	50.0		mg/L CaCO3	0.1	20	23-JUN-12
WG1495316-2 LCS								
Alkalinity, Total (as CaCO3)			94.2		%		85-115	23-JUN-12
WG1495316-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	23-JUN-12
CL-IC-TB	**Water**							
Batch R2387628								
WG1495913-2 LCS								
Chloride (Cl)			99.6		%		90-110	22-JUN-12
WG1495913-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	22-JUN-12
WG1495913-4 MS		**L1166188-15**						
Chloride (Cl)			103.1		%		75-125	22-JUN-12
WG1495913-6 MS		**L1166593-2**						
Chloride (Cl)			101.5		%		75-125	22-JUN-12
CN-FREE-CFA-VA	**Water**							
Batch R2389904								
WG1497715-10 LCS								
Cyanide, Free			97.7		%		80-120	27-JUN-12
WG1497715-16 LCS								
Cyanide, Free			98.2		%		80-120	27-JUN-12
WG1497715-18 LCS								
Cyanide, Free			98.4		%		80-120	27-JUN-12
WG1497715-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2389904								
WG1497715-2 LCS								
Cyanide, Free			97.8		%		80-120	27-JUN-12
WG1497715-21 LCS								
Cyanide, Free			98.4		%		80-120	27-JUN-12
WG1497715-25 LCS								
Cyanide, Free			98.5		%		80-120	27-JUN-12
WG1497715-27 LCS								
Cyanide, Free			98.3		%		80-120	27-JUN-12
WG1497715-29 LCS								
Cyanide, Free			100.2		%		80-120	27-JUN-12
WG1497715-6 LCS								
Cyanide, Free			99.3		%		80-120	27-JUN-12
WG1497715-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-15 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-17 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-20 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-24 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-26 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-28 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-JUN-12
WG1497715-12 MS		**L1166892-1**						
Cyanide, Free			96.0		%		70-130	27-JUN-12
WG1497715-14 MS		**L1164338-2**						
Cyanide, Free			96.1		%		70-130	27-JUN-12
WG1497715-23 MS		**L1166351-5**						
Cyanide, Free			95.9		%		70-130	27-JUN-12
WG1497715-4 MS		**L1162942-5**						
Cyanide, Free			92.3		%		70-130	27-JUN-12
CN-TOT-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-TOT-WT	**Water**							
Batch R2391346								
WG1499188-4 CVS								
Cyanide, Total			100.5		%		85-115	29-JUN-12
WG1499188-2 DUP		**L1166467-1**						
Cyanide, Total		0.0030	0.0030		mg/L	0.0	20	29-JUN-12
WG1499188-3 LCS								
Cyanide, Total			96.7		%		80-120	29-JUN-12
WG1499188-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	29-JUN-12
CN-WAD-WT	**Water**							
Batch R2390213								
WG1498311-4 CVS								
Cyanide, Weak Acid Diss			93.5		%		85-115	28-JUN-12
WG1498311-5 DUP		**L1166467-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-JUN-12
WG1498311-3 LCS								
Cyanide, Weak Acid Diss			94.4		%		80-120	28-JUN-12
WG1498311-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	28-JUN-12
EC-CAP-TB	**Water**							
Batch R2388109								
WG1495137-2 LCS								
Conductivity (EC)			104.7		%		90-110	22-JUN-12
WG1495137-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	22-JUN-12
Batch R2388817								
WG1495316-3 DUP		**L1166467-15**						
Conductivity (EC)		107	107		uS/cm	0.1	10	23-JUN-12
WG1495316-2 LCS								
Conductivity (EC)			103.8		%		90-110	23-JUN-12
WG1495316-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	23-JUN-12
HG-D-CVAF-TB	**Water**							
Batch R2389412								
WG1495708-4 DUP		**L1166467-2**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	27-JUN-12
WG1495708-2 LCS								
Mercury (Hg)-Dissolved			106.0		%		80-120	27-JUN-12
WG1495708-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-TB	**Water**							
Batch R2389412								
WG1495708-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	27-JUN-12
WG1495708-5 MS		**L1166467-2**						
Mercury (Hg)-Dissolved			94.9		%		70-130	27-JUN-12
Batch R2390563								
WG1499091-2 LCS								
Mercury (Hg)-Dissolved			101.1		%		80-120	29-JUN-12
WG1499091-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	29-JUN-12
WG1499091-5 MS		**L1134156-8**						
Mercury (Hg)-Dissolved			94.6		%		70-130	29-JUN-12
HG-T-CVAF-TB	**Water**							
Batch R2389427								
WG1495716-4 DUP		**L1166467-3**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	27-JUN-12
WG1495716-2 LCS								
Mercury (Hg)-Total			106.0		%		80-120	27-JUN-12
WG1495716-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	27-JUN-12
WG1495716-5 MS		**L1166467-3**						
Mercury (Hg)-Total			86.6		%		70-130	27-JUN-12
Batch R2390550								
WG1499083-2 LCS								
Mercury (Hg)-Total			101.1		%		80-120	29-JUN-12
WG1499083-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	29-JUN-12
WG1499083-5 MS		**L1166593-13**						
Mercury (Hg)-Total			70.1		%		70-130	29-JUN-12
WG1499083-7 MS		**L1134156-8**						
Mercury (Hg)-Total			94.5		%		70-130	29-JUN-12
MET-DIS-WT	**Water**							
Batch R2391987								
WG1500010-2 CVS								
Aluminum (Al)-Dissolved			103.8		%		80-120	03-JUL-12
Antimony (Sb)-Dissolved			105.4		%		80-120	03-JUL-12
Arsenic (As)-Dissolved			100.2		%		80-120	03-JUL-12
Barium (Ba)-Dissolved			104.6		%		80-120	03-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DIS-WT	**Water**							
Batch R2391987								
WG1500010-2 CVS								
Beryllium (Be)-Dissolved			110.5		%		80-120	03-JUL-12
Bismuth (Bi)-Dissolved			90.9		%		80-120	03-JUL-12
Boron (B)-Dissolved			111.3		%		70-130	03-JUL-12
Cadmium (Cd)-Dissolved			108.1		%		80-120	03-JUL-12
Calcium (Ca)-Dissolved			99.3		%		80-120	03-JUL-12
Chromium (Cr)-Dissolved			105.8		%		80-120	03-JUL-12
Cobalt (Co)-Dissolved			100.9		%		80-120	03-JUL-12
Copper (Cu)-Dissolved			101.8		%		80-120	03-JUL-12
Iron (Fe)-Dissolved			103.7		%		70-130	03-JUL-12
Lead (Pb)-Dissolved			100.4		%		80-120	03-JUL-12
Magnesium (Mg)-Dissolved			101.4		%		80-120	03-JUL-12
Manganese (Mn)-Dissolved			109.0		%		80-120	03-JUL-12
Molybdenum (Mo)-Dissolved			101.0		%		80-120	03-JUL-12
Nickel (Ni)-Dissolved			101.0		%		80-120	03-JUL-12
Phosphorus (P)-Dissolved			101.0		%		70-130	03-JUL-12
Potassium (K)-Dissolved			98.4		%		80-120	03-JUL-12
Selenium (Se)-Dissolved			100.3		%		80-120	03-JUL-12
Silicon (Si)-Dissolved			104.8		%		70-130	03-JUL-12
Silver (Ag)-Dissolved			108.0		%		80-120	03-JUL-12
Sodium (Na)-Dissolved			101.0		%		80-120	03-JUL-12
Strontium (Sr)-Dissolved			100.1		%		80-120	03-JUL-12
Thallium (Tl)-Dissolved			104.6		%		80-120	03-JUL-12
Tin (Sn)-Dissolved			103.0		%		80-120	03-JUL-12
Titanium (Ti)-Dissolved			108.1		%		80-120	03-JUL-12
Tungsten (W)-Dissolved			100.0		%		70-130	03-JUL-12
Uranium (U)-Dissolved			100.3		%		80-120	03-JUL-12
Vanadium (V)-Dissolved			103.3		%		80-120	03-JUL-12
Zinc (Zn)-Dissolved			100.1		%		80-120	03-JUL-12
Zirconium (Zr)-Dissolved			100.7		%		80-120	03-JUL-12
WG1500010-7 LCS								
Aluminum (Al)-Dissolved			106.4		%		70-130	03-JUL-12
Antimony (Sb)-Dissolved			91.2		%		80-120	03-JUL-12
Arsenic (As)-Dissolved			98.6		%		80-120	03-JUL-12
Barium (Ba)-Dissolved			103.8		%		80-120	03-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DIS-WT	**Water**							
Batch R2391987								
WG1500010-7 LCS								
Beryllium (Be)-Dissolved			88.4		%		80-120	03-JUL-12
Bismuth (Bi)-Dissolved			86.4		%		70-130	03-JUL-12
Boron (B)-Dissolved			82.2		%		80-120	03-JUL-12
Cadmium (Cd)-Dissolved			97.0		%		80-120	03-JUL-12
Calcium (Ca)-Dissolved			96.3		%		70-130	03-JUL-12
Chromium (Cr)-Dissolved			93.6		%		80-120	03-JUL-12
Cobalt (Co)-Dissolved			95.4		%		80-120	03-JUL-12
Copper (Cu)-Dissolved			96.6		%		80-120	03-JUL-12
Iron (Fe)-Dissolved			91.8		%		70-130	03-JUL-12
Lead (Pb)-Dissolved			90.2		%		80-120	03-JUL-12
Magnesium (Mg)-Dissolved			96.6		%		70-130	03-JUL-12
Manganese (Mn)-Dissolved			93.2		%		70-130	03-JUL-12
Molybdenum (Mo)-Dissolved			97.6		%		80-120	03-JUL-12
Nickel (Ni)-Dissolved			95.8		%		80-120	03-JUL-12
Phosphorus (P)-Dissolved			110.2		%		70-130	03-JUL-12
Potassium (K)-Dissolved			95.8		%		70-130	03-JUL-12
Selenium (Se)-Dissolved			98.5		%		80-120	03-JUL-12
Silicon (Si)-Dissolved			104.5		%		70-130	03-JUL-12
Silver (Ag)-Dissolved			96.1		%		80-120	03-JUL-12
Sodium (Na)-Dissolved			95.0		%		80-120	03-JUL-12
Strontium (Sr)-Dissolved			99.97		%		70-130	03-JUL-12
Thallium (Tl)-Dissolved			91.0		%		80-120	03-JUL-12
Tin (Sn)-Dissolved			95.8		%		70-130	03-JUL-12
Titanium (Ti)-Dissolved			94.3		%		70-130	03-JUL-12
Tungsten (W)-Dissolved			93.3		%		70-130	03-JUL-12
Uranium (U)-Dissolved			86.2		%		70-130	03-JUL-12
Vanadium (V)-Dissolved			93.9		%		80-120	03-JUL-12
Zinc (Zn)-Dissolved			96.6		%		80-120	03-JUL-12
Zirconium (Zr)-Dissolved			93.1		%		70-130	03-JUL-12
WG1500010-1 MB								
Aluminum (Al)-Dissolved			<0.010		mg/L		0.01	03-JUL-12
Antimony (Sb)-Dissolved			<0.0050		mg/L		0.005	03-JUL-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	03-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DIS-WT	**Water**							
Batch R2391987								
WG1500010-1 MB								
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	03-JUL-12
Cadmium (Cd)-Dissolved			<0.000090		mg/L		0.00009	03-JUL-12
Calcium (Ca)-Dissolved			<0.50		mg/L		0.5	03-JUL-12
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	03-JUL-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	03-JUL-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Iron (Fe)-Dissolved			<0.050		mg/L		0.05	03-JUL-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Magnesium (Mg)-Dissolved			<0.50		mg/L		0.5	03-JUL-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	03-JUL-12
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	03-JUL-12
Potassium (K)-Dissolved			<1.0		mg/L		1	03-JUL-12
Selenium (Se)-Dissolved			<0.00040		mg/L		0.0004	03-JUL-12
Silicon (Si)-Dissolved			<1.0		mg/L		1	03-JUL-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	03-JUL-12
Sodium (Na)-Dissolved			<0.50		mg/L		0.5	03-JUL-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	03-JUL-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	03-JUL-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	03-JUL-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	03-JUL-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	03-JUL-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	03-JUL-12
Zirconium (Zr)-Dissolved			<0.0040		mg/L		0.004	03-JUL-12
WG1500010-6 MS		**WG1500010-4**						
Aluminum (Al)-Dissolved			98.9		%		70-130	03-JUL-12
Antimony (Sb)-Dissolved			84.7		%		70-130	03-JUL-12
Arsenic (As)-Dissolved			97.4		%		70-130	03-JUL-12
Barium (Ba)-Dissolved			105.8		%		70-130	03-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-DIS-WT	**Water**							
Batch R2391987								
WG1500010-6 MS		**WG1500010-4**						
Beryllium (Be)-Dissolved			79.7		%		70-130	03-JUL-12
Boron (B)-Dissolved			103.7		%		70-130	03-JUL-12
Cadmium (Cd)-Dissolved			97.9		%		70-130	03-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	03-JUL-12
Chromium (Cr)-Dissolved			86.6		%		70-130	03-JUL-12
Cobalt (Co)-Dissolved			83.8		%		70-130	03-JUL-12
Copper (Cu)-Dissolved			90.3		%		70-130	03-JUL-12
Iron (Fe)-Dissolved			87.6		%		70-130	03-JUL-12
Lead (Pb)-Dissolved			87.6		%		70-130	03-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	03-JUL-12
Manganese (Mn)-Dissolved			94.6		%		70-130	03-JUL-12
Molybdenum (Mo)-Dissolved			87.2		%		70-130	03-JUL-12
Nickel (Ni)-Dissolved			82.4		%		70-130	03-JUL-12
Phosphorus (P)-Dissolved			118.8		%		70-130	03-JUL-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	03-JUL-12
Selenium (Se)-Dissolved			100.4		%		70-130	03-JUL-12
Silicon (Si)-Dissolved			122.2		%		70-130	03-JUL-12
Silver (Ag)-Dissolved			93.9		%		60-140	03-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	03-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	03-JUL-12
Thallium (Tl)-Dissolved			87.3		%		70-130	03-JUL-12
Tin (Sn)-Dissolved			92.6		%		70-130	03-JUL-12
Titanium (Ti)-Dissolved			96.0		%		70-130	03-JUL-12
Tungsten (W)-Dissolved			85.2		%		70-130	03-JUL-12
Uranium (U)-Dissolved			79.1		%		70-130	03-JUL-12
Vanadium (V)-Dissolved			92.3		%		70-130	03-JUL-12
Zinc (Zn)-Dissolved			90.6		%		70-130	03-JUL-12
Zirconium (Zr)-Dissolved			85.3		%		70-130	03-JUL-12
MET-TOT-WT	**Water**							
Batch R2387665								
WG1495570-2 CVS								
Aluminum (Al)-Total			101.7		%		80-120	25-JUN-12
Antimony (Sb)-Total			101.6		%		80-120	25-JUN-12
Arsenic (As)-Total			104.2		%		80-120	25-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2387665								
WG1495570-2 CVS								
Barium (Ba)-Total			101.0		%		80-120	25-JUN-12
Beryllium (Be)-Total			97.5		%		80-120	25-JUN-12
Bismuth (Bi)-Total			86.3		%		80-120	25-JUN-12
Boron (B)-Total			98.0		%		70-130	25-JUN-12
Cadmium (Cd)-Total			108.0		%		80-120	25-JUN-12
Calcium (Ca)-Total			98.1		%		80-120	25-JUN-12
Chromium (Cr)-Total			95.3		%		80-120	25-JUN-12
Cobalt (Co)-Total			107.3		%		80-120	25-JUN-12
Copper (Cu)-Total			107.1		%		80-120	25-JUN-12
Iron (Fe)-Total			92.7		%		70-130	25-JUN-12
Lead (Pb)-Total			101.4		%		80-120	25-JUN-12
Magnesium (Mg)-Total			96.7		%		80-120	25-JUN-12
Manganese (Mn)-Total			100.3		%		80-120	25-JUN-12
Molybdenum (Mo)-Total			106.9		%		90-110	25-JUN-12
Nickel (Ni)-Total			107.7		%		80-120	25-JUN-12
Potassium (K)-Total			98.2		%		80-120	25-JUN-12
Selenium (Se)-Total			107.8		%		80-120	25-JUN-12
Silicon (Si)-Total			104.7		%		70-130	25-JUN-12
Silver (Ag)-Total			105.1		%		80-120	25-JUN-12
Sodium (Na)-Total			96.9		%		80-120	25-JUN-12
Strontium (Sr)-Total			107.9		%		80-120	25-JUN-12
Thallium (Tl)-Total			107.0		%		80-120	25-JUN-12
Tin (Sn)-Total			97.9		%		70-130	25-JUN-12
Titanium (Ti)-Total			98.6		%		80-120	25-JUN-12
Tungsten (W)-Total			100.5		%		70-130	25-JUN-12
Uranium (U)-Total			95.6		%		80-120	25-JUN-12
Vanadium (V)-Total			95.5		%		80-120	25-JUN-12
Zinc (Zn)-Total			97.2		%		80-120	25-JUN-12
Zirconium (Zr)-Total			107.6		%		80-120	25-JUN-12
WG1495516-2 LCS								
Aluminum (Al)-Total			100.1		%		80-120	25-JUN-12
Antimony (Sb)-Total			92.8		%		70-130	25-JUN-12
Arsenic (As)-Total			99.1		%		70-130	25-JUN-12
Barium (Ba)-Total			103.8		%		70-130	25-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2387665								
WG1495516-2 LCS								
Beryllium (Be)-Total			108.5		%		70-130	25-JUN-12
Bismuth (Bi)-Total			92.7		%		70-130	25-JUN-12
Boron (B)-Total			104.6		%		70-130	25-JUN-12
Cadmium (Cd)-Total			99.9		%		70-130	25-JUN-12
Calcium (Ca)-Total			96.2		%		70-130	25-JUN-12
Chromium (Cr)-Total			97.5		%		70-130	25-JUN-12
Cobalt (Co)-Total			96.9		%		70-130	25-JUN-12
Copper (Cu)-Total			94.4		%		70-130	25-JUN-12
Iron (Fe)-Total			100.4		%		70-130	25-JUN-12
Lead (Pb)-Total			96.0		%		70-130	25-JUN-12
Magnesium (Mg)-Total			93.2		%		70-130	25-JUN-12
Manganese (Mn)-Total			104.3		%		70-130	25-JUN-12
Molybdenum (Mo)-Total			90.0		%		70-130	25-JUN-12
Nickel (Ni)-Total			95.1		%		70-130	25-JUN-12
Potassium (K)-Total			91.6		%		70-130	25-JUN-12
Selenium (Se)-Total			97.2		%		70-130	25-JUN-12
Silicon (Si)-Total			96.5		%		70-130	25-JUN-12
Silver (Ag)-Total			99.1		%		70-130	25-JUN-12
Sodium (Na)-Total			91.2		%		70-130	25-JUN-12
Strontium (Sr)-Total			97.0		%		70-130	25-JUN-12
Thallium (Tl)-Total			99.4		%		70-130	25-JUN-12
Tin (Sn)-Total			97.5		%		70-130	25-JUN-12
Titanium (Ti)-Total			97.5		%		70-130	25-JUN-12
Tungsten (W)-Total			98.1		%		70-130	25-JUN-12
Uranium (U)-Total			96.4		%		70-130	25-JUN-12
Vanadium (V)-Total			95.7		%		70-130	25-JUN-12
Zinc (Zn)-Total			97.0		%		70-130	25-JUN-12
Zirconium (Zr)-Total			89.0		%		70-130	25-JUN-12
WG1495516-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	25-JUN-12
Antimony (Sb)-Total			<0.0050		mg/L		0.005	25-JUN-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	25-JUN-12
Barium (Ba)-Total			<0.010		mg/L		0.01	25-JUN-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	25-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2387665								
WG1495516-1 MB								
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	25-JUN-12
Boron (B)-Total			<0.050		mg/L		0.05	25-JUN-12
Cadmium (Cd)-Total			<0.000090		mg/L		0.00009	25-JUN-12
Calcium (Ca)-Total			<0.50		mg/L		0.5	25-JUN-12
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	25-JUN-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	25-JUN-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	25-JUN-12
Iron (Fe)-Total			<0.050		mg/L		0.05	25-JUN-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	25-JUN-12
Magnesium (Mg)-Total			<0.50		mg/L		0.5	25-JUN-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	25-JUN-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	25-JUN-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	25-JUN-12
Potassium (K)-Total			<1.0		mg/L		1	25-JUN-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	25-JUN-12
Silicon (Si)-Total			<1.0		mg/L		1	25-JUN-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	25-JUN-12
Sodium (Na)-Total			<0.50		mg/L		0.5	25-JUN-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	25-JUN-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	25-JUN-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	25-JUN-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	25-JUN-12
Tungsten (W)-Total			<0.010		mg/L		0.01	25-JUN-12
Uranium (U)-Total			<0.0050		mg/L		0.005	25-JUN-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	25-JUN-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	25-JUN-12
Zirconium (Zr)-Total			<0.0040		mg/L		0.004	25-JUN-12
WG1495516-5 MS		**WG1495516-3**						
Aluminum (Al)-Total			N/A	MS-B	%		-	25-JUN-12
Antimony (Sb)-Total			98.4		%		70-130	25-JUN-12
Arsenic (As)-Total			103.5		%		70-130	25-JUN-12
Beryllium (Be)-Total			91.7		%		70-130	25-JUN-12
Bismuth (Bi)-Total			90.5		%		70-130	25-JUN-12
Boron (B)-Total			N/A	MS-B	%		-	25-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2387665								
WG1495516-5 MS		**WG1495516-3**						
Cadmium (Cd)-Total			97.5		%		70-130	25-JUN-12
Calcium (Ca)-Total			N/A	MS-B	%		-	25-JUN-12
Chromium (Cr)-Total			95.6		%		70-130	25-JUN-12
Cobalt (Co)-Total			96.2		%		70-130	25-JUN-12
Copper (Cu)-Total			90.4		%		70-130	25-JUN-12
Iron (Fe)-Total			102.9		%		70-130	25-JUN-12
Lead (Pb)-Total			90.1		%		70-130	25-JUN-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	25-JUN-12
Manganese (Mn)-Total			N/A	MS-B	%		-	25-JUN-12
Molybdenum (Mo)-Total			N/A	MS-B	%		-	25-JUN-12
Nickel (Ni)-Total			95.0		%		70-130	25-JUN-12
Potassium (K)-Total			N/A	MS-B	%		-	25-JUN-12
Selenium (Se)-Total			101.6		%		70-130	25-JUN-12
Silicon (Si)-Total			N/A	MS-B	%		-	25-JUN-12
Silver (Ag)-Total			93.3		%		70-130	25-JUN-12
Sodium (Na)-Total			N/A	MS-B	%		-	25-JUN-12
Strontium (Sr)-Total			N/A	MS-B	%		-	25-JUN-12
Thallium (Tl)-Total			93.2		%		70-130	25-JUN-12
Tin (Sn)-Total			99.0		%		70-130	25-JUN-12
Titanium (Ti)-Total			102.8		%		70-130	25-JUN-12
Tungsten (W)-Total			98.4		%		70-130	25-JUN-12
Uranium (U)-Total			92.5		%		70-130	25-JUN-12
Vanadium (V)-Total			95.9		%		70-130	25-JUN-12
Zinc (Zn)-Total			N/A	MS-B	%		-	25-JUN-12
Zirconium (Zr)-Total			89.6		%		70-130	25-JUN-12
Batch R2388164								
WG1496310-2 CVS								
Aluminum (Al)-Total			99.4		%		80-120	26-JUN-12
Antimony (Sb)-Total			99.5		%		80-120	26-JUN-12
Arsenic (As)-Total			98.9		%		80-120	26-JUN-12
Barium (Ba)-Total			99.0		%		80-120	26-JUN-12
Beryllium (Be)-Total			104.0		%		80-120	26-JUN-12
Bismuth (Bi)-Total			90.6		%		80-120	26-JUN-12
Boron (B)-Total			103.4		%		70-130	26-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2388164								
WG1496310-2 CVS								
Cadmium (Cd)-Total			104.7		%		80-120	26-JUN-12
Calcium (Ca)-Total			100.7		%		80-120	26-JUN-12
Chromium (Cr)-Total			100.6		%		80-120	26-JUN-12
Cobalt (Co)-Total			99.8		%		80-120	26-JUN-12
Copper (Cu)-Total			99.7		%		80-120	26-JUN-12
Iron (Fe)-Total			101.2		%		70-130	26-JUN-12
Lead (Pb)-Total			102.4		%		80-120	26-JUN-12
Magnesium (Mg)-Total			102.3		%		80-120	26-JUN-12
Manganese (Mn)-Total			106.1		%		80-120	26-JUN-12
Molybdenum (Mo)-Total			99.7		%		90-110	26-JUN-12
Nickel (Ni)-Total			101.8		%		80-120	26-JUN-12
Potassium (K)-Total			100.0		%		80-120	26-JUN-12
Selenium (Se)-Total			100.3		%		80-120	26-JUN-12
Silicon (Si)-Total			101.7		%		70-130	26-JUN-12
Silver (Ag)-Total			105.6		%		80-120	26-JUN-12
Sodium (Na)-Total			101.5		%		80-120	26-JUN-12
Strontium (Sr)-Total			100.8		%		80-120	26-JUN-12
Thallium (Tl)-Total			104.0		%		80-120	26-JUN-12
Tin (Sn)-Total			98.0		%		70-130	26-JUN-12
Titanium (Ti)-Total			101.1		%		80-120	26-JUN-12
Tungsten (W)-Total			100.0		%		70-130	26-JUN-12
Uranium (U)-Total			98.7		%		80-120	26-JUN-12
Vanadium (V)-Total			100.8		%		80-120	26-JUN-12
Zinc (Zn)-Total			97.6		%		80-120	26-JUN-12
Zirconium (Zr)-Total			99.7		%		80-120	26-JUN-12
WG1495517-2 LCS								
Aluminum (Al)-Total			96.8		%		80-120	26-JUN-12
Antimony (Sb)-Total			89.5		%		70-130	26-JUN-12
Arsenic (As)-Total			100.1		%		70-130	26-JUN-12
Barium (Ba)-Total			97.2		%		70-130	26-JUN-12
Beryllium (Be)-Total			91.5		%		70-130	26-JUN-12
Bismuth (Bi)-Total			98.5		%		70-130	26-JUN-12
Boron (B)-Total			90.5		%		70-130	26-JUN-12
Cadmium (Cd)-Total			99.4		%		70-130	26-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2388164								
WG1495517-2 LCS								
Calcium (Ca)-Total			99.5		%		70-130	26-JUN-12
Chromium (Cr)-Total			98.9		%		70-130	26-JUN-12
Cobalt (Co)-Total			97.9		%		70-130	26-JUN-12
Copper (Cu)-Total			96.7		%		70-130	26-JUN-12
Iron (Fe)-Total			102.6		%		70-130	26-JUN-12
Lead (Pb)-Total			100.7		%		70-130	26-JUN-12
Magnesium (Mg)-Total			95.0		%		70-130	26-JUN-12
Manganese (Mn)-Total			102.0		%		70-130	26-JUN-12
Molybdenum (Mo)-Total			98.8		%		70-130	26-JUN-12
Nickel (Ni)-Total			95.9		%		70-130	26-JUN-12
Potassium (K)-Total			96.1		%		70-130	26-JUN-12
Selenium (Se)-Total			97.3		%		70-130	26-JUN-12
Silicon (Si)-Total			95.4		%		70-130	26-JUN-12
Silver (Ag)-Total			97.1		%		70-130	26-JUN-12
Sodium (Na)-Total			93.1		%		70-130	26-JUN-12
Strontium (Sr)-Total			102.0		%		70-130	26-JUN-12
Thallium (Tl)-Total			98.9		%		70-130	26-JUN-12
Tin (Sn)-Total			95.6		%		70-130	26-JUN-12
Titanium (Ti)-Total			98.1		%		70-130	26-JUN-12
Tungsten (W)-Total			100.5		%		70-130	26-JUN-12
Uranium (U)-Total			98.8		%		70-130	26-JUN-12
Vanadium (V)-Total			100.5		%		70-130	26-JUN-12
Zinc (Zn)-Total			98.2		%		70-130	26-JUN-12
Zirconium (Zr)-Total			96.4		%		70-130	26-JUN-12
WG1495517-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	26-JUN-12
Antimony (Sb)-Total			<0.0050		mg/L		0.005	26-JUN-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	26-JUN-12
Barium (Ba)-Total			<0.010		mg/L		0.01	26-JUN-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	26-JUN-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	26-JUN-12
Boron (B)-Total			<0.050		mg/L		0.05	26-JUN-12
Cadmium (Cd)-Total			<0.000090		mg/L		0.00009	26-JUN-12
Calcium (Ca)-Total			<0.50		mg/L		0.5	26-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2388164								
WG1495517-1 MB								
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	26-JUN-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	26-JUN-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	26-JUN-12
Iron (Fe)-Total			<0.050		mg/L		0.05	26-JUN-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	26-JUN-12
Magnesium (Mg)-Total			<0.50		mg/L		0.5	26-JUN-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	26-JUN-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	26-JUN-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	26-JUN-12
Potassium (K)-Total			<1.0		mg/L		1	26-JUN-12
Selenium (Se)-Total			<0.00040		mg/L		0.0004	26-JUN-12
Silicon (Si)-Total			<1.0		mg/L		1	26-JUN-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	26-JUN-12
Sodium (Na)-Total			<0.50		mg/L		0.5	26-JUN-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	26-JUN-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	26-JUN-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	26-JUN-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	26-JUN-12
Tungsten (W)-Total			<0.010		mg/L		0.01	26-JUN-12
Uranium (U)-Total			<0.0050		mg/L		0.005	26-JUN-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	26-JUN-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	26-JUN-12
Zirconium (Zr)-Total			<0.0040		mg/L		0.004	26-JUN-12
WG1495517-5 MS		**WG1495517-3**						
Aluminum (Al)-Total			N/A	MS-B	%		-	26-JUN-12
Antimony (Sb)-Total			94.5		%		70-130	26-JUN-12
Arsenic (As)-Total			97.3		%		70-130	26-JUN-12
Barium (Ba)-Total			106.1		%		70-130	26-JUN-12
Beryllium (Be)-Total			96.9		%		70-130	26-JUN-12
Bismuth (Bi)-Total			101.4		%		70-130	26-JUN-12
Boron (B)-Total			94.2		%		70-130	26-JUN-12
Cadmium (Cd)-Total			100.4		%		70-130	26-JUN-12
Calcium (Ca)-Total			98.3		%		70-130	26-JUN-12
Chromium (Cr)-Total			98.8		%		70-130	26-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2388164								
WG1495517-5 MS		**WG1495517-3**						
Cobalt (Co)-Total			93.8		%		70-130	26-JUN-12
Copper (Cu)-Total			93.8		%		70-130	26-JUN-12
Iron (Fe)-Total			102.3		%		70-130	26-JUN-12
Lead (Pb)-Total			98.8		%		70-130	26-JUN-12
Magnesium (Mg)-Total			92.6		%		70-130	26-JUN-12
Manganese (Mn)-Total			103.6		%		70-130	26-JUN-12
Molybdenum (Mo)-Total			96.1		%		70-130	26-JUN-12
Nickel (Ni)-Total			94.6		%		70-130	26-JUN-12
Potassium (K)-Total			97.4		%		70-130	26-JUN-12
Selenium (Se)-Total			95.4		%		70-130	26-JUN-12
Silicon (Si)-Total			N/A	MS-B	%		-	26-JUN-12
Silver (Ag)-Total			99.3		%		70-130	26-JUN-12
Sodium (Na)-Total			91.5		%		70-130	26-JUN-12
Strontium (Sr)-Total			96.8		%		70-130	26-JUN-12
Thallium (Tl)-Total			99.2		%		70-130	26-JUN-12
Tin (Sn)-Total			95.7		%		70-130	26-JUN-12
Titanium (Ti)-Total			97.7		%		70-130	26-JUN-12
Tungsten (W)-Total			100.6		%		70-130	26-JUN-12
Uranium (U)-Total			97.8		%		70-130	26-JUN-12
Vanadium (V)-Total			99.97		%		70-130	26-JUN-12
Zinc (Zn)-Total			94.7		%		70-130	26-JUN-12
Zirconium (Zr)-Total			92.0		%		70-130	26-JUN-12
Batch R2388832								
WG1497084-2 CVS								
Aluminum (Al)-Total			101.7		%		80-120	27-JUN-12
Antimony (Sb)-Total			102.3		%		80-120	27-JUN-12
Arsenic (As)-Total			100.9		%		80-120	27-JUN-12
Barium (Ba)-Total			101.0		%		80-120	27-JUN-12
Bismuth (Bi)-Total			92.4		%		80-120	27-JUN-12
Cadmium (Cd)-Total			106.0		%		80-120	27-JUN-12
Calcium (Ca)-Total			100.4		%		80-120	27-JUN-12
Chromium (Cr)-Total			103.4		%		80-120	27-JUN-12
Cobalt (Co)-Total			98.5		%		80-120	27-JUN-12
Copper (Cu)-Total			101.2		%		80-120	27-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TOT-WT	**Water**							
Batch R2388832								
WG1497084-2 CVS								
Iron (Fe)-Total			103.4		%		70-130	27-JUN-12
Lead (Pb)-Total			101.5		%		80-120	27-JUN-12
Magnesium (Mg)-Total			104.2		%		80-120	27-JUN-12
Manganese (Mn)-Total			107.4		%		80-120	27-JUN-12
Molybdenum (Mo)-Total			98.3		%		90-110	27-JUN-12
Nickel (Ni)-Total			100.9		%		80-120	27-JUN-12
Potassium (K)-Total			99.3		%		80-120	27-JUN-12
Selenium (Se)-Total			99.4		%		80-120	27-JUN-12
Silicon (Si)-Total			103.7		%		70-130	27-JUN-12
Silver (Ag)-Total			108.0		%		80-120	27-JUN-12
Sodium (Na)-Total			103.7		%		80-120	27-JUN-12
Strontium (Sr)-Total			99.3		%		80-120	27-JUN-12
Thallium (Tl)-Total			105.2		%		80-120	27-JUN-12
Tin (Sn)-Total			102.5		%		70-130	27-JUN-12
Titanium (Ti)-Total			102.9		%		80-120	27-JUN-12
Tungsten (W)-Total			101.3		%		70-130	27-JUN-12
Uranium (U)-Total			99.8		%		80-120	27-JUN-12
Vanadium (V)-Total			101.2		%		80-120	27-JUN-12
Zinc (Zn)-Total			100.6		%		80-120	27-JUN-12
Zirconium (Zr)-Total			97.9		%		80-120	27-JUN-12
Batch R2390549								
WG1498695-2 CVS								
Beryllium (Be)-Total			112.4		%		80-120	29-JUN-12
Boron (B)-Total			107.2		%		70-130	29-JUN-12
NH3-COL-TB	**Water**							
Batch R2388709								
WG1496641-3 DUP		**L1166467-3**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	26-JUN-12
WG1496641-2 LCS								
Ammonia, Total (as N)			94.4		%		85-115	26-JUN-12
WG1496641-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUN-12
WG1496641-4 MS		**L1166467-3**						
Ammonia, Total (as N)			91.6		%		75-125	26-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2389897								
WG1497945-2 LCS								
Ammonia, Total (as N)			91.1		%		85-115	28-JUN-12
WG1497945-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	28-JUN-12
WG1497945-6 MS		**L1169178-10**						
Ammonia, Total (as N)			95.8		%		75-125	28-JUN-12
NO2-IC-TB	**Water**							
Batch R2387628								
WG1495913-2 LCS								
Nitrite (as N)			94.8		%		90-110	22-JUN-12
WG1495913-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	22-JUN-12
WG1495913-6 MS		**L1166593-2**						
Nitrite (as N)			95.6		%		75-115	22-JUN-12
NO3-IC-TB	**Water**							
Batch R2387628								
WG1495913-2 LCS								
Nitrate (as N)			100.1		%		90-110	22-JUN-12
WG1495913-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	22-JUN-12
WG1495913-4 MS		**L1166188-15**						
Nitrate (as N)			102.0		%		75-125	22-JUN-12
WG1495913-6 MS		**L1166593-2**						
Nitrate (as N)			98.8		%		75-125	22-JUN-12
OGG-TOT-WT	**Water**							
Batch R2387422								
WG1495458-2 LCS								
Oil and Grease, Total			89.9		%		75-120	24-JUN-12
WG1495458-3 LCSD		**WG1495458-2**						
Oil and Grease, Total		89.9	90		%	0.1	45	24-JUN-12
WG1495458-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	24-JUN-12
Batch R2387903								
WG1495678-2 LCS								
Oil and Grease, Total			87.0		%		75-120	25-JUN-12
WG1495678-3 LCSD		**WG1495678-2**						
Oil and Grease, Total		87.0	91		%	4.5	45	25-JUN-12
WG1495678-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
OGG-TOT-WT	**Water**							
Batch R2387903								
WG1495678-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	25-JUN-12
Batch R2387904								
WG1495874-2 LCS								
Oil and Grease, Total			93.5		%		75-120	25-JUN-12
WG1495874-3 LCSD		**WG1495874-2**						
Oil and Grease, Total		93.5	97		%	3.6	45	25-JUN-12
WG1495874-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	25-JUN-12
P-T-COL-TB	**Water**							
Batch R2388980								
WG1496819-3 DUP		**L1166467-4**						
Phosphorus (P)-Total		0.0071	0.0090	J	mg/L	0.0020	0.01	27-JUN-12
WG1496819-2 LCS								
Phosphorus (P)-Total			101.0		%		80-120	27-JUN-12
WG1496819-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	27-JUN-12
WG1496819-4 MS		**L1166467-4**						
Phosphorus (P)-Total			99.4		%		70-130	27-JUN-12
PH-CAP-TB	**Water**							
Batch R2388109								
WG1495137-2 LCS								
pH			6.00		pH		5.9-6.1	22-JUN-12
Batch R2388817								
WG1495316-3 DUP		**L1166467-15**						
pH		7.61	7.61	J	pH	0.01	0.2	23-JUN-12
WG1495316-2 LCS								
pH			6.00		pH		5.9-6.1	23-JUN-12
SO4-IC-TB	**Water**							
Batch R2387628								
WG1495913-2 LCS								
Sulfate (SO4)			101.9		%		90-110	22-JUN-12
WG1495913-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	22-JUN-12
WG1495913-4 MS		**L1166188-15**						
Sulfate (SO4)			102.4		%		75-125	22-JUN-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2387628								
WG1495913-6 MS		**L1166593-2**						
Sulfate (SO4)			101.6		%		75-125	22-JUN-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2388781								
WG1496260-4 DUP		**L1166467-5**						
Total Suspended Solids		8.6	8.4		mg/L	2.4	20	26-JUN-12
WG1496260-2 LCS								
Total Suspended Solids			99.8		%		85-115	26-JUN-12
WG1496260-1 MB								
Total Suspended Solids			<2.0		mg/L		2	26-JUN-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Total Metals							
Dissolved Mercury in Water by CVAFS							
	5	20-JUN-12 13:40	29-JUN-12 13:21	7	9	days	EHT
Total Mercury in Water by CVAFS							
	5	20-JUN-12 13:40	29-JUN-12 10:36	7	9	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 L1166467 were received on 22-JUN-12 09:15.

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.

ALS Environmental

ADDRESS 1081 Barton Street, Th
ALS CANADA LIMITED Part of the
1 807 623 7598

L1166467

Company:			
Contact:	See Other CoC		
Address:			
Phone:	Fax:		
Email:			
Project:	PD:		
Quote #			
Invoice To:	Same as Report: ☒ Yes ☐ No		
Company:			
Contact:			
Address:			
Email:			
Account Manager	Kareen R	Sampler: MAL POTTER	

☒ O. Reg 153 (O. Reg 511 Amend) Table: ____
Record of Site Condition ☐ Yes ☐ No
PWQO ☒ MISA ☐ MMER ☐ CCME ☐
Guideline Required:
TCLP Regulation 558 ☐ Other:

Service Requested
☒ Regular TAT (7 Oays)
☐ Priority TAT 50% Surcharge (3-5 Days)
☐ Emergency TAT 100% Surcharge (1-2 Days)
Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples
Are any samples taken from a regulated DW System? ☐ Yes ☐ No
If yes, an authorized OW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request
Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	BIK, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN - Free - Colv VIS	Ammonia, Total Phos	O&G	Total Metals + Hg	Dissolved Metals + Hg	Hardness	Number of Containers
					P	D	P	P	P	2	F/P					
1	SW4	21/06/12	10 NS	WATER												9
2	SW6		11 30													
3	SW66		11 30													
4	SW5		11 45													
5	SW11	20/06/12	1 40													
6	~~SW10~~ SW9		2 10													
7	*SW8		11 20													8
8	TL1a		10 00													9
9	TL2a		10 10													
10	TL3		8 20													
11	JCTa		9 35													

Special Instructions / Comments

*NO DISSOLVED MERCURY IN SW8

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: 21/06/12 1:30 pm <Original signed by>	Date & Time	Received by: <Original signed	Date & Time 22/06/12 9:15	Temp 9.6	Cooling Initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time 22/06/12 10:05	Observations: Yes (No) If Yes add SIF

**Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis ... time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

ALS Environmental

PHONE +1 807 623 6463 FAX +1 807 623 7598
Company www.alsglobal.com

03583

Company:	Treasury Metals	Report Information	Both questions below must answered for water samples
Contact:	Mac Boiter	(CCME Reg 153/04; Reg 511 Amend) Table:_____	Are any samples taken from a regulated DW System? ☐Yes ☐No
Address:	599 Bay Street, Suite 1102 Toronto, ON	Record of Site Condition ☐Yes ☐No	If yes, an authorized DW COC must be used.
		PWQO ☒ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption? ☐Yes ☐No
Phone:	938 6961 Fax: 938 6499	Guideline Required:	
Email:	mac@treasurymetals.com	TCLP Regulation 558 ☐ Other:	
Project:	M0906A01 PO: M0210-PO115	Service Requested	Analysis Request
Quote #	G32690 LSD Goliath Project	☒ Regular TAT (7 Days)	Please indicate below Filtered, Preserved or both (F, P, F/P)
Invoice To:	Same as Report: ☒Yes ☐No	☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:		☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:		Specify Date Required:	
Address:		All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:			
Account Manager	Karen R	Sampler: Mac Boiter	

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	P	P	P	P	P	P	F/P			Number of Containers
					pH, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-Free - CoL-VA	Ammonia, Total Phos.	O&G	Total metals + Hg	Dissolved metals + Hg	Hardness			
12	SW2	20/06/12	8:10	Water														9
13	SW1		9:00															
14	SW3		7:10															
15	SW7		11:00															
16	SW10		12:00															
17	Field Blank	20/06/12	4:00	Water														9
18	Travel Blank																	

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: 21/06/12 1:30 pm <Original signed by>	Date & Time	Received by: <Original signed by>	Date & Time 22/06/12 9:15	Temp 9.6	Cooling Initiated ☐Yes ☐No	Verified by: <Original signed by>	Date & Time 22/06/12 10:05	Observations: Yes (No ?) If Yes add SIF

**Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

8.4-6.4, 9.4-7.9, 8.1-11.2, 7.1-6.6, 5.2-3.6, 1.2-2.7

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 20-JUL-12
Report Date: 07-SEP-12 10:10 (MT)
Version: FINAL REV. 2

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1181718

Project P.O. #: NOT SUBMITTED
Job Reference: GOLIATH
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1181718-1	L1181718-2	L1181718-3	L1181718-4	L1181718-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12
Sampled Time	07:20	06:30	05:55	03:00	02:15
Client ID	SW1	SW2	SW3	SW4	SW5
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	139	128	175	100	107
Hardness (as CaCO3) (mg/L)	77.9	76.4	69.9	46.6	49.0
pH (pH)	7.26	7.65	7.26	7.90	7.98
Total Suspended Solids (mg/L)	<2.0	45.2	2.7	2.5	<2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	6.0	2.8	4.2	3.4	2.2
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	70.3	63.6	58.6	42.7	43.4
Ammonia, Total (as N) (mg/L)	<0.020	0.028	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.32	0.24	17.4	3.23	4.12
Nitrate (as N) (mg/L)	<0.030	0.078	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0096	0.0704	0.0153	0.0191	0.0099
Sulfate (SO4) (mg/L)	0.94	0.74	2.66	1.69	2.77
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0259	0.586	0.0781	0.671	0.0118
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	0.011	0.014	0.010	0.011	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	23.4	20.0	19.1	14.3	14.2
Chromium (Cr)-Total (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	0.00061	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0016	<0.0010	0.0019	0.0015
Iron (Fe)-Total (mg/L)	0.405	2.03	0.362	0.570	0.123
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	3.57	5.21	4.62	2.83	3.07
Manganese (Mn)-Total (mg/L)	0.0634	0.0841	0.0444	0.0107	0.0037
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	0.0021	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	0.61	0.76	0.83	0.93	0.99
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1181718-6	L1181718-7	L1181718-8	L1181718-9	L1181718-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12
Sampled Time	01:45	16:15	10:00	12:00	09:30
Client ID	SW6	SW7	SW8	SW9	SW10
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	108	90.3	137	205	79.8
Hardness (as CaCO3) (mg/L)	47.1	50.1	75.6	118	45.3
pH (pH)	7.97	7.47	7.82	7.69	7.31
Total Suspended Solids (mg/L)	<2.0	7.3	3.5	<2.0	<2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	2.0	2.8	2.2	3.8	3.0
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	44.5	40.0	69.8	108	37.1
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	4.16	0.18	0.13	0.27	0.18
Nitrate (as N) (mg/L)	<0.030	0.112	0.037	0.057	0.047
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0081	0.0181	0.0091	0.0081	0.0106
Sulfate (SO4) (mg/L)	2.74	3.44	0.50	0.59	1.00
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0136	0.137	0.0342	0.0648	0.155
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.020	0.019	0.012
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	14.1	15.1	25.3	35.5	14.4
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0012	<0.0010	<0.0010	<0.0010
Iron (Fe)-Total (mg/L)	<0.020	0.809	0.475	0.242	1.61
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	3.11	2.69	2.20	6.51	2.04
Manganese (Mn)-Total (mg/L)	0.0029	0.0226	0.0600	0.0639 DTC	0.0507
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	0.98	0.63	<0.50	1.45	<0.50
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1181718-11 WATER 19-JUL-12 11:05 SW11	L1181718-12 WATER 19-JUL-12 06:51 TL1A	L1181718-13 WATER 19-JUL-12 08:50 TL2A	L1181718-14 WATER 19-JUL-12 08:30 TL3	L1181718-15 WATER 19-JUL-12 08:00 JCTA
Sample ID / Description / Sampled Date / Sampled Time / Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	33.1	86.7	152	111	95.9
	Hardness (as CaCO3) (mg/L)	18.9	49.6	89.7	66.0	53.2
	pH (pH)	5.06	7.03	7.50	7.48	7.27
	Total Suspended Solids (mg/L)	2.4	3.7	5.2	4.3	6.9
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	16.0	5.8	3.8	2.8	3.4
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	40.9	75.0	53.2	45.8
	Ammonia, Total (as N) (mg/L)	<0.020	0.089	0.044	<0.020	0.031
	Chloride (Cl) (mg/L)	0.11	0.32	0.18	0.58	0.41
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0158	0.0064	0.0379	0.0244	0.0294
	Sulfate (SO4) (mg/L)	<0.30	1.23	<0.30	0.60	0.41
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.539	0.0821	0.112	0.154	0.109
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	0.0014	0.0010	0.0012	<0.0010	0.0010
	Barium (Ba)-Total (mg/L)	<0.010	0.013	0.010	<0.010	<0.010
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	0.000036	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	5.93	14.3	24.0	17.7	15.4
	Chromium (Cr)-Total (mg/L)	0.0013	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	0.00058	0.00279	<0.00050	<0.00050	0.00051
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	1.87	2.25	0.891	1.11	1.54
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	1.18	3.30	6.49	4.42	3.72
	Manganese (Mn)-Total (mg/L)	0.0472	1.03	0.146	0.0318	0.283
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<0.50	<0.50	1.88	0.78	0.59
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1181718-16	L1181718-17	L1181718-18		
Description	WATER	WATER	WATER		
Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12		
Sampled Time	08:30	05:50	01:45		
Client ID	TL33	FIELD BLANK	TRAVEL BLANK		
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	111	<3.0	<3.0		
Hardness (as CaCO3) (mg/L)	63.7	<0.51	<0.51		
pH (pH)	7.51	5.48	4.98		
Total Suspended Solids (mg/L)	5.6	<2.0	<2.0		
Anions and Nutrients Acidity (as CaCO3) (mg/L)	3.2	<2.0	<2.0		
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	53.6	<5.0	<5.0		
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020		
Chloride (Cl) (mg/L)	0.59	<0.10	<0.10		
Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030		
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020		
Phosphorus (P)-Total (mg/L)	0.0251	<0.0050	<0.0050		
Sulfate (SO4) (mg/L)	0.60	<0.30	<0.30		
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020		
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020		
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050		
Total Metals Aluminum (Al)-Total (mg/L)	0.163	<0.0050	<0.0050		
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060		
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Barium (Ba)-Total (mg/L)	<0.010	<0.010	<0.010		
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050		
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017		
Calcium (Ca)-Total (mg/L)	17.8	<0.20	<0.20		
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050		
Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Iron (Fe)-Total (mg/L)	1.12	<0.020	<0.020		
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050		
Magnesium (Mg)-Total (mg/L)	4.41	<0.020	<0.020		
Manganese (Mn)-Total (mg/L)	0.0332	<0.0010	<0.0010		
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020		
Potassium (K)-Total (mg/L)	0.77	<0.50	<0.50		
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1181718-1	L1181718-2	L1181718-3	L1181718-4	L1181718-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12
	Sampled Time	07:20	06:30	05:55	03:00	02:15
	Client ID	SW1	SW2	SW3	SW4	SW5
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	1.64	1.91	10.7	3.01	3.37
	Strontium (Sr)-Total (mg/L)	0.0479	0.0364	0.0517	0.0272	0.0279
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.0020	0.0247	0.0035	0.0206	<0.0020
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0021	<0.0010	0.0011	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0046 RRV	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	0.0416	0.0114	0.0109	<0.0050
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.011	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	24.8	21.3	19.8	14.2	14.4
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0010	<0.0010	0.0015	0.0011
	Iron (Fe)-Dissolved (mg/L)	0.113	0.651	0.073	<0.020	<0.020
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	3.90	5.63	4.95	2.69	3.19
	Manganese (Mn)-Dissolved (mg/L)	0.0471	0.0559	0.0231	0.0012	<0.0010
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	0.67	0.74	0.87	0.79	1.01
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.77	2.06	11.1	2.96	3.44
	Strontium (Sr)-Dissolved (mg/L)	0.0468	0.0355	0.0512	0.0239	0.0265

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1181718-6 WATER 19-JUL-12 01:45 SW6	L1181718-7 WATER 19-JUL-12 16:15 SW7	L1181718-8 WATER 19-JUL-12 10:00 SW8	L1181718-9 WATER 19-JUL-12 12:00 SW9	L1181718-10 WATER 19-JUL-12 09:30 SW10
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	3.35	1.39	1.13	3.06	1.36
	Strontium (Sr)-Total (mg/L)	0.0279	0.0299	0.0413	0.0651	0.0284
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.0020	0.0052	<0.0020	0.0023	0.0035
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0012	<0.0010	<0.0010	0.0014
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	0.0822	<0.0050	0.0254	0.136
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	0.021	0.020	0.012
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	13.7	15.4	26.4	36.2	14.6
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.020	0.564	0.203	0.108	1.15
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	3.13	2.81	2.34	6.68 DTC	2.13
	Manganese (Mn)-Dissolved (mg/L)	<0.0010	0.0138	0.0517	0.0837	0.0502
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	0.95	0.68	<0.50	1.49	<0.50
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	3.33	1.47	1.18	3.10	1.40
	Strontium (Sr)-Dissolved (mg/L)	0.0254	0.0305	0.0404	0.0633	0.0275

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1181718-11 WATER 19-JUL-12 11:05 SW11	L1181718-12 WATER 19-JUL-12 06:51 TL1A	L1181718-13 WATER 19-JUL-12 08:50 TL2A	L1181718-14 WATER 19-JUL-12 08:30 TL3	L1181718-15 WATER 19-JUL-12 08:00 JCTA
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	0.95	1.23	3.13	1.81	1.53
	Strontium (Sr)-Total (mg/L)	0.0156	0.0357	0.0594	0.0414	0.0372
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0130	0.0023	0.0046	0.0069	0.0046
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	0.0012	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0051	0.0031 RRV	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.511	0.0611	0.0195	0.0254	0.0332
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	0.0012	<0.0010	0.0011	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.012	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	0.000040	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	5.87	14.3	24.6	18.6	15.1
	Chromium (Cr)-Dissolved (mg/L)	0.0011	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	0.00059	0.00272	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	1.72	1.64	0.459	0.769	0.893
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	1.17	3.38	6.87	4.76	3.78
	Manganese (Mn)-Dissolved (mg/L)	0.0496	1.06	0.0257	0.0255	0.225
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	1.96	0.82	0.59
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	0.99	1.22	3.17	1.87	1.49
	Strontium (Sr)-Dissolved (mg/L)	0.0161	0.0335	0.0568	0.0404	0.0336

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1181718-16 WATER 19-JUL-12 08:30 TL33	L1181718-17 WATER 19-JUL-12 05:50 FIELD BLANK	L1181718-18 WATER 19-JUL-12 01:45 TRAVEL BLANK		
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Total (mg/L)	1.80	<0.10	<0.10		
	Strontium (Sr)-Total (mg/L)	0.0415	<0.0010	<0.0010		
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Total (mg/L)	0.0078	<0.0020	<0.0020		
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0255	<0.0050	<0.0050		
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060		
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017		
	Calcium (Ca)-Dissolved (mg/L)	18.0	<0.20	<0.20		
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Iron (Fe)-Dissolved (mg/L)	0.731	<0.020	<0.020		
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Magnesium (Mg)-Dissolved (mg/L)	4.55	<0.020	<0.020		
	Manganese (Mn)-Dissolved (mg/L)	0.0258	<0.0010	<0.0010		
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Potassium (K)-Dissolved (mg/L)	0.78	<0.50	<0.50		
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Dissolved (mg/L)	1.78	<0.10	<0.10		
	Strontium (Sr)-Dissolved (mg/L)	0.0385	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1181718-1	L1181718-2	L1181718-3	L1181718-4	L1181718-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12
	Sampled Time	07:20	06:30	05:55	03:00	02:15
	Client ID	SW1	SW2	SW3	SW4	SW5
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	0.0024	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030		<0.0030	<0.0030	0.0035
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1181718-6	L1181718-7	L1181718-8	L1181718-9	L1181718-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12	19-JUL-12
	Sampled Time	01:45	16:15	10:00	12:00	09:30
	Client ID	SW6	SW7	SW8	SW9	SW10
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	0.0023	<0.0020	<0.0020	0.0025
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	0.0010	<0.0010	<0.0010	0.0012
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0045	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1181718-11 WATER 19-JUL-12 11:05 SW11	L1181718-12 WATER 19-JUL-12 06:51 TL1A	L1181718-13 WATER 19-JUL-12 08:50 TL2A	L1181718-14 WATER 19-JUL-12 08:30 TL3	L1181718-15 WATER 19-JUL-12 08:00 JCTA
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	0.0108	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	0.0013	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0096	<0.0030	0.0033	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1181718-16	L1181718-17	L1181718-18		
	Description	WATER	WATER	WATER		
	Sampled Date	19-JUL-12	19-JUL-12	19-JUL-12		
	Sampled Time	08:30	05:50	01:45		
	Client ID	TL33	FIELD BLANK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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	Cyanide, Free	DLA	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Manganese (Mn)-Total	DUP-H	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Duplicate	Titanium (Ti)-Total	DUP-H	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1181718-1, -10, -11, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Antimony (Sb)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1181718-1, -10, -12, -13, -14, -15, -16, -17, -18, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1181718-12
Matrix Spike	Aluminum (Al)-Dissolved	MS-B	L1181718-12

Reference Information

	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1181718-12
Matrix Spike	Boron (B)-Dissolved	MS-B	L1181718-12
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1181718-12
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-12
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1181718-12
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1181718-12
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-12
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1181718-12
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1181718-12
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1181718-12
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1181718-12
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1181718-12
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1181718-12
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1181718-12

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM
Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference			
CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet
Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A
This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
		Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Reference Information

NH3-COL-TB	Water		

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2407432								
WG1517116-2 LCS								
Acidity (as CaCO3)			105.6		%		85-115	30-JUL-12
WG1517116-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	30-JUL-12
ALK-TOT-CAP-TB	**Water**							
Batch R2404329								
WG1511893-2 LCS								
Alkalinity, Total (as CaCO3)			93.5		%		85-115	20-JUL-12
WG1511893-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	20-JUL-12
CL-IC-TB	**Water**							
Batch R2404488								
WG1514315-2 LCS								
Chloride (Cl)			97.7		%		90-110	24-JUL-12
WG1514315-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-JUL-12
WG1514315-4 MS		**L1183216-6**						
Chloride (Cl)			104.8		%		75-125	24-JUL-12
Batch R2404831								
WG1512866-3 DUP		**L1181718-8**						
Chloride (Cl)		0.13	0.13		mg/L	1.4	20	20-JUL-12
WG1512866-2 LCS								
Chloride (Cl)			98.9		%		90-110	20-JUL-12
WG1512866-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	20-JUL-12
WG1512866-4 MS		**L1181718-8**						
Chloride (Cl)			102.4		%		75-125	20-JUL-12
WG1512866-6 MS		**L1181792-4**						
Chloride (Cl)			103.0		%		75-125	20-JUL-12
CN-FREE-CFA-VA	**Water**							
Batch R2407699								
WG1516771-8 DUP		**L1181718-6**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-JUL-12
WG1516771-11 LCS								
Cyanide, Free			102.6		%		80-120	28-JUL-12
WG1516771-15 LCS								
Cyanide, Free			104.2		%		80-120	28-JUL-12
WG1516771-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2407699								
WG1516771-2 LCS								
Cyanide, Free			102.8		%		80-120	28-JUL-12
WG1516771-7 LCS								
Cyanide, Free			102.6		%		80-120	28-JUL-12
WG1516771-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-JUL-12
WG1516771-10 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-JUL-12
WG1516771-14 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-JUL-12
WG1516771-6 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-JUL-12
WG1516771-13 MS		**L1181792-10**						
Cyanide, Free			100.6		%		70-130	28-JUL-12
WG1516771-5 MS		**L1182442-3**						
Cyanide, Free			100.7		%		70-130	28-JUL-12
WG1516771-9 MS		**L1181718-6**						
Cyanide, Free			102.0		%		70-130	28-JUL-12
CN-TOT-WT	**Water**							
Batch R2404721								
WG1513680-4 CVS								
Cyanide, Total			102.5		%		85-115	24-JUL-12
WG1513680-6 DUP		**L1181718-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	24-JUL-12
WG1513680-3 LCS								
Cyanide, Total			99.1		%		80-120	24-JUL-12
WG1513680-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	24-JUL-12
CN-WAD-WT	**Water**							
Batch R2405217								
WG1514600-4 CVS								
Cyanide, Weak Acid Diss			89.5		%		85-115	25-JUL-12
WG1514600-2 DUP		**L1181718-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	25-JUL-12
WG1514600-3 LCS								
Cyanide, Weak Acid Diss			112.8		%		80-120	25-JUL-12
WG1514600-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2404329								
WG1511893-2 LCS								
Conductivity (EC)			96.9		%		90-110	20-JUL-12
WG1511893-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	20-JUL-12
HG-D-CVAF-TB	**Water**							
Batch R2403080								
WG1512770-4 DUP		**L1181718-7**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-JUL-12
WG1512770-2 LCS								
Mercury (Hg)-Dissolved			100.5		%		80-120	23-JUL-12
WG1512770-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	23-JUL-12
WG1512770-5 MS		**L1181718-7**						
Mercury (Hg)-Dissolved			100.9		%		70-130	23-JUL-12
HG-T-CVAF-TB	**Water**							
Batch R2403072								
WG1512767-4 DUP		**L1181718-9**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	23-JUL-12
WG1512767-2 LCS								
Mercury (Hg)-Total			100.5		%		80-120	23-JUL-12
WG1512767-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	23-JUL-12
WG1512767-5 MS		**L1181718-9**						
Mercury (Hg)-Total			96.8		%		70-130	23-JUL-12
WG1512767-7 MS		**L1181792-6**						
Mercury (Hg)-Total			98.7		%		70-130	23-JUL-12
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-9 DUP		**L1181718-3**						
Aluminum (Al)-Dissolved		0.0114	0.0116		mg/L	1.8	20	26-JUL-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	26-JUL-12
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Barium (Ba)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	26-JUL-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	26-JUL-12
Cadmium (Cd)-Dissolved		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-9 DUP		**L1181718-3**						
Calcium (Ca)-Dissolved		19.8	20.1		mg/L	1.5	20	26-JUL-12
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	26-JUL-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Iron (Fe)-Dissolved		0.073	0.081		mg/L	9.6	20	26-JUL-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	26-JUL-12
Magnesium (Mg)-Dissolved		4.95	5.04		mg/L	1.8	20	26-JUL-12
Manganese (Mn)-Dissolved		0.0231	0.0235		mg/L	1.8	20	26-JUL-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	26-JUL-12
Potassium (K)-Dissolved		0.87	0.89		mg/L	1.2	20	26-JUL-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	26-JUL-12
Sodium (Na)-Dissolved		11.1	11.2		mg/L	0.7	20	26-JUL-12
Strontium (Sr)-Dissolved		0.0512	0.0507		mg/L	1.1	20	26-JUL-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	26-JUL-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	26-JUL-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	26-JUL-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-JUL-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
Zinc (Zn)-Dissolved		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	26-JUL-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	26-JUL-12
WG1515213-2 LCS								
Aluminum (Al)-Dissolved			96.4		%		80-120	26-JUL-12
Antimony (Sb)-Dissolved			97.6		%		80-120	26-JUL-12
Arsenic (As)-Dissolved			102.5		%		80-120	26-JUL-12
Barium (Ba)-Dissolved			100.8		%		80-120	26-JUL-12
Beryllium (Be)-Dissolved			102.1		%		80-120	26-JUL-12
Bismuth (Bi)-Dissolved			103.5		%		80-120	26-JUL-12
Boron (B)-Dissolved			96.4		%		80-120	26-JUL-12
Cadmium (Cd)-Dissolved			104.8		%		80-120	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-2 LCS								
Calcium (Ca)-Dissolved			103.0		%		80-120	26-JUL-12
Chromium (Cr)-Dissolved			102.8		%		80-120	26-JUL-12
Cobalt (Co)-Dissolved			101.2		%		80-120	26-JUL-12
Copper (Cu)-Dissolved			99.4		%		80-120	26-JUL-12
Iron (Fe)-Dissolved			97.3		%		80-120	26-JUL-12
Lead (Pb)-Dissolved			102.3		%		80-120	26-JUL-12
Lithium (Li)-Dissolved			101.6		%		80-120	26-JUL-12
Magnesium (Mg)-Dissolved			107.1		%		80-120	26-JUL-12
Manganese (Mn)-Dissolved			103.8		%		80-120	26-JUL-12
Molybdenum (Mo)-Dissolved			101.4		%		80-120	26-JUL-12
Nickel (Ni)-Dissolved			104.7		%		80-120	26-JUL-12
Potassium (K)-Dissolved			107.7		%		80-120	26-JUL-12
Selenium (Se)-Dissolved			95.4		%		80-120	26-JUL-12
Silver (Ag)-Dissolved			96.2		%		80-120	26-JUL-12
Sodium (Na)-Dissolved			107.0		%		80-120	26-JUL-12
Strontium (Sr)-Dissolved			99.9		%		80-120	26-JUL-12
Tellurium (Te)-Dissolved			100.5		%		80-120	26-JUL-12
Thallium (Tl)-Dissolved			102.9		%		80-120	26-JUL-12
Tin (Sn)-Dissolved			101.1		%		80-120	26-JUL-12
Titanium (Ti)-Dissolved			100.9		%		80-120	26-JUL-12
Tungsten (W)-Dissolved			97.3		%		80-120	26-JUL-12
Uranium (U)-Dissolved			96.7		%		80-120	26-JUL-12
Vanadium (V)-Dissolved			103.1		%		80-120	26-JUL-12
Zinc (Zn)-Dissolved			99.0		%		80-120	26-JUL-12
Zirconium (Zr)-Dissolved			93.9		%		80-120	26-JUL-12
WG1515213-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	26-JUL-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	26-JUL-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	26-JUL-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	26-JUL-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-1 MB								
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	26-JUL-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	26-JUL-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	26-JUL-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	26-JUL-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	26-JUL-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	26-JUL-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	26-JUL-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	26-JUL-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	26-JUL-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	26-JUL-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	26-JUL-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	26-JUL-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	26-JUL-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	26-JUL-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	26-JUL-12
WG1515213-10 MS		**L1181718-3**						
Aluminum (Al)-Dissolved			114.4		%		70-130	26-JUL-12
Antimony (Sb)-Dissolved			97.6		%		70-130	26-JUL-12
Arsenic (As)-Dissolved			115.8		%		70-130	26-JUL-12
Beryllium (Be)-Dissolved			109.7		%		70-130	26-JUL-12
Bismuth (Bi)-Dissolved			96.7		%		70-130	26-JUL-12
Boron (B)-Dissolved			102.3		%		70-130	26-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Chromium (Cr)-Dissolved			111.8		%		70-130	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-10 MS		**L1181718-3**						
Cobalt (Co)-Dissolved			108.6		%		70-130	26-JUL-12
Copper (Cu)-Dissolved			110.2		%		70-130	26-JUL-12
Iron (Fe)-Dissolved			110.9		%		70-130	26-JUL-12
Lead (Pb)-Dissolved			110.5		%		70-130	26-JUL-12
Lithium (Li)-Dissolved			112.4		%		70-130	26-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Molybdenum (Mo)-Dissolved			98.3		%		70-130	26-JUL-12
Nickel (Ni)-Dissolved			112.5		%		70-130	26-JUL-12
Potassium (K)-Dissolved			115.6		%		70-130	26-JUL-12
Selenium (Se)-Dissolved			109.3		%		70-130	26-JUL-12
Silver (Ag)-Dissolved			106.1		%		70-130	26-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Tellurium (Te)-Dissolved			104.9		%		70-130	26-JUL-12
Thallium (Tl)-Dissolved			104.6		%		70-130	26-JUL-12
Tin (Sn)-Dissolved			101.4		%		70-130	26-JUL-12
Titanium (Ti)-Dissolved			100.3		%		70-130	26-JUL-12
Tungsten (W)-Dissolved			96.7		%		70-130	26-JUL-12
Uranium (U)-Dissolved			108.7		%		70-130	26-JUL-12
Vanadium (V)-Dissolved			116.9		%		70-130	26-JUL-12
Zinc (Zn)-Dissolved			109.0		%		70-130	26-JUL-12
Zirconium (Zr)-Dissolved			97.3		%		70-130	26-JUL-12
WG1515213-4 MS		**L1180054-2**						
Aluminum (Al)-Dissolved			104.1		%		70-130	26-JUL-12
Antimony (Sb)-Dissolved			101.1		%		70-130	26-JUL-12
Arsenic (As)-Dissolved			109.0		%		70-130	26-JUL-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Beryllium (Be)-Dissolved			109.9		%		70-130	26-JUL-12
Bismuth (Bi)-Dissolved			89.4		%		70-130	26-JUL-12
Cadmium (Cd)-Dissolved			127.0		%		70-130	26-JUL-12
Chromium (Cr)-Dissolved			115.6		%		70-130	26-JUL-12
Cobalt (Co)-Dissolved			105.2		%		70-130	26-JUL-12
Copper (Cu)-Dissolved			89.8		%		70-130	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-4 MS		**L1180054-2**						
Iron (Fe)-Dissolved			113.8		%		70-130	26-JUL-12
Lead (Pb)-Dissolved			100.3		%		70-130	26-JUL-12
Lithium (Li)-Dissolved			110.7		%		70-130	26-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Molybdenum (Mo)-Dissolved			104.1		%		70-130	26-JUL-12
Nickel (Ni)-Dissolved			91.8		%		70-130	26-JUL-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Selenium (Se)-Dissolved			115.9		%		70-130	26-JUL-12
Silver (Ag)-Dissolved			84.3		%		70-130	26-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Tellurium (Te)-Dissolved			113.6		%		70-130	26-JUL-12
Thallium (Tl)-Dissolved			96.9		%		70-130	26-JUL-12
Tin (Sn)-Dissolved			104.8		%		70-130	26-JUL-12
Titanium (Ti)-Dissolved			106.4		%		70-130	26-JUL-12
Tungsten (W)-Dissolved			99.7		%		70-130	26-JUL-12
Vanadium (V)-Dissolved			122.9		%		70-130	26-JUL-12
Zinc (Zn)-Dissolved			96.0		%		70-130	26-JUL-12
Zirconium (Zr)-Dissolved			93.2		%		70-130	26-JUL-12
WG1515213-6 MS		**L1181233-2**						
Antimony (Sb)-Dissolved			100.2		%		70-130	26-JUL-12
Arsenic (As)-Dissolved			112.9		%		70-130	26-JUL-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Bismuth (Bi)-Dissolved			87.5		%		70-130	26-JUL-12
Cadmium (Cd)-Dissolved			123.6		%		70-130	26-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Chromium (Cr)-Dissolved			102.9		%		70-130	26-JUL-12
Cobalt (Co)-Dissolved			96.6		%		70-130	26-JUL-12
Copper (Cu)-Dissolved			96.6		%		70-130	26-JUL-12
Iron (Fe)-Dissolved			99.0		%		70-130	26-JUL-12
Lead (Pb)-Dissolved			100.6		%		70-130	26-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Manganese (Mn)-Dissolved			103.3		%		70-130	26-JUL-12
Molybdenum (Mo)-Dissolved			101.1		%		70-130	26-JUL-12

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-6 MS		**L1181233-2**						
Nickel (Ni)-Dissolved			96.0		%		70-130	26-JUL-12
Potassium (K)-Dissolved			107.3		%		70-130	26-JUL-12
Selenium (Se)-Dissolved			109.0		%		70-130	26-JUL-12
Silver (Ag)-Dissolved			102.5		%		70-130	26-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Tellurium (Te)-Dissolved			115.5		%		70-130	26-JUL-12
Thallium (Tl)-Dissolved			97.3		%		70-130	26-JUL-12
Tin (Sn)-Dissolved			101.7		%		70-130	26-JUL-12
Titanium (Ti)-Dissolved			98.7		%		70-130	26-JUL-12
Tungsten (W)-Dissolved			101.4		%		70-130	26-JUL-12
Vanadium (V)-Dissolved			107.9		%		70-130	26-JUL-12
Zinc (Zn)-Dissolved			96.4		%		70-130	26-JUL-12
Zirconium (Zr)-Dissolved			93.3		%		70-130	26-JUL-12
WG1515213-8 MS		**L1181609-3**						
Aluminum (Al)-Dissolved			120.8		%		70-130	26-JUL-12
Antimony (Sb)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Arsenic (As)-Dissolved			105.0		%		70-130	26-JUL-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Beryllium (Be)-Dissolved			110.4		%		70-130	26-JUL-12
Bismuth (Bi)-Dissolved			94.1		%		70-130	26-JUL-12
Boron (B)-Dissolved			114.9		%		70-130	26-JUL-12
Cadmium (Cd)-Dissolved			128.8		%		70-130	26-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Chromium (Cr)-Dissolved			115.8		%		70-130	26-JUL-12
Cobalt (Co)-Dissolved			112.5		%		70-130	26-JUL-12
Copper (Cu)-Dissolved			96.3		%		70-130	26-JUL-12
Iron (Fe)-Dissolved			112.1		%		70-130	26-JUL-12
Lead (Pb)-Dissolved			103.6		%		70-130	26-JUL-12
Lithium (Li)-Dissolved			114.1		%		70-130	26-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Manganese (Mn)-Dissolved			119.7		%		70-130	26-JUL-12
Molybdenum (Mo)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Nickel (Ni)-Dissolved			99.8		%		70-130	26-JUL-12

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2406665								
WG1515213-8 MS		**L1181609-3**						
Potassium (K)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Selenium (Se)-Dissolved			100.5		%		70-130	26-JUL-12
Silver (Ag)-Dissolved			101.7		%		70-130	26-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	26-JUL-12
Tellurium (Te)-Dissolved			104.7		%		70-130	26-JUL-12
Thallium (Tl)-Dissolved			99.0		%		70-130	26-JUL-12
Tin (Sn)-Dissolved			103.4		%		70-130	26-JUL-12
Titanium (Ti)-Dissolved			108.5		%		70-130	26-JUL-12
Tungsten (W)-Dissolved			99.9		%		70-130	26-JUL-12
Uranium (U)-Dissolved			122.2		%		70-130	26-JUL-12
Vanadium (V)-Dissolved			123.9		%		70-130	26-JUL-12
Zinc (Zn)-Dissolved			100.3		%		70-130	26-JUL-12
Zirconium (Zr)-Dissolved			89.1		%		70-130	26-JUL-12
Batch R2408986								
WG1517295-2 LCS								
Aluminum (Al)-Dissolved			94.3		%		80-120	30-JUL-12
Antimony (Sb)-Dissolved			97.6		%		80-120	30-JUL-12
Arsenic (As)-Dissolved			100.5		%		80-120	30-JUL-12
Barium (Ba)-Dissolved			99.4		%		80-120	30-JUL-12
Beryllium (Be)-Dissolved			99.4		%		80-120	30-JUL-12
Bismuth (Bi)-Dissolved			105.7		%		80-120	30-JUL-12
Boron (B)-Dissolved			91.4		%		80-120	30-JUL-12
Cadmium (Cd)-Dissolved			104.6		%		80-120	30-JUL-12
Calcium (Ca)-Dissolved			101.0		%		80-120	30-JUL-12
Chromium (Cr)-Dissolved			102.2		%		80-120	30-JUL-12
Cobalt (Co)-Dissolved			100.2		%		80-120	30-JUL-12
Copper (Cu)-Dissolved			99.0		%		80-120	30-JUL-12
Iron (Fe)-Dissolved			100.8		%		80-120	30-JUL-12
Lead (Pb)-Dissolved			103.5		%		80-120	30-JUL-12
Lithium (Li)-Dissolved			85.3		%		80-120	30-JUL-12
Magnesium (Mg)-Dissolved			102.7		%		80-120	30-JUL-12
Manganese (Mn)-Dissolved			102.5		%		80-120	30-JUL-12
Molybdenum (Mo)-Dissolved			102.8		%		80-120	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-2 LCS								
Nickel (Ni)-Dissolved			104.8		%		80-120	30-JUL-12
Potassium (K)-Dissolved			101.4		%		80-120	30-JUL-12
Selenium (Se)-Dissolved			93.8		%		80-120	30-JUL-12
Silver (Ag)-Dissolved			97.2		%		80-120	30-JUL-12
Sodium (Na)-Dissolved			103.2		%		80-120	30-JUL-12
Strontium (Sr)-Dissolved			102.8		%		80-120	30-JUL-12
Tellurium (Te)-Dissolved			102.4		%		80-120	30-JUL-12
Thallium (Tl)-Dissolved			111.4		%		80-120	30-JUL-12
Tin (Sn)-Dissolved			100.2		%		80-120	30-JUL-12
Titanium (Ti)-Dissolved			97.8		%		80-120	30-JUL-12
Tungsten (W)-Dissolved			97.4		%		80-120	30-JUL-12
Uranium (U)-Dissolved			97.4		%		80-120	30-JUL-12
Vanadium (V)-Dissolved			101.1		%		80-120	30-JUL-12
Zinc (Zn)-Dissolved			103.3		%		80-120	30-JUL-12
Zirconium (Zr)-Dissolved			95.1		%		80-120	30-JUL-12
WG1517295-6 LCS								
Aluminum (Al)-Dissolved			96.4		%		80-120	30-JUL-12
Antimony (Sb)-Dissolved			94.0		%		80-120	30-JUL-12
Arsenic (As)-Dissolved			99.5		%		80-120	30-JUL-12
Barium (Ba)-Dissolved			97.9		%		80-120	30-JUL-12
Beryllium (Be)-Dissolved			105.0		%		80-120	30-JUL-12
Bismuth (Bi)-Dissolved			99.2		%		80-120	30-JUL-12
Boron (B)-Dissolved			94.2		%		80-120	30-JUL-12
Cadmium (Cd)-Dissolved			102.3		%		80-120	30-JUL-12
Calcium (Ca)-Dissolved			100.6		%		80-120	30-JUL-12
Chromium (Cr)-Dissolved			103.4		%		80-120	30-JUL-12
Cobalt (Co)-Dissolved			100.9		%		80-120	30-JUL-12
Copper (Cu)-Dissolved			97.6		%		80-120	30-JUL-12
Iron (Fe)-Dissolved			96.0		%		80-120	30-JUL-12
Lead (Pb)-Dissolved			103.0		%		80-120	30-JUL-12
Lithium (Li)-Dissolved			100.7		%		80-120	30-JUL-12
Magnesium (Mg)-Dissolved			105.4		%		80-120	30-JUL-12
Manganese (Mn)-Dissolved			100.6		%		80-120	30-JUL-12
Molybdenum (Mo)-Dissolved			101.4		%		80-120	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-6 LCS								
Nickel (Ni)-Dissolved			105.0		%		80-120	30-JUL-12
Potassium (K)-Dissolved			103.5		%		80-120	30-JUL-12
Selenium (Se)-Dissolved			85.6		%		80-120	30-JUL-12
Silver (Ag)-Dissolved			93.6		%		80-120	30-JUL-12
Sodium (Na)-Dissolved			105.0		%		80-120	30-JUL-12
Strontium (Sr)-Dissolved			101.7		%		80-120	30-JUL-12
Tellurium (Te)-Dissolved			99.7		%		80-120	30-JUL-12
Thallium (Tl)-Dissolved			103.3		%		80-120	30-JUL-12
Tin (Sn)-Dissolved			96.8		%		80-120	30-JUL-12
Titanium (Ti)-Dissolved			99.0		%		80-120	30-JUL-12
Tungsten (W)-Dissolved			98.5		%		80-120	30-JUL-12
Uranium (U)-Dissolved			97.1		%		80-120	30-JUL-12
Vanadium (V)-Dissolved			102.7		%		80-120	30-JUL-12
Zinc (Zn)-Dissolved			101.3		%		80-120	30-JUL-12
Zirconium (Zr)-Dissolved			94.5		%		80-120	30-JUL-12
WG1517295-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	30-JUL-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	30-JUL-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	30-JUL-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	30-JUL-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	30-JUL-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	30-JUL-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	30-JUL-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	30-JUL-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	30-JUL-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-1 MB								
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	30-JUL-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	30-JUL-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	30-JUL-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	30-JUL-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	30-JUL-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	30-JUL-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	30-JUL-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	30-JUL-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
WG1517295-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	30-JUL-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	30-JUL-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	30-JUL-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	30-JUL-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	30-JUL-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	30-JUL-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	30-JUL-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	30-JUL-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	30-JUL-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	30-JUL-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-5 MB								
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	30-JUL-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	30-JUL-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	30-JUL-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	30-JUL-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	30-JUL-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	30-JUL-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	30-JUL-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	30-JUL-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	30-JUL-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	30-JUL-12
WG1517295-12 MS		**L1183216-4**						
Antimony (Sb)-Dissolved			109.6		%		70-130	30-JUL-12
Arsenic (As)-Dissolved			110.9		%		70-130	30-JUL-12
Beryllium (Be)-Dissolved			113.0		%		70-130	30-JUL-12
Bismuth (Bi)-Dissolved			102.1		%		70-130	30-JUL-12
Boron (B)-Dissolved			116.4		%		70-130	30-JUL-12
Calcium (Ca)-Dissolved			113.2		%		70-130	30-JUL-12
Chromium (Cr)-Dissolved			113.8		%		70-130	30-JUL-12
Cobalt (Co)-Dissolved			116.0		%		70-130	30-JUL-12
Copper (Cu)-Dissolved			114.4		%		70-130	30-JUL-12
Iron (Fe)-Dissolved			116.8		%		70-130	30-JUL-12
Lead (Pb)-Dissolved			115.0		%		70-130	30-JUL-12
Lithium (Li)-Dissolved			111.3		%		70-130	30-JUL-12
Magnesium (Mg)-Dissolved			119.8		%		70-130	30-JUL-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Molybdenum (Mo)-Dissolved			110.0		%		70-130	30-JUL-12
Nickel (Ni)-Dissolved			114.9		%		70-130	30-JUL-12
Potassium (K)-Dissolved			119.2		%		70-130	30-JUL-12
Selenium (Se)-Dissolved			98.5		%		70-130	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-12 MS		**L1183216-4**						
Silver (Ag)-Dissolved			115.7		%		70-130	30-JUL-12
Sodium (Na)-Dissolved			116.8		%		70-130	30-JUL-12
Strontium (Sr)-Dissolved			110.3		%		70-130	30-JUL-12
Tellurium (Te)-Dissolved			112.5		%		70-130	30-JUL-12
Thallium (Tl)-Dissolved			113.8		%		70-130	30-JUL-12
Tin (Sn)-Dissolved			111.3		%		70-130	30-JUL-12
Titanium (Ti)-Dissolved			114.9		%		70-130	30-JUL-12
Tungsten (W)-Dissolved			105.4		%		70-130	30-JUL-12
Uranium (U)-Dissolved			109.1		%		70-130	30-JUL-12
Vanadium (V)-Dissolved			114.3		%		70-130	30-JUL-12
Zinc (Zn)-Dissolved			115.3		%		70-130	30-JUL-12
Zirconium (Zr)-Dissolved			105.9		%		70-130	30-JUL-12
WG1517295-4 MS		**L1183045-8**						
Aluminum (Al)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Antimony (Sb)-Dissolved			107.3		%		70-130	30-JUL-12
Arsenic (As)-Dissolved			110.7		%		70-130	30-JUL-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Beryllium (Be)-Dissolved			114.7		%		70-130	30-JUL-12
Bismuth (Bi)-Dissolved			81.5		%		70-130	30-JUL-12
Boron (B)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Cadmium (Cd)-Dissolved			130.0		%		70-130	30-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Chromium (Cr)-Dissolved			100.7		%		70-130	30-JUL-12
Cobalt (Co)-Dissolved			99.9		%		70-130	30-JUL-12
Copper (Cu)-Dissolved			93.7		%		70-130	30-JUL-12
Iron (Fe)-Dissolved			97.8		%		70-130	30-JUL-12
Lead (Pb)-Dissolved			98.1		%		70-130	30-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Molybdenum (Mo)-Dissolved			98.3		%		70-130	30-JUL-12
Nickel (Ni)-Dissolved			95.0		%		70-130	30-JUL-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Selenium (Se)-Dissolved			112.9		%		70-130	30-JUL-12
Silver (Ag)-Dissolved			83.8		%		70-130	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-4 MS		**L1183045-8**						
Sodium (Na)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Tellurium (Te)-Dissolved			120.5		%		70-130	30-JUL-12
Thallium (Tl)-Dissolved			97.6		%		70-130	30-JUL-12
Tin (Sn)-Dissolved			102.1		%		70-130	30-JUL-12
Titanium (Ti)-Dissolved			99.4		%		70-130	30-JUL-12
Vanadium (V)-Dissolved			103.7		%		70-130	30-JUL-12
Zinc (Zn)-Dissolved			102.4		%		70-130	30-JUL-12
Zirconium (Zr)-Dissolved			92.4		%		70-130	30-JUL-12
WG1517295-8 MS		**L1183056-1**						
Antimony (Sb)-Dissolved			114.9		%		70-130	30-JUL-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Bismuth (Bi)-Dissolved			87.9		%		70-130	30-JUL-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Chromium (Cr)-Dissolved			109.8		%		70-130	30-JUL-12
Cobalt (Co)-Dissolved			104.2		%		70-130	30-JUL-12
Copper (Cu)-Dissolved			98.9		%		70-130	30-JUL-12
Iron (Fe)-Dissolved			107.3		%		70-130	30-JUL-12
Lead (Pb)-Dissolved			102.8		%		70-130	30-JUL-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Molybdenum (Mo)-Dissolved			107.2		%		70-130	30-JUL-12
Nickel (Ni)-Dissolved			100.6		%		70-130	30-JUL-12
Potassium (K)-Dissolved			110.9		%		70-130	30-JUL-12
Silver (Ag)-Dissolved			70.1		%		70-130	30-JUL-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	30-JUL-12
Thallium (Tl)-Dissolved			102.9		%		70-130	30-JUL-12
Tin (Sn)-Dissolved			108.0		%		70-130	30-JUL-12
Titanium (Ti)-Dissolved			114.8		%		70-130	30-JUL-12
Tungsten (W)-Dissolved			102.9		%		70-130	30-JUL-12
Uranium (U)-Dissolved			104.0		%		70-130	30-JUL-12
Vanadium (V)-Dissolved			110.2		%		70-130	30-JUL-12
Zinc (Zn)-Dissolved			107.2		%		70-130	30-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2408986								
WG1517295-8 MS		**L1183056-1**						
Zirconium (Zr)-Dissolved			103.9		%		70-130	30-JUL-12
Batch R2411905								
WG1520440-2 LCS								
Aluminum (Al)-Dissolved			111.8		%		80-120	04-AUG-12
Antimony (Sb)-Dissolved			100.8		%		80-120	04-AUG-12
Arsenic (As)-Dissolved			107.4		%		80-120	04-AUG-12
Barium (Ba)-Dissolved			109.0		%		80-120	04-AUG-12
Beryllium (Be)-Dissolved			112.1		%		80-120	04-AUG-12
Bismuth (Bi)-Dissolved			104.3		%		80-120	04-AUG-12
Boron (B)-Dissolved			104.0		%		80-120	04-AUG-12
Cadmium (Cd)-Dissolved			112.2		%		80-120	04-AUG-12
Calcium (Ca)-Dissolved			110.1		%		80-120	04-AUG-12
Chromium (Cr)-Dissolved			114.2		%		80-120	04-AUG-12
Cobalt (Co)-Dissolved			110.2		%		80-120	04-AUG-12
Copper (Cu)-Dissolved			105.2		%		80-120	04-AUG-12
Iron (Fe)-Dissolved			118.0		%		80-120	04-AUG-12
Lead (Pb)-Dissolved			106.5		%		80-120	04-AUG-12
Lithium (Li)-Dissolved			111.1		%		80-120	04-AUG-12
Magnesium (Mg)-Dissolved			114.6		%		80-120	04-AUG-12
Manganese (Mn)-Dissolved			117.6		%		80-120	04-AUG-12
Molybdenum (Mo)-Dissolved			106.7		%		80-120	04-AUG-12
Nickel (Ni)-Dissolved			108.8		%		80-120	04-AUG-12
Potassium (K)-Dissolved			113.6		%		80-120	04-AUG-12
Selenium (Se)-Dissolved			111.5		%		80-120	04-AUG-12
Silver (Ag)-Dissolved			102.7		%		80-120	04-AUG-12
Sodium (Na)-Dissolved			114.9		%		80-120	04-AUG-12
Strontium (Sr)-Dissolved			111.8		%		80-120	04-AUG-12
Tellurium (Te)-Dissolved			109.8		%		80-120	04-AUG-12
Thallium (Tl)-Dissolved			107.8		%		80-120	04-AUG-12
Tin (Sn)-Dissolved			106.2		%		80-120	04-AUG-12
Titanium (Ti)-Dissolved			107.2		%		80-120	04-AUG-12
Tungsten (W)-Dissolved			102.8		%		80-120	04-AUG-12
Uranium (U)-Dissolved			108.3		%		80-120	04-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2411905								
WG1520440-2 LCS								
Vanadium (V)-Dissolved			111.1		%		80-120	04-AUG-12
Zinc (Zn)-Dissolved			108.9		%		80-120	04-AUG-12
Zirconium (Zr)-Dissolved			99.6		%		80-120	04-AUG-12
WG1520440-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-AUG-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-AUG-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-AUG-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-AUG-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-AUG-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-AUG-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-AUG-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-AUG-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-AUG-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-AUG-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-AUG-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-AUG-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-AUG-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-AUG-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-AUG-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-AUG-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-AUG-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2411905								
WG1520440-1 MB								
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-AUG-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-AUG-12
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-3 DUP		**L1181718-4**						
Aluminum (Al)-Total		0.671	0.789		mg/L	16	20	25-JUL-12
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	25-JUL-12
Arsenic (As)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Barium (Ba)-Total		0.011	0.012		mg/L	6.7	20	25-JUL-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-JUL-12
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	25-JUL-12
Calcium (Ca)-Total		14.3	14.2		mg/L	0.5	20	25-JUL-12
Chromium (Cr)-Total		<0.0010	0.0011	RPD-NA	mg/L	N/A	20	25-JUL-12
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	25-JUL-12
Copper (Cu)-Total		0.0019	0.0019		mg/L	3.1	20	25-JUL-12
Iron (Fe)-Total		0.570	0.676		mg/L	17	20	25-JUL-12
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	25-JUL-12
Magnesium (Mg)-Total		2.83	2.81		mg/L	0.6	20	25-JUL-12
Manganese (Mn)-Total		0.0107	0.0143	DUP-H	mg/L	28	20	25-JUL-12
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	25-JUL-12
Potassium (K)-Total		0.93	0.93		mg/L	0.0	20	25-JUL-12
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	25-JUL-12
Sodium (Na)-Total		3.01	3.03		mg/L	0.8	20	25-JUL-12
Strontium (Sr)-Total		0.0272	0.0272		mg/L	0.0	20	25-JUL-12
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	25-JUL-12
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
Titanium (Ti)-Total		0.0206	0.0258	DUP-H	mg/L	22	20	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-3 DUP		**L1181718-4**						
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	25-JUL-12
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-JUL-12
Vanadium (V)-Total		0.0011	0.0013		mg/L	14	20	25-JUL-12
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	25-JUL-12
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	25-JUL-12
WG1512642-2 LCS								
Aluminum (Al)-Total			94.2		%		80-120	25-JUL-12
Antimony (Sb)-Total			98.5		%		80-120	25-JUL-12
Arsenic (As)-Total			102.7		%		80-120	25-JUL-12
Barium (Ba)-Total			99.1		%		80-120	25-JUL-12
Beryllium (Be)-Total			106.2		%		80-120	25-JUL-12
Bismuth (Bi)-Total			105.4		%		80-120	25-JUL-12
Boron (B)-Total			95.7		%		80-120	25-JUL-12
Cadmium (Cd)-Total			106.9		%		80-120	25-JUL-12
Calcium (Ca)-Total			102.5		%		80-120	25-JUL-12
Chromium (Cr)-Total			104.0		%		80-120	25-JUL-12
Cobalt (Co)-Total			98.8		%		80-120	25-JUL-12
Copper (Cu)-Total			97.8		%		80-120	25-JUL-12
Iron (Fe)-Total			84.3		%		80-120	25-JUL-12
Lead (Pb)-Total			104.2		%		80-120	25-JUL-12
Lithium (Li)-Total			97.2		%		80-120	25-JUL-12
Magnesium (Mg)-Total			105.0		%		80-120	25-JUL-12
Manganese (Mn)-Total			102.2		%		80-120	25-JUL-12
Molybdenum (Mo)-Total			103.2		%		80-120	25-JUL-12
Nickel (Ni)-Total			102.1		%		80-120	25-JUL-12
Potassium (K)-Total			102.2		%		80-120	25-JUL-12
Selenium (Se)-Total			99.7		%		80-120	25-JUL-12
Silver (Ag)-Total			99.0		%		80-120	25-JUL-12
Sodium (Na)-Total			107.5		%		80-120	25-JUL-12
Strontium (Sr)-Total			104.5		%		80-120	25-JUL-12
Tellurium (Te)-Total			103.9		%		80-120	25-JUL-12
Thallium (Tl)-Total			105.8		%		80-120	25-JUL-12
Tin (Sn)-Total			100.6		%		80-120	25-JUL-12
Titanium (Ti)-Total			100.7		%		80-120	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-2 LCS								
Tungsten (W)-Total			100.8		%		80-120	25-JUL-12
Uranium (U)-Total			101.4		%		80-120	25-JUL-12
Vanadium (V)-Total			102.2		%		80-120	25-JUL-12
Zinc (Zn)-Total			99.6		%		80-120	25-JUL-12
Zirconium (Zr)-Total			96.2		%		80-120	25-JUL-12
WG1512642-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	25-JUL-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	25-JUL-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	25-JUL-12
Barium (Ba)-Total			<0.010		mg/L		0.01	25-JUL-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	25-JUL-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	25-JUL-12
Boron (B)-Total			<0.050		mg/L		0.05	25-JUL-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	25-JUL-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	25-JUL-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	25-JUL-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	25-JUL-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	25-JUL-12
Iron (Fe)-Total			<0.020		mg/L		0.02	25-JUL-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	25-JUL-12
Lithium (Li)-Total			<0.050		mg/L		0.05	25-JUL-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	25-JUL-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	25-JUL-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	25-JUL-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	25-JUL-12
Potassium (K)-Total			<0.50		mg/L		0.5	25-JUL-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	25-JUL-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	25-JUL-12
Sodium (Na)-Total			<0.10		mg/L		0.1	25-JUL-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	25-JUL-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	25-JUL-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	25-JUL-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	25-JUL-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-1 MB								
Tungsten (W)-Total			<0.010		mg/L		0.01	25-JUL-12
Uranium (U)-Total			<0.0050		mg/L		0.005	25-JUL-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	25-JUL-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	25-JUL-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	25-JUL-12
WG1512642-4 MS		**L1181718-4**						
Aluminum (Al)-Total			N/A	MS-B	%		-	25-JUL-12
Antimony (Sb)-Total			94.2		%		70-130	25-JUL-12
Arsenic (As)-Total			101.4		%		70-130	25-JUL-12
Barium (Ba)-Total			96.5		%		70-130	25-JUL-12
Beryllium (Be)-Total			103.3		%		70-130	25-JUL-12
Bismuth (Bi)-Total			92.8		%		70-130	25-JUL-12
Boron (B)-Total			105.1		%		70-130	25-JUL-12
Cadmium (Cd)-Total			122.8		%		70-130	25-JUL-12
Calcium (Ca)-Total			N/A	MS-B	%		-	25-JUL-12
Chromium (Cr)-Total			100.4		%		70-130	25-JUL-12
Cobalt (Co)-Total			98.6		%		70-130	25-JUL-12
Copper (Cu)-Total			96.8		%		70-130	25-JUL-12
Iron (Fe)-Total			99.3		%		70-130	25-JUL-12
Lead (Pb)-Total			97.0		%		70-130	25-JUL-12
Lithium (Li)-Total			100.4		%		70-130	25-JUL-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	25-JUL-12
Manganese (Mn)-Total			101.9		%		70-130	25-JUL-12
Molybdenum (Mo)-Total			95.9		%		70-130	25-JUL-12
Nickel (Ni)-Total			100.2		%		70-130	25-JUL-12
Potassium (K)-Total			97.9		%		70-130	25-JUL-12
Selenium (Se)-Total			100.9		%		70-130	25-JUL-12
Silver (Ag)-Total			99.1		%		70-130	25-JUL-12
Sodium (Na)-Total			N/A	MS-B	%		-	25-JUL-12
Strontium (Sr)-Total			N/A	MS-B	%		-	25-JUL-12
Tellurium (Te)-Total			100.7		%		70-130	25-JUL-12
Thallium (Tl)-Total			92.8		%		70-130	25-JUL-12
Tin (Sn)-Total			97.1		%		70-130	25-JUL-12
Titanium (Ti)-Total			93.8		%		70-130	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-4 MS		**L1181718-4**						
Tungsten (W)-Total			93.9		%		70-130	25-JUL-12
Uranium (U)-Total			96.8		%		70-130	25-JUL-12
Vanadium (V)-Total			101.9		%		70-130	25-JUL-12
Zinc (Zn)-Total			100.9		%		70-130	25-JUL-12
Zirconium (Zr)-Total			94.7		%		70-130	25-JUL-12
WG1512642-6 MS		**L1181833-14**						
Aluminum (Al)-Total			103.1		%		70-130	25-JUL-12
Antimony (Sb)-Total			97.0		%		70-130	25-JUL-12
Arsenic (As)-Total			105.9		%		70-130	25-JUL-12
Beryllium (Be)-Total			105.7		%		70-130	25-JUL-12
Bismuth (Bi)-Total			97.8		%		70-130	25-JUL-12
Boron (B)-Total			111.5		%		70-130	25-JUL-12
Cadmium (Cd)-Total			128.7		%		70-130	25-JUL-12
Calcium (Ca)-Total			101.1		%		70-130	25-JUL-12
Chromium (Cr)-Total			102.8		%		70-130	25-JUL-12
Cobalt (Co)-Total			101.4		%		70-130	25-JUL-12
Copper (Cu)-Total			103.2		%		70-130	25-JUL-12
Iron (Fe)-Total			105.4		%		70-130	25-JUL-12
Lead (Pb)-Total			102.0		%		70-130	25-JUL-12
Lithium (Li)-Total			106.9		%		70-130	25-JUL-12
Magnesium (Mg)-Total			96.2		%		70-130	25-JUL-12
Manganese (Mn)-Total			106.1		%		70-130	25-JUL-12
Molybdenum (Mo)-Total			99.9		%		70-130	25-JUL-12
Nickel (Ni)-Total			103.1		%		70-130	25-JUL-12
Potassium (K)-Total			108.6		%		70-130	25-JUL-12
Selenium (Se)-Total			107.4		%		70-130	25-JUL-12
Silver (Ag)-Total			105.7		%		70-130	25-JUL-12
Sodium (Na)-Total			99.5		%		70-130	25-JUL-12
Strontium (Sr)-Total			102.9		%		70-130	25-JUL-12
Tellurium (Te)-Total			102.6		%		70-130	25-JUL-12
Thallium (Tl)-Total			98.5		%		70-130	25-JUL-12
Tin (Sn)-Total			100.6		%		70-130	25-JUL-12
Titanium (Ti)-Total			98.4		%		70-130	25-JUL-12
Tungsten (W)-Total			98.2		%		70-130	25-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2405558								
WG1512642-6 MS		**L1181833-14**						
Uranium (U)-Total			101.3		%		70-130	25-JUL-12
Vanadium (V)-Total			107.8		%		70-130	25-JUL-12
Zinc (Zn)-Total			93.7		%		70-130	25-JUL-12
Zirconium (Zr)-Total			97.6		%		70-130	25-JUL-12
Batch R2406522								
WG1512642-12 LCS								
Aluminum (Al)-Total			94.9		%		80-120	26-JUL-12
Antimony (Sb)-Total			98.7		%		80-120	26-JUL-12
Arsenic (As)-Total			102.6		%		80-120	26-JUL-12
Barium (Ba)-Total			100.7		%		80-120	26-JUL-12
Beryllium (Be)-Total			97.1		%		80-120	26-JUL-12
Bismuth (Bi)-Total			103.8		%		80-120	26-JUL-12
Boron (B)-Total			95.7		%		80-120	26-JUL-12
Cadmium (Cd)-Total			105.4		%		80-120	26-JUL-12
Calcium (Ca)-Total			102.0		%		80-120	26-JUL-12
Chromium (Cr)-Total			103.0		%		80-120	26-JUL-12
Cobalt (Co)-Total			100.0		%		80-120	26-JUL-12
Copper (Cu)-Total			99.9		%		80-120	26-JUL-12
Iron (Fe)-Total			89.2		%		80-120	26-JUL-12
Lead (Pb)-Total			102.5		%		80-120	26-JUL-12
Lithium (Li)-Total			103.2		%		80-120	26-JUL-12
Magnesium (Mg)-Total			105.4		%		80-120	26-JUL-12
Manganese (Mn)-Total			105.6		%		80-120	26-JUL-12
Molybdenum (Mo)-Total			101.0		%		80-120	26-JUL-12
Nickel (Ni)-Total			105.0		%		80-120	26-JUL-12
Potassium (K)-Total			103.7		%		80-120	26-JUL-12
Selenium (Se)-Total			97.1		%		80-120	26-JUL-12
Silver (Ag)-Total			95.7		%		80-120	26-JUL-12
Sodium (Na)-Total			104.4		%		80-120	26-JUL-12
Strontium (Sr)-Total			98.0		%		80-120	26-JUL-12
Tellurium (Te)-Total			104.3		%		80-120	26-JUL-12
Thallium (Tl)-Total			103.4		%		80-120	26-JUL-12
Tin (Sn)-Total			104.8		%		80-120	26-JUL-12
Titanium (Ti)-Total			99.6		%		80-120	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2406522								
WG1512642-12 LCS								
Tungsten (W)-Total			96.0		%		80-120	26-JUL-12
Uranium (U)-Total			96.6		%		80-120	26-JUL-12
Vanadium (V)-Total			103.8		%		80-120	26-JUL-12
Zinc (Zn)-Total			99.9		%		80-120	26-JUL-12
Zirconium (Zr)-Total			93.5		%		80-120	26-JUL-12
WG1512642-11 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	26-JUL-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	26-JUL-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	26-JUL-12
Barium (Ba)-Total			<0.010		mg/L		0.01	26-JUL-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	26-JUL-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	26-JUL-12
Boron (B)-Total			<0.050		mg/L		0.05	26-JUL-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	26-JUL-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	26-JUL-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	26-JUL-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	26-JUL-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	26-JUL-12
Iron (Fe)-Total			<0.020		mg/L		0.02	26-JUL-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	26-JUL-12
Lithium (Li)-Total			<0.050		mg/L		0.05	26-JUL-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	26-JUL-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	26-JUL-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	26-JUL-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	26-JUL-12
Potassium (K)-Total			<0.50		mg/L		0.5	26-JUL-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	26-JUL-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	26-JUL-12
Sodium (Na)-Total			<0.10		mg/L		0.1	26-JUL-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	26-JUL-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	26-JUL-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	26-JUL-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	26-JUL-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	26-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2406522								
WG1512642-11 MB								
Tungsten (W)-Total			<0.010		mg/L		0.01	26-JUL-12
Uranium (U)-Total			<0.0050		mg/L		0.005	26-JUL-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	26-JUL-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	26-JUL-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	26-JUL-12
Batch R2407779								
WG1514131-2 LCS								
Aluminum (Al)-Total			99.7		%		80-120	27-JUL-12
Antimony (Sb)-Total			103.7		%		80-120	27-JUL-12
Arsenic (As)-Total			109.9		%		80-120	27-JUL-12
Barium (Ba)-Total			103.8		%		80-120	27-JUL-12
Beryllium (Be)-Total			107.5		%		80-120	27-JUL-12
Bismuth (Bi)-Total			109.2		%		80-120	27-JUL-12
Boron (B)-Total			100.4		%		80-120	27-JUL-12
Cadmium (Cd)-Total			111.3		%		80-120	27-JUL-12
Calcium (Ca)-Total			108.5		%		80-120	27-JUL-12
Chromium (Cr)-Total			111.3		%		80-120	27-JUL-12
Cobalt (Co)-Total			106.6		%		80-120	27-JUL-12
Copper (Cu)-Total			104.3		%		80-120	27-JUL-12
Iron (Fe)-Total			118.7		%		80-120	27-JUL-12
Lead (Pb)-Total			107.1		%		80-120	27-JUL-12
Lithium (Li)-Total			101.4		%		80-120	27-JUL-12
Magnesium (Mg)-Total			110.4		%		80-120	27-JUL-12
Manganese (Mn)-Total			112.7		%		80-120	27-JUL-12
Molybdenum (Mo)-Total			110.4		%		80-120	27-JUL-12
Nickel (Ni)-Total			111.4		%		80-120	27-JUL-12
Potassium (K)-Total			108.7		%		80-120	27-JUL-12
Selenium (Se)-Total			106.4		%		80-120	27-JUL-12
Silver (Ag)-Total			102.7		%		80-120	27-JUL-12
Sodium (Na)-Total			110.5		%		80-120	27-JUL-12
Strontium (Sr)-Total			106.2		%		80-120	27-JUL-12
Tellurium (Te)-Total			112.7		%		80-120	27-JUL-12
Thallium (Tl)-Total			111.3		%		80-120	27-JUL-12
Tin (Sn)-Total			105.9		%		80-120	27-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2407779								
WG1514131-2 LCS								
Titanium (Ti)-Total			105.6		%		80-120	27-JUL-12
Tungsten (W)-Total			101.8		%		80-120	27-JUL-12
Uranium (U)-Total			105.8		%		80-120	27-JUL-12
Vanadium (V)-Total			110.9		%		80-120	27-JUL-12
Zinc (Zn)-Total			107.6		%		80-120	27-JUL-12
Zirconium (Zr)-Total			101.6		%		80-120	27-JUL-12
WG1514131-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	27-JUL-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	27-JUL-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	27-JUL-12
Barium (Ba)-Total			<0.010		mg/L		0.01	27-JUL-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	27-JUL-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	27-JUL-12
Boron (B)-Total			<0.050		mg/L		0.05	27-JUL-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	27-JUL-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	27-JUL-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	27-JUL-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	27-JUL-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	27-JUL-12
Iron (Fe)-Total			<0.020		mg/L		0.02	27-JUL-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	27-JUL-12
Lithium (Li)-Total			<0.050		mg/L		0.05	27-JUL-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	27-JUL-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	27-JUL-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	27-JUL-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	27-JUL-12
Potassium (K)-Total			<0.50		mg/L		0.5	27-JUL-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	27-JUL-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	27-JUL-12
Sodium (Na)-Total			<0.10		mg/L		0.1	27-JUL-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	27-JUL-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	27-JUL-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	27-JUL-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	27-JUL-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2407779								
WG1514131-1 MB								
Titanium (Ti)-Total			<0.0020		mg/L		0.002	27-JUL-12
Tungsten (W)-Total			<0.010		mg/L		0.01	27-JUL-12
Uranium (U)-Total			<0.0050		mg/L		0.005	27-JUL-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	27-JUL-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	27-JUL-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	27-JUL-12
NH3-COL-TB	**Water**							
Batch R2405064								
WG1513387-3 DUP		**L1181718-14**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	24-JUL-12
WG1513387-2 LCS								
Ammonia, Total (as N)			94.6		%		85-115	24-JUL-12
WG1513387-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	24-JUL-12
WG1513387-4 MS		**L1181718-14**						
Ammonia, Total (as N)			90.3		%		75-125	24-JUL-12
WG1513387-6 MS		**L1181833-11**						
Ammonia, Total (as N)			105.9		%		75-125	24-JUL-12
NO2-IC-TB	**Water**							
Batch R2404488								
WG1514315-2 LCS								
Nitrite (as N)			96.7		%		90-110	24-JUL-12
WG1514315-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-JUL-12
WG1514315-4 MS		**L1183216-6**						
Nitrite (as N)			101.8		%		75-115	24-JUL-12
Batch R2404831								
WG1512866-3 DUP		**L1181718-8**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	20-JUL-12
WG1512866-2 LCS								
Nitrite (as N)			94.3		%		90-110	20-JUL-12
WG1512866-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	20-JUL-12
WG1512866-4 MS		**L1181718-8**						
Nitrite (as N)			103.1		%		75-115	20-JUL-12
WG1512866-6 MS		**L1181792-4**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2404831								
WG1512866-6 MS		**L1181792-4**						
Nitrite (as N)			99.2		%		75-115	20-JUL-12
NO3-IC-TB	**Water**							
Batch R2404488								
WG1514315-2 LCS								
Nitrate (as N)			100.7		%		90-110	24-JUL-12
WG1514315-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-JUL-12
WG1514315-4 MS		**L1183216-6**						
Nitrate (as N)			101.1		%		75-125	24-JUL-12
Batch R2404831								
WG1512866-3 DUP		**L1181718-8**						
Nitrate (as N)		0.037	0.037		mg/L	1.3	20	20-JUL-12
WG1512866-2 LCS								
Nitrate (as N)			99.96		%		90-110	20-JUL-12
WG1512866-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	20-JUL-12
WG1512866-4 MS		**L1181718-8**						
Nitrate (as N)			96.8		%		75-125	20-JUL-12
WG1512866-6 MS		**L1181792-4**						
Nitrate (as N)			102.2		%		75-125	20-JUL-12
OGG-TOT-WT	**Water**							
Batch R2405241								
WG1514113-2 LCS								
Oil and Grease, Total			89.9		%		75-120	25-JUL-12
WG1514113-3 LCSD		**WG1514113-2**						
Oil and Grease, Total		89.9	91		%	1.0	45	25-JUL-12
WG1514113-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	25-JUL-12
Batch R2406066								
WG1514063-2 LCS								
Oil and Grease, Total			86.2		%		75-120	25-JUL-12
WG1514063-3 LCSD		**WG1514063-2**						
Oil and Grease, Total		86.2	88		%	2.2	45	25-JUL-12
WG1514063-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	25-JUL-12
P-T-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2404062								
WG1512654-3 DUP		**L1181718-6**						
Phosphorus (P)-Total		0.0081	0.0078		mg/L	4.8	20	23-JUL-12
WG1512654-2 LCS								
Phosphorus (P)-Total			97.2		%		80-120	23-JUL-12
WG1512654-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	23-JUL-12
WG1512654-4 MS		**L1181718-6**						
Phosphorus (P)-Total			91.4		%		70-130	23-JUL-12
WG1512705-4 MS		**L1181792-4**						
Phosphorus (P)-Total			93.1		%		70-130	23-JUL-12
WG1512705-6 MS		**L1181833-16**						
Phosphorus (P)-Total			93.4		%		70-130	23-JUL-12
PH-CAP-TB	**Water**							
Batch R2404329								
WG1511893-2 LCS								
pH			5.99		pH		5.9-6.1	20-JUL-12
SO4-IC-TB	**Water**							
Batch R2404488								
WG1514315-2 LCS								
Sulfate (SO4)			99.8		%		90-110	24-JUL-12
WG1514315-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-JUL-12
WG1514315-4 MS		**L1183216-6**						
Sulfate (SO4)			104.5		%		75-125	24-JUL-12
Batch R2404831								
WG1512866-3 DUP		**L1181718-8**						
Sulfate (SO4)		0.50	0.50		mg/L	0.8	20	20-JUL-12
WG1512866-2 LCS								
Sulfate (SO4)			101.2		%		90-110	20-JUL-12
WG1512866-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	20-JUL-12
WG1512866-4 MS		**L1181718-8**						
Sulfate (SO4)			103.7		%		75-125	20-JUL-12
WG1512866-6 MS		**L1181792-4**						
Sulfate (SO4)			104.9		%		75-125	20-JUL-12
SOLIDS-TOTSUS-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-TB	**Water**							
Batch R2405233								
WG1514168-3 DUP		**L1181718-2**						
Total Suspended Solids		45.2	44.0		mg/L	2.7	20	25-JUL-12
WG1514168-2 LCS								
Total Suspended Solids			100.6		%		85-115	25-JUL-12
WG1514168-1 MB								
Total Suspended Solids			<2.0		mg/L		2	25-JUL-12
Batch R2406091								
WG1514961-2 LCS								
Total Suspended Solids			99.4		%		85-115	26-JUL-12
WG1514961-1 MB								
Total Suspended Solids			<2.0		mg/L		2	26-JUL-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier

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 L1181718 were received on 20-JUL-12 10:00.

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.

ALS Environmental

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Company www.alsglobal.com

L1181718 03581

Company:	Treasury Metals
Contact:	Mac Potter
Address:	899 Tree Nursery Rd. Wabigoon, ON, P0V 2W0
Phone:	807 938 6961 Fax:
Email:	mac@treasurymetals.com
Project:	Goliath PO:
Quote #	G32690 LSD Gaimm Project
Invoice To:	Same as Report: Yes No
Company:	
Contact:	
Address:	
Email:	
Account Manager	Karen R.
Sampler:	Mac Potter

rmation

(end) Table:

Record of Site Condition ☐ Yes ☐ No

PWQO ☑ MISA ☐ MMER ☐ CCME ☐

Guideline Required:

TCLP Regulation 558 ☐ Other:

Service Requested

☑ Regular TAT (7 Days)

☐ Priority TAT 50% Surcharge (3-5 Days)

☐ Emergency TAT 100% Surcharge (1-2 Days)

Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-Free-COL-VA (P)	Ammonia, Total Phos. (P)	O&G (P)	Total Metals + Hg (P)	Dissolved Metals + Hg (F/P)	Hardness		Number of Containers
1	SW1	19/07/12	7:20	Water	X	X	X	X	X	X	X	X	X	X	X		9
2	SW2		6:30										—	—			
3	SW3		5:55														
4	SW4		3:00														
5	SW5		2:15														
6	SW6		1:45														
7	SW7		16:15										X	X			
8	SW8		10:00										X	X			
9	SW9		12:00														
10	SW10		9:30										X	X			
11	SW11		11:05														

Special Instructions / Comments

* No preservation is Total Metals/Hg, Dissolved Metals/Hg in samples SW4, SW5, SW6, SW9, SW11

SHIPMENT RELEASE (client use)

Released by:	Date & Time
Mac Potter <Original signed by>	4:30 9/07/12

SHIPMENT RECEPTION (lab use only)

Received by:	Date & Time	Temp	Cooling Initiated
<Original signed by>	July 20/12 10:00	14.3	☑ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
<Original signed by>	July 20/12 11:00	

Failure to complete all portions of this Please contact the lab to confirm TATs. A delay analysis. **TAT may vary dependant on complexity of analysis, suspected hazards relating to a sample must be noted on the chain of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page. workload at time of submission. the comments section. By use of

ALS Environmental
L11817718-COFC
a PHONE +1 807 623 6463 FAX +1 807 623 7598
nited Company www.alsglobal.com

03580

Company:	See Page	nformation	Both questions below must answered for water samples
Contact:		☐ O. Reg 153 (O. Reg 511 Amend) Table ___	Are any samples taken from a regulated DW System? ☐ Yes ☐ No
Address:		Record of Site Condition ☐ Yes ☐ No	If yes, an authorized DW COC must be used.
		PWQO ☑ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption? ☐ Yes ☐ No
Phone:	Fax:	Guideline Required:	
Email:		TCLP Regulation 558 ☐ Other:	
Project:	PO:	Service Requested	Analysis Request
Quote #		☑ Regular TAT (7 Days)	Please indicate below Filtered, Preserved or both (F, P, F/P)
Invoice To:	Same as Report: ☐ Yes ☐ No	☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:		☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:		Specify Date Required:	
Address:		All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:			
Account Manager	KAREN R.	Sampler: MAC POTTER	

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH, Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS		P Total Cyanide	P WAD Cyanide	P CN-FREE-COL-VA	P Ammonia, Total Phos.	P 066	P Total Metals + Hg	F/P Dissolved Metals + Hg	Hardness	Number of Containers
12	TL1a	19107/12	6 61	Water	X	X	X	X	X	X	X	X	X	X	X	X	9
13	TL2a		8 50														
14	TL3		8 30														
15	JCTa		8 00														
16	TL33		8 30														
17	Field Blank		5 50														
18	Travel Blank		—														

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: MAC POTTER 1430 <Original signed by>	Date & Time 19107/12	Received by:	Date & Time	Temp	Cooling Initiated ☐ Yes ☐ No	Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 24-AUG-12
Report Date: 07-SEP-12 07:19 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1199233

Project P.O. #:	MO210-P0115
Job Reference:	MO906A01
C of C Numbers:	l1199233
Legal Site Desc:	GOLIATH PROJECT

<Original signed by>

Karén Rutledge
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1199233-1	L1199233-2	L1199233-3	L1199233-4	L1199233-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
Sampled Time	07:00	06:05	05:30	09:30	09:45
Client ID	SW1	SW2	SW3	SW7	SW8
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	143	134	191	130	173
Hardness (as CaCO3) (mg/L)	75.0	75.7	76.2	67.2	92.5
pH (pH)	7.45	7.74	7.41	7.68	7.92
Total Suspended Solids (mg/L)	3.0	34.9	4.9	6.2	53.2
Anions and Nutrients Acidity (as CaCO3) (mg/L)	3.6	2.8	5.4	2.8	2.8
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	72.2	66.8	65.4	59.7	87.9
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.33	<0.10	17.5	0.22	0.20
Nitrate (as N) (mg/L)	<0.030	0.039	<0.030	0.120	0.100
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0080	0.139	0.0121	0.0187	0.0398
Sulfate (SO4) (mg/L)	1.03	0.76	1.94	4.91	0.74
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.0377	0.626	0.0369	0.0728	0.0587
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	0.0013	<0.0010
Barium (Ba)-Total (mg/L)	0.010	0.013	0.010	0.011	0.025
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	24.5	21.7	21.8	21.3	32.4
Chromium (Cr)-Total (mg/L)	<0.0010	0.0015	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	0.00053	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0018	<0.0010	<0.0010	<0.0010
Iron (Fe)-Total (mg/L)	0.236	1.91	0.252	1.02	0.566
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	3.61	5.50	5.15	3.68	2.76
Manganese (Mn)-Total (mg/L)	0.115	0.0644	0.0270	0.0278	0.203
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	0.0021	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	0.71	0.64	0.68	0.81	0.68
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1199233-6	L1199233-7	L1199233-8	L1199233-9	L1199233-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
Sampled Time	13:30	08:55	10:45	08:07	08:37
Client ID	SW9	SW10	SW11	TL1A	TL2A
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	282	134	36.1	123	159
Hardness (as CaCO3) (mg/L)	152	70.9	25.3	65.1	84.0
pH (pH)	8.02	7.54	5.94	7.08	7.65
Total Suspended Solids (mg/L)	10.4	403	31.9	10.2	2.8
Anions and Nutrients Acidity (as CaCO3) (mg/L)	3.8	3.6	13.6	12.0	3.6
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	154	67.4	9.4	61.1	78.6
Ammonia, Total (as N) (mg/L)	<0.020	0.022	0.032	0.085	<0.020
Chloride (Cl) (mg/L)	0.36	0.27	0.16	0.15	0.27
Nitrate (as N) (mg/L)	0.082	0.071	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0103	0.0908	0.0255	0.0128	0.0215
Sulfate (SO4) (mg/L)	0.53	1.75	<0.30	<0.30	1.18
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.187	1.77	0.933	0.0540	0.0773
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	0.0021	0.0015	0.0011	<0.0010
Barium (Ba)-Total (mg/L)	0.028	0.033	0.013	0.015	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	0.000057	0.000034	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	49.6	25.2	7.39	19.1	22.7
Chromium (Cr)-Total (mg/L)	<0.0010	0.0048	0.0021	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	0.00162	0.00087	0.00411	<0.00050
Copper (Cu)-Total (mg/L)	0.0023	0.0028	0.0014	<0.0010	<0.0010
Iron (Fe)-Total (mg/L)	0.482	8.71	2.82	3.97	0.615
Lead (Pb)-Total (mg/L)	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	8.20	3.68	1.62	4.23	6.29
Manganese (Mn)-Total (mg/L)	0.336	0.261	0.0585	1.86	0.0944
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	0.0022	0.0021	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	1.90	0.88	<0.50	<0.50	1.92
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1199233-11	L1199233-12	L1199233-13	L1199233-14	L1199233-15
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
Sampled Time	06:35	07:25	07:30	08:30	08:45
Client ID	TL3	JCTA	SW4	SW5	SW6
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	181	161	105	111	111
Hardness (as CaCO3) (mg/L)	96.5	83.2	45.6	46.1	46.1
pH (pH)	7.47	7.45	7.87	7.93	7.90
Total Suspended Solids (mg/L)	14.4	9.7	10.5	<2.0	<2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	7.6	3.6	2.2	2.0	2.0
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	90.3	80.6	44.0	45.2	45.1
Ammonia, Total (as N) (mg/L)	<0.020	0.089	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	1.25	0.81	3.18	4.05	4.30
Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0311	0.0266	0.0207	0.0060	0.0077
Sulfate (SO4) (mg/L)	0.56	0.51	1.70	2.76	4.53
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.472	0.149	0.785	0.0118	0.0149
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Total (mg/L)	<0.0010	0.0011	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	0.015	0.013	0.012	<0.010	<0.010
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Total (mg/L)	28.0	25.1	14.6	14.1	14.1
Chromium (Cr)-Total (mg/L)	0.0012	<0.0010	0.0011	<0.0010	<0.0010
Cobalt (Co)-Total (mg/L)	<0.00050	0.00072	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	0.0013	<0.0010	0.0026	0.0011	0.0012
Iron (Fe)-Total (mg/L)	1.05	1.50	0.629	<0.020	<0.020
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Total (mg/L)	6.97	6.02	2.79	2.97	3.00
Manganese (Mn)-Total (mg/L)	0.201	0.510	0.0148	0.0030	0.0033
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Total (mg/L)	1.14	1.06	0.99	0.95	0.97
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1199233-16	L1199233-17			
	Description	TRAVEL BLANK	WATER			
	Sampled Date	22-AUG-12	22-AUG-12			
	Sampled Time	10:45				
	Client ID	TRAVEL BLANK	TL111			
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	<3.0	124			
	Hardness (as CaCO3) (mg/L)	<0.51	63.6			
	pH (pH)	5.98	7.17			
	Total Suspended Solids (mg/L)	<2.0	7.5			
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	9.6			
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	61.6			
	Ammonia, Total (as N) (mg/L)	0.046	0.088			
	Chloride (Cl) (mg/L)	<0.10	0.19			
	Nitrate (as N) (mg/L)	<0.030	<0.030			
	Nitrite (as N) (mg/L)	<0.020	<0.020			
	Phosphorus (P)-Total (mg/L)	<0.0050	0.0135			
	Sulfate (SO4) (mg/L)	<0.30	<0.30			
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020			
	Cyanide, Total (mg/L)	<0.0020	<0.0020			
	Cyanide, Free (mg/L)	<0.0050	<0.0050			
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0050	0.0519			
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060			
	Arsenic (As)-Total (mg/L)	<0.0010	0.0011			
	Barium (Ba)-Total (mg/L)	<0.010	0.015			
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010			
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010			
	Boron (B)-Total (mg/L)	<0.050	<0.050			
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017			
	Calcium (Ca)-Total (mg/L)	<0.20	19.4			
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010			
	Cobalt (Co)-Total (mg/L)	<0.00050	0.00420			
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010			
	Iron (Fe)-Total (mg/L)	<0.020	3.99			
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010			
	Lithium (Li)-Total (mg/L)	<0.050	<0.050			
	Magnesium (Mg)-Total (mg/L)	<0.020	4.30			
	Manganese (Mn)-Total (mg/L)	<0.0010	1.87			
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010			
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010			
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020			
	Potassium (K)-Total (mg/L)	<0.50	<0.50			
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010			

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1199233-1	L1199233-2	L1199233-3	L1199233-4	L1199233-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
Sampled Time	07:00	06:05	05:30	09:30	09:45
Client ID	SW1	SW2	SW3	SW7	SW8
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	1.79	1.83	11.3	1.70	1.28
Strontium (Sr)-Total (mg/L)	0.0443	0.0366	0.0543	0.0395	0.0484
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0022	0.0268	0.0023	0.0040	0.0037
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	0.0020	<0.0010	0.0012	<0.0010
Zinc (Zn)-Total (mg/L)	<0.0030	0.0046	<0.0030	<0.0030	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	<0.0050	0.0349	0.0085	0.0291	<0.0050
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	<0.0010
Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	0.010	<0.010	0.021
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium (Ca)-Dissolved (mg/L)	24.0	21.5	21.9	20.9	32.4
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Iron (Fe)-Dissolved (mg/L)	0.113	0.431	0.129	0.629	0.160
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	3.65	5.38	5.21	3.66	2.79
Manganese (Mn)-Dissolved (mg/L)	0.0971	0.0612	0.0181	0.0124	0.0869
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	0.73	0.54	0.69	0.83	0.67
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	1.83	1.82	11.5	1.74	1.40
Strontium (Sr)-Dissolved (mg/L)	0.0452	0.0360	0.0571	0.0400	0.0494

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1199233-6 WATER 22-AUG-12 13:30 SW9	L1199233-7 WATER 22-AUG-12 08:55 SW10	L1199233-8 WATER 22-AUG-12 10:45 SW11	L1199233-9 WATER 22-AUG-12 08:07 TL1A	L1199233-10 WATER 22-AUG-12 08:37 TL2A
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	3.64	1.93	0.98	1.21	3.00
	Strontium (Sr)-Total (mg/L)	0.0778	0.0449	0.0175	0.0444	0.0526
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0097	0.0921	0.0344	<0.0020	0.0047
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0096	0.0021	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0146	0.0072	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0084	0.0256	0.483	0.0479	0.0103
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.0060 DLA	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.023	0.013	<0.10 DLA	0.014	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.50 DLA	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.00017 DLA	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	47.9	23.1	7.9	19.1	23.0
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.0050 DLA	0.00407	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.031	1.62	1.79	2.98	0.378
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.50 DLA	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	7.99	3.21	1.34	4.25	6.45
	Manganese (Mn)-Dissolved (mg/L)	0.110	0.0961	0.053	1.84	0.0375
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.020 DLA	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	1.77	0.73	<5.0 DLA	<0.50	1.96
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.0010 DLA	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	3.80	1.93	1.1	1.34	3.29
	Strontium (Sr)-Dissolved (mg/L)	0.0789	0.0392	0.016	0.0453	0.0545

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1199233-11 WATER 22-AUG-12 06:35 TL3	L1199233-12 WATER 22-AUG-12 07:25 JCTA	L1199233-13 WATER 22-AUG-12 07:30 SW4	L1199233-14 WATER 22-AUG-12 08:30 SW5	L1199233-15 WATER 22-AUG-12 08:45 SW6
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	2.22	1.89	2.82	3.06	3.13
	Strontium (Sr)-Total (mg/L)	0.0589	0.0517	0.0259	0.0266	0.0267
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0209	0.0072	0.0241	<0.0020	<0.0020
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	0.0013	<0.0010	0.0013	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	0.0032	<0.0030	0.0038	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0126	0.0190	0.0094	<0.0050	<0.0050
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.011	0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	27.7	23.9	14.2	13.7	13.7
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	0.0013	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.293	0.885	<0.020	<0.020	<0.020
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	6.64	5.73	2.50	2.87	2.88
	Manganese (Mn)-Dissolved (mg/L)	0.175	0.464	<0.0010	<0.0010	<0.0010
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	1.00	0.97	0.72	0.89	0.90
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	2.25	1.91	2.69	3.14	3.11
	Strontium (Sr)-Dissolved (mg/L)	0.0566	0.0493	0.0232	0.0254	0.0258

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1199233-16	L1199233-17			
	Description	TRAVEL BLANK	WATER			
	Sampled Date	22-AUG-12	22-AUG-12			
	Sampled Time	10:45				
	Client ID	TRAVEL BLANK	TL111			
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010			
	Sodium (Na)-Total (mg/L)	<0.10	1.24			
	Strontium (Sr)-Total (mg/L)	<0.0010	0.0456			
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010			
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030			
	Tin (Sn)-Total (mg/L)	0.0028 RRV	<0.0010			
	Titanium (Ti)-Total (mg/L)	<0.0020	<0.0020			
	Tungsten (W)-Total (mg/L)	<0.010	<0.010			
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050			
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010			
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030			
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010			
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	0.0387			
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060			
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010			
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.014			
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010			
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010			
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050			
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017			
	Calcium (Ca)-Dissolved (mg/L)	<0.20	18.7			
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010			
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	0.00400			
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010			
	Iron (Fe)-Dissolved (mg/L)	<0.020	2.69			
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010			
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050			
	Magnesium (Mg)-Dissolved (mg/L)	<0.020	4.10			
	Manganese (Mn)-Dissolved (mg/L)	<0.0010	1.82			
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010			
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010			
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020			
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50			
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010			
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010			
	Sodium (Na)-Dissolved (mg/L)	<0.10	1.27			
	Strontium (Sr)-Dissolved (mg/L)	<0.0010	0.0433			

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1199233-1	L1199233-2	L1199233-3	L1199233-4	L1199233-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
	Sampled Time	07:00	06:05	05:30	09:30	09:45
	Client ID	SW1	SW2	SW3	SW7	SW8
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0035	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1199233-6	L1199233-7	L1199233-8	L1199233-9	L1199233-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12	22-AUG-12
Sampled Time	13:30	08:55	10:45	08:07	08:37
Client ID	SW9	SW10	SW11	TL1A	TL2A
Grouping / **Analyte**					
WATER					
Dissolved Metals Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.0030 DLA	<0.00030	<0.00030
Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.020 DLA	<0.0020	<0.0020
Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.10 DLA	<0.010	<0.010
Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.050 DLA	<0.0050	<0.0050
Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
Zinc (Zn)-Dissolved (mg/L)	0.0034	<0.0030	<0.030 DLA	<0.0030	0.0047
Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.0010	<0.0010
Aggregate Organics Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1199233-11 WATER 22-AUG-12 06:35 TL3	L1199233-12 WATER 22-AUG-12 07:25 JCTA	L1199233-13 WATER 22-AUG-12 07:30 SW4	L1199233-14 WATER 22-AUG-12 08:30 SW5	L1199233-15 WATER 22-AUG-12 08:45 SW6
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1199233-16	L1199233-17			
	Description	TRAVEL BLANK	WATER			
	Sampled Date	22-AUG-12	22-AUG-12			
	Sampled Time	10:45				
	Client ID	TRAVEL BLANK	TL111			
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010			
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030			
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010			
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020			
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010			
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050			
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010			
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030			
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010			
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0			

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

Reference Information

Qualifiers for Sample Submission Listed:

Qualifier	Description
SFPL	Sample was Filtered and Preserved at the laboratory - SW9, SW11, SW4, SW5, SW6 dissolvedl metals and mercury
SPL	Sample was Preserved at the laboratory - SW9, SW11, SW4, SW5, SW6 total metals and mercury

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Method Blank	Iron (Fe)-Total	A	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Comments:	No Fe samples <5x LOR in run.		
Matrix Spike	Antimony (Sb)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Molybdenum (Mo)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Boron (B)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Calcium (Ca)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Manganese (Mn)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Potassium (K)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Sodium (Na)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Strontium (Sr)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Barium (Ba)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Calcium (Ca)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Potassium (K)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Strontium (Sr)-Total	MS-B	L1199233-10, -11, -12, -13, -14, -15, -16, -17
Matrix Spike	Calcium (Ca)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1199233-1, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1199233-1, -10, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17

Reference Information

	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1199233-11, -12, -13, -14, -15, -16, -17

Qualifiers for Individual Parameters Listed:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
DLA	Detection Limit Adjusted For required dilution
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM
Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex. When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference			
CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet
Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A
This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)
Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.			
NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B
Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.			
P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Reference Information

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

l1199233

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2428960								
WG1539172-6 DUP		**L1199233-7**						
Acidity (as CaCO3)		3.6	3.6		mg/L	0.0	20	04-SEP-12
WG1539172-2 LCS								
Acidity (as CaCO3)			102.4		%		85-115	04-SEP-12
WG1539172-5 LCS								
Acidity (as CaCO3)			101.6		%		85-115	04-SEP-12
WG1539172-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-SEP-12
WG1539172-4 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-SEP-12
ALK-TOT-CAP-TB	**Water**							
Batch R2424516								
WG1534369-6 DUP		**L1199233-17**						
Alkalinity, Total (as CaCO3)		61.6	62.0		mg/L CaCO3	0.6	20	24-AUG-12
WG1534369-2 LCS								
Alkalinity, Total (as CaCO3)			92.5		%		85-115	24-AUG-12
WG1534369-5 LCS								
Alkalinity, Total (as CaCO3)			93.4		%		85-115	24-AUG-12
WG1534369-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	24-AUG-12
WG1534369-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	24-AUG-12
CL-IC-TB	**Water**							
Batch R2424550								
WG1534702-15 DUP		**L1199233-1**						
Chloride (Cl)		0.33	0.34		mg/L	0.3	20	24-AUG-12
WG1534702-10 LCS								
Chloride (Cl)			97.5		%		90-110	24-AUG-12
WG1534702-14 LCS								
Chloride (Cl)			97.3		%		90-110	24-AUG-12
WG1534702-18 LCS								
Chloride (Cl)			98.2		%		90-110	24-AUG-12
WG1534702-2 LCS								
Chloride (Cl)			97.4		%		90-110	24-AUG-12
WG1534702-22 LCS								
Chloride (Cl)			97.5		%		90-110	24-AUG-12
WG1534702-6 LCS								
Chloride (Cl)			97.3		%		90-110	24-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2424550								
WG1534702-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-13 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-17 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-21 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	24-AUG-12
WG1534702-12 MS		**L1199180-7**						
Chloride (Cl)			93.5		%		75-125	24-AUG-12
WG1534702-16 MS		**L1199233-1**						
Chloride (Cl)			102.6		%		75-125	24-AUG-12
WG1534702-20 MS		**L1199413-1**						
Chloride (Cl)			102.1		%		75-125	24-AUG-12
WG1534702-4 MS		**L1199105-2**						
Chloride (Cl)			102.1		%		75-125	24-AUG-12
WG1534702-8 MS		**L1199128-3**						
Chloride (Cl)			102.7		%		75-125	24-AUG-12
CN-FREE-CFA-VA	**Water**							
Batch R2428833								
WG1538477-3 DUP		**L1199233-7**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	31-AUG-12
WG1538477-10 LCS								
Cyanide, Free			102.2		%		80-120	31-AUG-12
WG1538477-12 LCS								
Cyanide, Free			101.9		%		80-120	31-AUG-12
WG1538477-16 LCS								
Cyanide, Free			102.2		%		80-120	31-AUG-12
WG1538477-18 LCS								
Cyanide, Free			99.0		%		80-120	31-AUG-12
WG1538477-2 LCS								
Cyanide, Free			102.6		%		80-120	31-AUG-12
WG1538477-6 LCS								
Cyanide, Free			101.9		%		80-120	31-AUG-12
WG1538477-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2428833								
WG1538477-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-11 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-15 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-17 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	31-AUG-12
WG1538477-4 MS		**L1199233-7**						
Cyanide, Free			98.2		%		70-130	31-AUG-12
WG1538477-8 MS		**L1199606-1**						
Cyanide, Free			98.1		%		70-130	31-AUG-12
CN-TOT-WT	**Water**							
Batch R2427800								
WG1538336-4 CVS								
Cyanide, Total			101.0		%		85-115	31-AUG-12
WG1538336-3 LCS								
Cyanide, Total			93.9		%		80-120	31-AUG-12
WG1538336-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	31-AUG-12
CN-WAD-WT	**Water**							
Batch R2427619								
WG1537442-4 CVS								
Cyanide, Weak Acid Diss			103.5		%		85-115	30-AUG-12
WG1537442-5 DUP		**L1199233-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	30-AUG-12
WG1537442-3 LCS								
Cyanide, Weak Acid Diss			95.8		%		80-120	30-AUG-12
WG1537442-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	30-AUG-12
EC-CAP-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2424516								
WG1534369-6 DUP		**L1199233-17**						
Conductivity (EC)		124	124		uS/cm	0.0	10	24-AUG-12
WG1534369-2 LCS								
Conductivity (EC)			99.3		%		90-110	24-AUG-12
WG1534369-5 LCS								
Conductivity (EC)			100.4		%		90-110	24-AUG-12
WG1534369-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	24-AUG-12
WG1534369-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	24-AUG-12
HG-D-CVAF-TB	**Water**							
Batch R2424655								
WG1534481-7 DUP		**L1199233-10**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	27-AUG-12
WG1534481-2 LCS								
Mercury (Hg)-Dissolved			100.7		%		80-120	27-AUG-12
WG1534481-6 LCS								
Mercury (Hg)-Dissolved			99.96		%		80-120	27-AUG-12
WG1534481-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	27-AUG-12
WG1534481-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	27-AUG-12
WG1534481-4 MS		**L1199180-13**						
Mercury (Hg)-Dissolved			77.6		%		70-130	27-AUG-12
WG1534481-8 MS		**L1199233-10**						
Mercury (Hg)-Dissolved			105.6		%		70-130	27-AUG-12
HG-T-CVAF-TB	**Water**							
Batch R2425299								
WG1534474-13 DUP		**L1199233-1**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	28-AUG-12
WG1534474-12 LCS								
Mercury (Hg)-Total			100.4		%		80-120	28-AUG-12
WG1534474-2 LCS								
Mercury (Hg)-Total			102.1		%		80-120	28-AUG-12
WG1534474-8 LCS								
Mercury (Hg)-Total			100.9		%		80-120	28-AUG-12
WG1534474-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	28-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2425299								
WG1534474-11 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	28-AUG-12
WG1534474-7 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	28-AUG-12
WG1534474-10 MS		**L1199128-11**						
Mercury (Hg)-Total			107.0		%		70-130	28-AUG-12
WG1534474-14 MS		**L1199233-1**						
Mercury (Hg)-Total			101.5		%		70-130	28-AUG-12
WG1534474-6 MS		**L1199089-1**						
Mercury (Hg)-Total			100.1		%		70-130	28-AUG-12
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-7 DUP		**L1199233-10**						
Aluminum (Al)-Dissolved		0.0103	0.0105		mg/L	2.3	20	31-AUG-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	31-AUG-12
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Barium (Ba)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	31-AUG-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-AUG-12
Cadmium (Cd)-Dissolved		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	31-AUG-12
Calcium (Ca)-Dissolved		23.0	23.5		mg/L	2.2	20	31-AUG-12
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	31-AUG-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Iron (Fe)-Dissolved		0.378	0.405		mg/L	6.9	20	31-AUG-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	31-AUG-12
Magnesium (Mg)-Dissolved		6.45	6.66		mg/L	3.3	20	31-AUG-12
Manganese (Mn)-Dissolved		0.0375	0.0383		mg/L	2.2	20	31-AUG-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-AUG-12
Potassium (K)-Dissolved		1.96	2.01		mg/L	2.5	20	31-AUG-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	31-AUG-12
Sodium (Na)-Dissolved		3.29	3.42		mg/L	3.8	20	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-7 DUP		**L1199233-10**						
Strontium (Sr)-Dissolved		0.0545	0.0556		mg/L	2.0	20	31-AUG-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	31-AUG-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-AUG-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	31-AUG-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	31-AUG-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
Zinc (Zn)-Dissolved		0.0047	0.0038	J	mg/L	0.0009	0.006	31-AUG-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	31-AUG-12
WG1537917-2 LCS								
Aluminum (Al)-Dissolved			97.4		%		80-120	31-AUG-12
Antimony (Sb)-Dissolved			102.3		%		80-120	31-AUG-12
Arsenic (As)-Dissolved			101.9		%		80-120	31-AUG-12
Barium (Ba)-Dissolved			97.8		%		80-120	31-AUG-12
Beryllium (Be)-Dissolved			100.7		%		80-120	31-AUG-12
Bismuth (Bi)-Dissolved			103.2		%		80-120	31-AUG-12
Boron (B)-Dissolved			93.1		%		80-120	31-AUG-12
Cadmium (Cd)-Dissolved			104.1		%		80-120	31-AUG-12
Calcium (Ca)-Dissolved			102.5		%		80-120	31-AUG-12
Chromium (Cr)-Dissolved			105.2		%		80-120	31-AUG-12
Cobalt (Co)-Dissolved			102.5		%		80-120	31-AUG-12
Copper (Cu)-Dissolved			100.3		%		80-120	31-AUG-12
Iron (Fe)-Dissolved			112.8		%		80-120	31-AUG-12
Lead (Pb)-Dissolved			98.8		%		80-120	31-AUG-12
Lithium (Li)-Dissolved			109.7		%		80-120	31-AUG-12
Magnesium (Mg)-Dissolved			103.1		%		80-120	31-AUG-12
Manganese (Mn)-Dissolved			102.8		%		80-120	31-AUG-12
Molybdenum (Mo)-Dissolved			101.9		%		80-120	31-AUG-12
Nickel (Ni)-Dissolved			100.9		%		80-120	31-AUG-12
Potassium (K)-Dissolved			103.8		%		80-120	31-AUG-12
Selenium (Se)-Dissolved			107.5		%		80-120	31-AUG-12
Silver (Ag)-Dissolved			103.7		%		80-120	31-AUG-12
Sodium (Na)-Dissolved			107.3		%		80-120	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-2 LCS								
Strontium (Sr)-Dissolved			99.4		%		80-120	31-AUG-12
Tellurium (Te)-Dissolved			104.6		%		80-120	31-AUG-12
Thallium (Tl)-Dissolved			102.0		%		80-120	31-AUG-12
Tin (Sn)-Dissolved			101.4		%		80-120	31-AUG-12
Titanium (Ti)-Dissolved			107.2		%		80-120	31-AUG-12
Tungsten (W)-Dissolved			99.1		%		80-120	31-AUG-12
Uranium (U)-Dissolved			97.5		%		80-120	31-AUG-12
Vanadium (V)-Dissolved			104.7		%		80-120	31-AUG-12
Zinc (Zn)-Dissolved			104.2		%		80-120	31-AUG-12
Zirconium (Zr)-Dissolved			98.8		%		80-120	31-AUG-12
WG1537917-6 LCS								
Aluminum (Al)-Dissolved			96.0		%		80-120	31-AUG-12
Antimony (Sb)-Dissolved			101.9		%		80-120	31-AUG-12
Arsenic (As)-Dissolved			102.8		%		80-120	31-AUG-12
Barium (Ba)-Dissolved			97.4		%		80-120	31-AUG-12
Beryllium (Be)-Dissolved			99.1		%		80-120	31-AUG-12
Bismuth (Bi)-Dissolved			100.6		%		80-120	31-AUG-12
Boron (B)-Dissolved			92.0		%		80-120	31-AUG-12
Cadmium (Cd)-Dissolved			103.1		%		80-120	31-AUG-12
Calcium (Ca)-Dissolved			101.6		%		80-120	31-AUG-12
Chromium (Cr)-Dissolved			103.8		%		80-120	31-AUG-12
Cobalt (Co)-Dissolved			100.9		%		80-120	31-AUG-12
Copper (Cu)-Dissolved			100.1		%		80-120	31-AUG-12
Iron (Fe)-Dissolved			113.8		%		80-120	31-AUG-12
Lead (Pb)-Dissolved			97.1		%		80-120	31-AUG-12
Lithium (Li)-Dissolved			107.0		%		80-120	31-AUG-12
Magnesium (Mg)-Dissolved			100.4		%		80-120	31-AUG-12
Manganese (Mn)-Dissolved			102.6		%		80-120	31-AUG-12
Molybdenum (Mo)-Dissolved			100.6		%		80-120	31-AUG-12
Nickel (Ni)-Dissolved			99.0		%		80-120	31-AUG-12
Potassium (K)-Dissolved			101.1		%		80-120	31-AUG-12
Selenium (Se)-Dissolved			102.9		%		80-120	31-AUG-12
Silver (Ag)-Dissolved			102.4		%		80-120	31-AUG-12
Sodium (Na)-Dissolved			103.8		%		80-120	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-6 LCS								
Strontium (Sr)-Dissolved			98.1		%		80-120	31-AUG-12
Tellurium (Te)-Dissolved			100.5		%		80-120	31-AUG-12
Thallium (Tl)-Dissolved			99.9		%		80-120	31-AUG-12
Tin (Sn)-Dissolved			100.3		%		80-120	31-AUG-12
Titanium (Ti)-Dissolved			101.3		%		80-120	31-AUG-12
Tungsten (W)-Dissolved			97.9		%		80-120	31-AUG-12
Uranium (U)-Dissolved			91.4		%		80-120	31-AUG-12
Vanadium (V)-Dissolved			103.8		%		80-120	31-AUG-12
Zinc (Zn)-Dissolved			103.7		%		80-120	31-AUG-12
Zirconium (Zr)-Dissolved			96.3		%		80-120	31-AUG-12
WG1537917-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	31-AUG-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	31-AUG-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	31-AUG-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	31-AUG-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	31-AUG-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	31-AUG-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	31-AUG-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	31-AUG-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	31-AUG-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	31-AUG-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	31-AUG-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	31-AUG-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	31-AUG-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-1 MB								
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	31-AUG-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	31-AUG-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	31-AUG-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	31-AUG-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	31-AUG-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
WG1537917-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	31-AUG-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	31-AUG-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	31-AUG-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	31-AUG-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	31-AUG-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	31-AUG-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	31-AUG-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	31-AUG-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	31-AUG-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	31-AUG-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	31-AUG-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	31-AUG-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	31-AUG-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-5 MB								
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	31-AUG-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	31-AUG-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	31-AUG-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	31-AUG-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	31-AUG-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	31-AUG-12
WG1537917-4 MS		**L1199180-13**						
Aluminum (Al)-Dissolved			102.7		%		70-130	31-AUG-12
Antimony (Sb)-Dissolved			104.3		%		70-130	31-AUG-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Beryllium (Be)-Dissolved			111.7		%		70-130	31-AUG-12
Bismuth (Bi)-Dissolved			90.4		%		70-130	31-AUG-12
Cadmium (Cd)-Dissolved			126.8		%		70-130	31-AUG-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Chromium (Cr)-Dissolved			86.6		%		70-130	31-AUG-12
Cobalt (Co)-Dissolved			112.3		%		70-130	31-AUG-12
Copper (Cu)-Dissolved			113.2		%		70-130	31-AUG-12
Iron (Fe)-Dissolved			93.4		%		70-130	31-AUG-12
Lead (Pb)-Dissolved			92.0		%		70-130	31-AUG-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Molybdenum (Mo)-Dissolved			112.9		%		70-130	31-AUG-12
Nickel (Ni)-Dissolved			115.0		%		70-130	31-AUG-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Thallium (Tl)-Dissolved			93.6		%		70-130	31-AUG-12
Tin (Sn)-Dissolved			98.9		%		70-130	31-AUG-12
Titanium (Ti)-Dissolved			97.4		%		70-130	31-AUG-12
Tungsten (W)-Dissolved			98.3		%		70-130	31-AUG-12
Vanadium (V)-Dissolved			103.1		%		70-130	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-4 MS		**L1199180-13**						
Zinc (Zn)-Dissolved			103.2		%		70-130	31-AUG-12
Zirconium (Zr)-Dissolved			96.1		%		70-130	31-AUG-12
WG1537917-8 MS		**L1199233-10**						
Aluminum (Al)-Dissolved			94.5		%		70-130	31-AUG-12
Antimony (Sb)-Dissolved			101.8		%		70-130	31-AUG-12
Arsenic (As)-Dissolved			108.6		%		70-130	31-AUG-12
Barium (Ba)-Dissolved			129.0		%		70-130	31-AUG-12
Beryllium (Be)-Dissolved			105.6		%		70-130	31-AUG-12
Bismuth (Bi)-Dissolved			93.7		%		70-130	31-AUG-12
Boron (B)-Dissolved			111.2		%		70-130	31-AUG-12
Cadmium (Cd)-Dissolved			127.9		%		70-130	31-AUG-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Chromium (Cr)-Dissolved			98.9		%		70-130	31-AUG-12
Cobalt (Co)-Dissolved			98.1		%		70-130	31-AUG-12
Copper (Cu)-Dissolved			102.6		%		70-130	31-AUG-12
Iron (Fe)-Dissolved			98.3		%		70-130	31-AUG-12
Lead (Pb)-Dissolved			97.2		%		70-130	31-AUG-12
Lithium (Li)-Dissolved			111.9		%		70-130	31-AUG-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Molybdenum (Mo)-Dissolved			99.8		%		70-130	31-AUG-12
Nickel (Ni)-Dissolved			99.98		%		70-130	31-AUG-12
Potassium (K)-Dissolved			98.0		%		70-130	31-AUG-12
Selenium (Se)-Dissolved			113.8		%		70-130	31-AUG-12
Silver (Ag)-Dissolved			91.8		%		70-130	31-AUG-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	31-AUG-12
Tellurium (Te)-Dissolved			103.0		%		70-130	31-AUG-12
Thallium (Tl)-Dissolved			96.4		%		70-130	31-AUG-12
Tin (Sn)-Dissolved			99.8		%		70-130	31-AUG-12
Titanium (Ti)-Dissolved			98.2		%		70-130	31-AUG-12
Tungsten (W)-Dissolved			99.3		%		70-130	31-AUG-12
Uranium (U)-Dissolved			99.0		%		70-130	31-AUG-12
Vanadium (V)-Dissolved			102.3		%		70-130	31-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430038								
WG1537917-8 MS		**L1199233-10**						
Zinc (Zn)-Dissolved			98.5		%		70-130	31-AUG-12
Zirconium (Zr)-Dissolved			98.7		%		70-130	31-AUG-12
Batch R2430778								
WG1539328-10 LCS								
Aluminum (Al)-Dissolved			88.7		%		80-120	04-SEP-12
Antimony (Sb)-Dissolved			100.8		%		80-120	04-SEP-12
Arsenic (As)-Dissolved			98.9		%		80-120	04-SEP-12
Barium (Ba)-Dissolved			95.0		%		80-120	04-SEP-12
Beryllium (Be)-Dissolved			100.1		%		80-120	04-SEP-12
Bismuth (Bi)-Dissolved			100.1		%		80-120	04-SEP-12
Boron (B)-Dissolved			91.0		%		80-120	04-SEP-12
Cadmium (Cd)-Dissolved			99.98		%		80-120	04-SEP-12
Calcium (Ca)-Dissolved			96.5		%		80-120	04-SEP-12
Chromium (Cr)-Dissolved			101.0		%		80-120	04-SEP-12
Cobalt (Co)-Dissolved			100.8		%		80-120	04-SEP-12
Copper (Cu)-Dissolved			94.2		%		80-120	04-SEP-12
Iron (Fe)-Dissolved			105.6		%		80-120	04-SEP-12
Lead (Pb)-Dissolved			99.6		%		80-120	04-SEP-12
Lithium (Li)-Dissolved			97.8		%		80-120	04-SEP-12
Magnesium (Mg)-Dissolved			95.1		%		80-120	04-SEP-12
Manganese (Mn)-Dissolved			104.6		%		80-120	04-SEP-12
Molybdenum (Mo)-Dissolved			97.8		%		80-120	04-SEP-12
Nickel (Ni)-Dissolved			98.1		%		80-120	04-SEP-12
Potassium (K)-Dissolved			99.4		%		80-120	04-SEP-12
Selenium (Se)-Dissolved			88.8		%		80-120	04-SEP-12
Silver (Ag)-Dissolved			102.2		%		80-120	04-SEP-12
Sodium (Na)-Dissolved			97.7		%		80-120	04-SEP-12
Strontium (Sr)-Dissolved			94.5		%		80-120	04-SEP-12
Tellurium (Te)-Dissolved			104.9		%		80-120	04-SEP-12
Thallium (Tl)-Dissolved			100.6		%		80-120	04-SEP-12
Tin (Sn)-Dissolved			101.4		%		80-120	04-SEP-12
Titanium (Ti)-Dissolved			97.6		%		80-120	04-SEP-12
Tungsten (W)-Dissolved			97.1		%		80-120	04-SEP-12
Uranium (U)-Dissolved			98.7		%		80-120	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-10 LCS								
Vanadium (V)-Dissolved			99.8		%		80-120	04-SEP-12
Zinc (Zn)-Dissolved			98.0		%		80-120	04-SEP-12
Zirconium (Zr)-Dissolved			93.3		%		80-120	04-SEP-12
WG1539328-14 LCS								
Aluminum (Al)-Dissolved			89.3		%		80-120	04-SEP-12
Antimony (Sb)-Dissolved			103.1		%		80-120	04-SEP-12
Arsenic (As)-Dissolved			100.5		%		80-120	04-SEP-12
Barium (Ba)-Dissolved			97.6		%		80-120	04-SEP-12
Beryllium (Be)-Dissolved			95.8		%		80-120	04-SEP-12
Bismuth (Bi)-Dissolved			102.4		%		80-120	04-SEP-12
Boron (B)-Dissolved			89.7		%		80-120	04-SEP-12
Cadmium (Cd)-Dissolved			102.8		%		80-120	04-SEP-12
Calcium (Ca)-Dissolved			98.4		%		80-120	04-SEP-12
Chromium (Cr)-Dissolved			101.3		%		80-120	04-SEP-12
Cobalt (Co)-Dissolved			99.3		%		80-120	04-SEP-12
Copper (Cu)-Dissolved			96.9		%		80-120	04-SEP-12
Iron (Fe)-Dissolved			103.5		%		80-120	04-SEP-12
Lead (Pb)-Dissolved			101.2		%		80-120	04-SEP-12
Lithium (Li)-Dissolved			100.3		%		80-120	04-SEP-12
Magnesium (Mg)-Dissolved			93.8		%		80-120	04-SEP-12
Manganese (Mn)-Dissolved			104.3		%		80-120	04-SEP-12
Molybdenum (Mo)-Dissolved			96.6		%		80-120	04-SEP-12
Nickel (Ni)-Dissolved			100.3		%		80-120	04-SEP-12
Potassium (K)-Dissolved			99.4		%		80-120	04-SEP-12
Selenium (Se)-Dissolved			87.1		%		80-120	04-SEP-12
Silver (Ag)-Dissolved			103.4		%		80-120	04-SEP-12
Sodium (Na)-Dissolved			96.9		%		80-120	04-SEP-12
Strontium (Sr)-Dissolved			95.0		%		80-120	04-SEP-12
Tellurium (Te)-Dissolved			106.7		%		80-120	04-SEP-12
Thallium (Tl)-Dissolved			101.7		%		80-120	04-SEP-12
Tin (Sn)-Dissolved			102.1		%		80-120	04-SEP-12
Titanium (Ti)-Dissolved			103.1		%		80-120	04-SEP-12
Tungsten (W)-Dissolved			99.8		%		80-120	04-SEP-12
Uranium (U)-Dissolved			100.6		%		80-120	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-14 LCS								
Vanadium (V)-Dissolved			98.8		%		80-120	04-SEP-12
Zinc (Zn)-Dissolved			100.5		%		80-120	04-SEP-12
Zirconium (Zr)-Dissolved			94.7		%		80-120	04-SEP-12
WG1539328-2 LCS								
Aluminum (Al)-Dissolved			90.0		%		80-120	04-SEP-12
Antimony (Sb)-Dissolved			101.2		%		80-120	04-SEP-12
Arsenic (As)-Dissolved			97.8		%		80-120	04-SEP-12
Barium (Ba)-Dissolved			96.3		%		80-120	04-SEP-12
Beryllium (Be)-Dissolved			92.7		%		80-120	04-SEP-12
Bismuth (Bi)-Dissolved			99.7		%		80-120	04-SEP-12
Boron (B)-Dissolved			92.3		%		80-120	04-SEP-12
Cadmium (Cd)-Dissolved			100.6		%		80-120	04-SEP-12
Calcium (Ca)-Dissolved			98.4		%		80-120	04-SEP-12
Chromium (Cr)-Dissolved			100.4		%		80-120	04-SEP-12
Cobalt (Co)-Dissolved			97.3		%		80-120	04-SEP-12
Copper (Cu)-Dissolved			93.5		%		80-120	04-SEP-12
Iron (Fe)-Dissolved			102.7		%		80-120	04-SEP-12
Lead (Pb)-Dissolved			98.3		%		80-120	04-SEP-12
Lithium (Li)-Dissolved			95.4		%		80-120	04-SEP-12
Magnesium (Mg)-Dissolved			95.6		%		80-120	04-SEP-12
Manganese (Mn)-Dissolved			102.3		%		80-120	04-SEP-12
Molybdenum (Mo)-Dissolved			98.1		%		80-120	04-SEP-12
Nickel (Ni)-Dissolved			95.4		%		80-120	04-SEP-12
Potassium (K)-Dissolved			96.5		%		80-120	04-SEP-12
Selenium (Se)-Dissolved			89.6		%		80-120	04-SEP-12
Silver (Ag)-Dissolved			101.3		%		80-120	04-SEP-12
Sodium (Na)-Dissolved			98.1		%		80-120	04-SEP-12
Strontium (Sr)-Dissolved			93.8		%		80-120	04-SEP-12
Tellurium (Te)-Dissolved			100.3		%		80-120	04-SEP-12
Thallium (Tl)-Dissolved			99.2		%		80-120	04-SEP-12
Tin (Sn)-Dissolved			101.8		%		80-120	04-SEP-12
Titanium (Ti)-Dissolved			98.2		%		80-120	04-SEP-12
Tungsten (W)-Dissolved			98.8		%		80-120	04-SEP-12
Uranium (U)-Dissolved			96.9		%		80-120	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-2 LCS								
Vanadium (V)-Dissolved			97.5		%		80-120	04-SEP-12
Zinc (Zn)-Dissolved			97.0		%		80-120	04-SEP-12
Zirconium (Zr)-Dissolved			101.3		%		80-120	04-SEP-12
WG1539328-6 LCS								
Aluminum (Al)-Dissolved			91.7		%		80-120	04-SEP-12
Antimony (Sb)-Dissolved			102.5		%		80-120	04-SEP-12
Arsenic (As)-Dissolved			100.4		%		80-120	04-SEP-12
Barium (Ba)-Dissolved			96.1		%		80-120	04-SEP-12
Beryllium (Be)-Dissolved			99.0		%		80-120	04-SEP-12
Bismuth (Bi)-Dissolved			101.2		%		80-120	04-SEP-12
Boron (B)-Dissolved			93.9		%		80-120	04-SEP-12
Cadmium (Cd)-Dissolved			102.1		%		80-120	04-SEP-12
Calcium (Ca)-Dissolved			99.3		%		80-120	04-SEP-12
Chromium (Cr)-Dissolved			103.2		%		80-120	04-SEP-12
Cobalt (Co)-Dissolved			101.6		%		80-120	04-SEP-12
Copper (Cu)-Dissolved			97.1		%		80-120	04-SEP-12
Iron (Fe)-Dissolved			102.9		%		80-120	04-SEP-12
Lead (Pb)-Dissolved			100.3		%		80-120	04-SEP-12
Lithium (Li)-Dissolved			101.2		%		80-120	04-SEP-12
Magnesium (Mg)-Dissolved			97.2		%		80-120	04-SEP-12
Manganese (Mn)-Dissolved			107.2		%		80-120	04-SEP-12
Molybdenum (Mo)-Dissolved			98.8		%		80-120	04-SEP-12
Nickel (Ni)-Dissolved			101.0		%		80-120	04-SEP-12
Potassium (K)-Dissolved			102.0		%		80-120	04-SEP-12
Selenium (Se)-Dissolved			86.5		%		80-120	04-SEP-12
Silver (Ag)-Dissolved			103.4		%		80-120	04-SEP-12
Sodium (Na)-Dissolved			99.6		%		80-120	04-SEP-12
Strontium (Sr)-Dissolved			95.5		%		80-120	04-SEP-12
Tellurium (Te)-Dissolved			105.6		%		80-120	04-SEP-12
Thallium (Tl)-Dissolved			101.2		%		80-120	04-SEP-12
Tin (Sn)-Dissolved			100.6		%		80-120	04-SEP-12
Titanium (Ti)-Dissolved			100.7		%		80-120	04-SEP-12
Tungsten (W)-Dissolved			100.3		%		80-120	04-SEP-12
Uranium (U)-Dissolved			100.4		%		80-120	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-6 LCS								
Vanadium (V)-Dissolved			100.7		%		80-120	04-SEP-12
Zinc (Zn)-Dissolved			99.3		%		80-120	04-SEP-12
Zirconium (Zr)-Dissolved			103.0		%		80-120	04-SEP-12
WG1539328-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-1 MB								
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
WG1539328-13 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-13 MB								
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
WG1539328-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-5 MB								
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
WG1539328-9 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	04-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	04-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	04-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	04-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	04-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	04-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	04-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	04-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	04-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	04-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	04-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	04-SEP-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-9 MB								
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	04-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	04-SEP-12
WG1539328-16 MS		**L1201429-8**						
Aluminum (Al)-Dissolved			94.3		%		70-130	04-SEP-12
Antimony (Sb)-Dissolved			104.8		%		70-130	04-SEP-12
Arsenic (As)-Dissolved			99.9		%		70-130	04-SEP-12
Barium (Ba)-Dissolved			105.8		%		70-130	04-SEP-12
Beryllium (Be)-Dissolved			101.3		%		70-130	04-SEP-12
Bismuth (Bi)-Dissolved			90.5		%		70-130	04-SEP-12
Boron (B)-Dissolved			103.9		%		70-130	04-SEP-12
Cadmium (Cd)-Dissolved			125.4		%		70-130	04-SEP-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Chromium (Cr)-Dissolved			100.4		%		70-130	04-SEP-12
Cobalt (Co)-Dissolved			99.5		%		70-130	04-SEP-12
Copper (Cu)-Dissolved			99.0		%		70-130	04-SEP-12
Iron (Fe)-Dissolved			100.1		%		70-130	04-SEP-12
Lead (Pb)-Dissolved			97.2		%		70-130	04-SEP-12
Lithium (Li)-Dissolved			100.7		%		70-130	04-SEP-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Manganese (Mn)-Dissolved			104.8		%		70-130	04-SEP-12
Molybdenum (Mo)-Dissolved			95.9		%		70-130	04-SEP-12
Nickel (Ni)-Dissolved			99.3		%		70-130	04-SEP-12
Potassium (K)-Dissolved			99.4		%		70-130	04-SEP-12
Selenium (Se)-Dissolved			90.3		%		70-130	04-SEP-12
Silver (Ag)-Dissolved			104.5		%		70-130	04-SEP-12
Sodium (Na)-Dissolved			94.1		%		70-130	04-SEP-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Tellurium (Te)-Dissolved			107.6		%		70-130	04-SEP-12
Thallium (Tl)-Dissolved			96.5		%		70-130	04-SEP-12
Tin (Sn)-Dissolved			104.0		%		70-130	04-SEP-12
Titanium (Ti)-Dissolved			98.8		%		70-130	04-SEP-12
Tungsten (W)-Dissolved			100.8		%		70-130	04-SEP-12
Uranium (U)-Dissolved			100.3		%		70-130	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-16 MS		**L1201429-8**						
Vanadium (V)-Dissolved			99.2		%		70-130	04-SEP-12
Zinc (Zn)-Dissolved			102.6		%		70-130	04-SEP-12
Zirconium (Zr)-Dissolved			95.8		%		70-130	04-SEP-12
WG1539328-4 MS		**L1199831-2**						
Aluminum (Al)-Dissolved			96.6		%		70-130	04-SEP-12
Antimony (Sb)-Dissolved			106.5		%		70-130	04-SEP-12
Arsenic (As)-Dissolved			100.3		%		70-130	04-SEP-12
Barium (Ba)-Dissolved			99.0		%		70-130	04-SEP-12
Beryllium (Be)-Dissolved			107.1		%		70-130	04-SEP-12
Bismuth (Bi)-Dissolved			93.6		%		70-130	04-SEP-12
Boron (B)-Dissolved			96.8		%		70-130	04-SEP-12
Calcium (Ca)-Dissolved			103.0		%		70-130	04-SEP-12
Chromium (Cr)-Dissolved			104.3		%		70-130	04-SEP-12
Cobalt (Co)-Dissolved			103.7		%		70-130	04-SEP-12
Copper (Cu)-Dissolved			102.3		%		70-130	04-SEP-12
Iron (Fe)-Dissolved			103.3		%		70-130	04-SEP-12
Lead (Pb)-Dissolved			102.5		%		70-130	04-SEP-12
Lithium (Li)-Dissolved			102.6		%		70-130	04-SEP-12
Magnesium (Mg)-Dissolved			99.4		%		70-130	04-SEP-12
Manganese (Mn)-Dissolved			110.6		%		70-130	04-SEP-12
Molybdenum (Mo)-Dissolved			95.9		%		70-130	04-SEP-12
Nickel (Ni)-Dissolved			104.0		%		70-130	04-SEP-12
Potassium (K)-Dissolved			103.6		%		70-130	04-SEP-12
Selenium (Se)-Dissolved			86.9		%		70-130	04-SEP-12
Silver (Ag)-Dissolved			109.6		%		70-130	04-SEP-12
Sodium (Na)-Dissolved			100.7		%		70-130	04-SEP-12
Strontium (Sr)-Dissolved			96.0		%		70-130	04-SEP-12
Tellurium (Te)-Dissolved			104.3		%		70-130	04-SEP-12
Thallium (Tl)-Dissolved			99.5		%		70-130	04-SEP-12
Tin (Sn)-Dissolved			103.2		%		70-130	04-SEP-12
Titanium (Ti)-Dissolved			101.6		%		70-130	04-SEP-12
Tungsten (W)-Dissolved			99.4		%		70-130	04-SEP-12
Uranium (U)-Dissolved			100.9		%		70-130	04-SEP-12
Vanadium (V)-Dissolved			102.9		%		70-130	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-4 MS		**L1199831-2**						
Zinc (Zn)-Dissolved			105.1		%		70-130	04-SEP-12
Zirconium (Zr)-Dissolved			94.7		%		70-130	04-SEP-12
WG1539328-8 MS		**L1200426-3**						
Aluminum (Al)-Dissolved			102.3		%		70-130	04-SEP-12
Antimony (Sb)-Dissolved			104.6		%		70-130	04-SEP-12
Arsenic (As)-Dissolved			117.0		%		70-130	04-SEP-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Beryllium (Be)-Dissolved			106.0		%		70-130	04-SEP-12
Bismuth (Bi)-Dissolved			94.4		%		70-130	04-SEP-12
Boron (B)-Dissolved			109.6		%		70-130	04-SEP-12
Cadmium (Cd)-Dissolved			128.4		%		70-130	04-SEP-12
Chromium (Cr)-Dissolved			103.2		%		70-130	04-SEP-12
Cobalt (Co)-Dissolved			102.2		%		70-130	04-SEP-12
Copper (Cu)-Dissolved			98.7		%		70-130	04-SEP-12
Iron (Fe)-Dissolved			105.9		%		70-130	04-SEP-12
Lead (Pb)-Dissolved			98.8		%		70-130	04-SEP-12
Lithium (Li)-Dissolved			102.8		%		70-130	04-SEP-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Molybdenum (Mo)-Dissolved			100.8		%		70-130	04-SEP-12
Nickel (Ni)-Dissolved			97.2		%		70-130	04-SEP-12
Potassium (K)-Dissolved			104.1		%		70-130	04-SEP-12
Selenium (Se)-Dissolved			109.5		%		70-130	04-SEP-12
Silver (Ag)-Dissolved			77.1		%		70-130	04-SEP-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	04-SEP-12
Tellurium (Te)-Dissolved			121.6		%		70-130	04-SEP-12
Thallium (Tl)-Dissolved			97.6		%		70-130	04-SEP-12
Tin (Sn)-Dissolved			104.0		%		70-130	04-SEP-12
Titanium (Ti)-Dissolved			102.6		%		70-130	04-SEP-12
Tungsten (W)-Dissolved			101.2		%		70-130	04-SEP-12
Uranium (U)-Dissolved			104.1		%		70-130	04-SEP-12
Vanadium (V)-Dissolved			103.8		%		70-130	04-SEP-12
Zinc (Zn)-Dissolved			101.1		%		70-130	04-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2430778								
WG1539328-8 MS		**L1200426-3**						
Zirconium (Zr)-Dissolved			97.1		%		70-130	04-SEP-12
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-10 LCS								
Aluminum (Al)-Total			88.8		%		80-120	29-AUG-12
Antimony (Sb)-Total			102.4		%		80-120	29-AUG-12
Arsenic (As)-Total			101.1		%		80-120	29-AUG-12
Barium (Ba)-Total			90.5		%		80-120	29-AUG-12
Beryllium (Be)-Total			102.1		%		80-120	29-AUG-12
Bismuth (Bi)-Total			105.2		%		80-120	29-AUG-12
Boron (B)-Total			90.3		%		80-120	29-AUG-12
Cadmium (Cd)-Total			101.6		%		80-120	29-AUG-12
Calcium (Ca)-Total			99.1		%		80-120	29-AUG-12
Chromium (Cr)-Total			102.5		%		80-120	29-AUG-12
Cobalt (Co)-Total			96.8		%		80-120	29-AUG-12
Copper (Cu)-Total			98.8		%		80-120	29-AUG-12
Iron (Fe)-Total			99.9		%		80-120	29-AUG-12
Lead (Pb)-Total			102.8		%		80-120	29-AUG-12
Lithium (Li)-Total			114.9		%		80-120	29-AUG-12
Magnesium (Mg)-Total			96.3		%		80-120	29-AUG-12
Manganese (Mn)-Total			104.2		%		80-120	29-AUG-12
Molybdenum (Mo)-Total			97.8		%		80-120	29-AUG-12
Nickel (Ni)-Total			98.8		%		80-120	29-AUG-12
Potassium (K)-Total			96.7		%		80-120	29-AUG-12
Selenium (Se)-Total			101.7		%		80-120	29-AUG-12
Silver (Ag)-Total			104.3		%		80-120	29-AUG-12
Sodium (Na)-Total			97.0		%		80-120	29-AUG-12
Strontium (Sr)-Total			91.4		%		80-120	29-AUG-12
Tellurium (Te)-Total			102.3		%		80-120	29-AUG-12
Thallium (Tl)-Total			103.6		%		80-120	29-AUG-12
Tin (Sn)-Total			103.8		%		80-120	29-AUG-12
Titanium (Ti)-Total			100.2		%		80-120	29-AUG-12
Tungsten (W)-Total			101.3		%		80-120	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-10 LCS								
Uranium (U)-Total			93.9		%		80-120	29-AUG-12
Vanadium (V)-Total			99.4		%		80-120	29-AUG-12
Zinc (Zn)-Total			100.8		%		80-120	29-AUG-12
Zirconium (Zr)-Total			96.1		%		80-120	29-AUG-12
WG1535255-2 LCS								
Aluminum (Al)-Total			90.5		%		80-120	29-AUG-12
Antimony (Sb)-Total			103.3		%		80-120	29-AUG-12
Arsenic (As)-Total			100.4		%		80-120	29-AUG-12
Barium (Ba)-Total			91.5		%		80-120	29-AUG-12
Beryllium (Be)-Total			97.0		%		80-120	29-AUG-12
Bismuth (Bi)-Total			105.9		%		80-120	29-AUG-12
Boron (B)-Total			88.6		%		80-120	29-AUG-12
Cadmium (Cd)-Total			103.5		%		80-120	29-AUG-12
Calcium (Ca)-Total			100.4		%		80-120	29-AUG-12
Chromium (Cr)-Total			104.3		%		80-120	29-AUG-12
Cobalt (Co)-Total			99.3		%		80-120	29-AUG-12
Copper (Cu)-Total			97.0		%		80-120	29-AUG-12
Iron (Fe)-Total			99.7		%		80-120	29-AUG-12
Lead (Pb)-Total			102.0		%		80-120	29-AUG-12
Lithium (Li)-Total			103.9		%		80-120	29-AUG-12
Magnesium (Mg)-Total			97.3		%		80-120	29-AUG-12
Manganese (Mn)-Total			105.6		%		80-120	29-AUG-12
Molybdenum (Mo)-Total			97.2		%		80-120	29-AUG-12
Nickel (Ni)-Total			99.8		%		80-120	29-AUG-12
Potassium (K)-Total			98.2		%		80-120	29-AUG-12
Selenium (Se)-Total			97.1		%		80-120	29-AUG-12
Silver (Ag)-Total			103.1		%		80-120	29-AUG-12
Sodium (Na)-Total			101.2		%		80-120	29-AUG-12
Strontium (Sr)-Total			91.2		%		80-120	29-AUG-12
Tellurium (Te)-Total			108.1		%		80-120	29-AUG-12
Thallium (Tl)-Total			103.3		%		80-120	29-AUG-12
Tin (Sn)-Total			104.0		%		80-120	29-AUG-12
Titanium (Ti)-Total			97.8		%		80-120	29-AUG-12
Tungsten (W)-Total			100.2		%		80-120	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-2 LCS								
Uranium (U)-Total			94.3		%		80-120	29-AUG-12
Vanadium (V)-Total			100.4		%		80-120	29-AUG-12
Zinc (Zn)-Total			99.6		%		80-120	29-AUG-12
Zirconium (Zr)-Total			96.2		%		80-120	29-AUG-12
WG1535255-6 LCS								
Aluminum (Al)-Total			92.9		%		80-120	29-AUG-12
Antimony (Sb)-Total			104.2		%		80-120	29-AUG-12
Arsenic (As)-Total			103.9		%		80-120	29-AUG-12
Barium (Ba)-Total			92.4		%		80-120	29-AUG-12
Beryllium (Be)-Total			99.96		%		80-120	29-AUG-12
Bismuth (Bi)-Total			103.8		%		80-120	29-AUG-12
Boron (B)-Total			89.3		%		80-120	29-AUG-12
Cadmium (Cd)-Total			105.1		%		80-120	29-AUG-12
Calcium (Ca)-Total			102.8		%		80-120	29-AUG-12
Chromium (Cr)-Total			105.0		%		80-120	29-AUG-12
Cobalt (Co)-Total			100.4		%		80-120	29-AUG-12
Copper (Cu)-Total			101.2		%		80-120	29-AUG-12
Iron (Fe)-Total			100.7		%		80-120	29-AUG-12
Lead (Pb)-Total			101.1		%		80-120	29-AUG-12
Lithium (Li)-Total			99.9		%		80-120	29-AUG-12
Magnesium (Mg)-Total			101.6		%		80-120	29-AUG-12
Manganese (Mn)-Total			108.4		%		80-120	29-AUG-12
Molybdenum (Mo)-Total			101.4		%		80-120	29-AUG-12
Nickel (Ni)-Total			104.4		%		80-120	29-AUG-12
Potassium (K)-Total			100.7		%		80-120	29-AUG-12
Selenium (Se)-Total			95.9		%		80-120	29-AUG-12
Silver (Ag)-Total			107.5		%		80-120	29-AUG-12
Sodium (Na)-Total			103.1		%		80-120	29-AUG-12
Strontium (Sr)-Total			95.3		%		80-120	29-AUG-12
Tellurium (Te)-Total			104.1		%		80-120	29-AUG-12
Thallium (Tl)-Total			103.2		%		80-120	29-AUG-12
Tin (Sn)-Total			105.0		%		80-120	29-AUG-12
Titanium (Ti)-Total			103.1		%		80-120	29-AUG-12
Tungsten (W)-Total			101.4		%		80-120	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-6 LCS								
Uranium (U)-Total			92.2		%		80-120	29-AUG-12
Vanadium (V)-Total			101.9		%		80-120	29-AUG-12
Zinc (Zn)-Total			101.8		%		80-120	29-AUG-12
Zirconium (Zr)-Total			99.6		%		80-120	29-AUG-12
WG1535255-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	29-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	29-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	29-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	29-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	29-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	29-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	29-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	29-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	29-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	29-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	29-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	29-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	29-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	29-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	29-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	29-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	29-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	29-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	29-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	29-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	29-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-1 MB								
Uranium (U)-Total			<0.0050		mg/L		0.005	29-AUG-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	29-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	29-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	29-AUG-12
WG1535255-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	29-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	29-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	29-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	29-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	29-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	29-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	29-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	29-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	29-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	29-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	29-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	29-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	29-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	29-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	29-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	29-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	29-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	29-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	29-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	29-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	29-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-5 MB								
Uranium (U)-Total			<0.0050		mg/L		0.005	29-AUG-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	29-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	29-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	29-AUG-12
WG1535255-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	29-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	29-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	29-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	29-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	29-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	29-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	29-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	29-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	29-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	29-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	29-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	29-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	29-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	29-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	29-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	29-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	29-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	29-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	29-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	29-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	29-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	29-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	29-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	29-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	29-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	29-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-9 MB								
Uranium (U)-Total			<0.0050		mg/L		0.005	29-AUG-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	29-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	29-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	29-AUG-12
WG1535255-4 MS		**L1199086-1**						
Aluminum (Al)-Total			95.5		%		70-130	29-AUG-12
Antimony (Sb)-Total			N/A	MS-B	%		-	29-AUG-12
Arsenic (As)-Total			106.9		%		70-130	29-AUG-12
Barium (Ba)-Total			N/A	MS-B	%		-	29-AUG-12
Beryllium (Be)-Total			108.4		%		70-130	29-AUG-12
Bismuth (Bi)-Total			84.8		%		70-130	29-AUG-12
Boron (B)-Total			N/A	MS-B	%		-	29-AUG-12
Cadmium (Cd)-Total			127.6		%		70-130	29-AUG-12
Calcium (Ca)-Total			N/A	MS-B	%		-	29-AUG-12
Chromium (Cr)-Total			103.2		%		70-130	29-AUG-12
Cobalt (Co)-Total			95.9		%		70-130	29-AUG-12
Copper (Cu)-Total			98.4		%		70-130	29-AUG-12
Iron (Fe)-Total			99.4		%		70-130	29-AUG-12
Lead (Pb)-Total			95.5		%		70-130	29-AUG-12
Lithium (Li)-Total			124.6		%		70-130	29-AUG-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	29-AUG-12
Manganese (Mn)-Total			N/A	MS-B	%		-	29-AUG-12
Molybdenum (Mo)-Total			N/A	MS-B	%		-	29-AUG-12
Nickel (Ni)-Total			93.1		%		70-130	29-AUG-12
Selenium (Se)-Total			102.7		%		70-130	29-AUG-12
Silver (Ag)-Total			99.6		%		70-130	29-AUG-12
Sodium (Na)-Total			N/A	MS-B	%		-	29-AUG-12
Strontium (Sr)-Total			N/A	MS-B	%		-	29-AUG-12
Tellurium (Te)-Total			109.5		%		70-130	29-AUG-12
Thallium (Tl)-Total			88.9		%		70-130	29-AUG-12
Tin (Sn)-Total			105.3		%		70-130	29-AUG-12
Titanium (Ti)-Total			97.7		%		70-130	29-AUG-12
Tungsten (W)-Total			100.3		%		70-130	29-AUG-12
Uranium (U)-Total			93.1		%		70-130	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-4 MS		**L1199086-1**						
Vanadium (V)-Total			105.4		%		70-130	29-AUG-12
Zinc (Zn)-Total			98.6		%		70-130	29-AUG-12
Zirconium (Zr)-Total			96.5		%		70-130	29-AUG-12
WG1535255-8 MS		**L1199128-11**						
Aluminum (Al)-Total			115.0		%		70-130	29-AUG-12
Antimony (Sb)-Total			104.9		%		70-130	29-AUG-12
Arsenic (As)-Total			105.4		%		70-130	29-AUG-12
Barium (Ba)-Total			94.2		%		70-130	29-AUG-12
Beryllium (Be)-Total			110.4		%		70-130	29-AUG-12
Bismuth (Bi)-Total			96.0		%		70-130	29-AUG-12
Boron (B)-Total			107.0		%		70-130	29-AUG-12
Calcium (Ca)-Total			N/A	MS-B	%		-	29-AUG-12
Chromium (Cr)-Total			106.1		%		70-130	29-AUG-12
Cobalt (Co)-Total			100.7		%		70-130	29-AUG-12
Copper (Cu)-Total			101.7		%		70-130	29-AUG-12
Iron (Fe)-Total			100.7		%		70-130	29-AUG-12
Lead (Pb)-Total			106.7		%		70-130	29-AUG-12
Lithium (Li)-Total			123.1		%		70-130	29-AUG-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	29-AUG-12
Manganese (Mn)-Total			108.5		%		70-130	29-AUG-12
Molybdenum (Mo)-Total			101.0		%		70-130	29-AUG-12
Nickel (Ni)-Total			105.0		%		70-130	29-AUG-12
Potassium (K)-Total			101.7		%		70-130	29-AUG-12
Selenium (Se)-Total			105.0		%		70-130	29-AUG-12
Silver (Ag)-Total			108.0		%		70-130	29-AUG-12
Sodium (Na)-Total			98.8		%		70-130	29-AUG-12
Strontium (Sr)-Total			N/A	MS-B	%		-	29-AUG-12
Tellurium (Te)-Total			105.4		%		70-130	29-AUG-12
Thallium (Tl)-Total			94.9		%		70-130	29-AUG-12
Tin (Sn)-Total			105.6		%		70-130	29-AUG-12
Titanium (Ti)-Total			98.6		%		70-130	29-AUG-12
Tungsten (W)-Total			100.8		%		70-130	29-AUG-12
Uranium (U)-Total			104.2		%		70-130	29-AUG-12
Vanadium (V)-Total			104.9		%		70-130	29-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2426842								
WG1535255-8 MS		**L1199128-11**						
Zinc (Zn)-Total			103.2		%		70-130	29-AUG-12
Zirconium (Zr)-Total			100.3		%		70-130	29-AUG-12
Batch R2427823								
WG1536097-10 LCS								
Aluminum (Al)-Total			89.5		%		80-120	30-AUG-12
Antimony (Sb)-Total			102.8		%		80-120	30-AUG-12
Arsenic (As)-Total			99.5		%		80-120	30-AUG-12
Barium (Ba)-Total			97.1		%		80-120	30-AUG-12
Beryllium (Be)-Total			112.4		%		80-120	30-AUG-12
Bismuth (Bi)-Total			102.0		%		80-120	30-AUG-12
Boron (B)-Total			99.4		%		80-120	30-AUG-12
Cadmium (Cd)-Total			101.3		%		80-120	30-AUG-12
Calcium (Ca)-Total			100.6		%		80-120	30-AUG-12
Chromium (Cr)-Total			105.6		%		80-120	30-AUG-12
Cobalt (Co)-Total			102.1		%		80-120	30-AUG-12
Copper (Cu)-Total			97.4		%		80-120	30-AUG-12
Iron (Fe)-Total			103.0		%		80-120	30-AUG-12
Lead (Pb)-Total			99.6		%		80-120	30-AUG-12
Lithium (Li)-Total			106.1		%		80-120	30-AUG-12
Magnesium (Mg)-Total			98.4		%		80-120	30-AUG-12
Manganese (Mn)-Total			102.7		%		80-120	30-AUG-12
Molybdenum (Mo)-Total			100.6		%		80-120	30-AUG-12
Nickel (Ni)-Total			98.9		%		80-120	30-AUG-12
Potassium (K)-Total			99.3		%		80-120	30-AUG-12
Selenium (Se)-Total			94.7		%		80-120	30-AUG-12
Silver (Ag)-Total			100.9		%		80-120	30-AUG-12
Sodium (Na)-Total			99.1		%		80-120	30-AUG-12
Strontium (Sr)-Total			94.6		%		80-120	30-AUG-12
Tellurium (Te)-Total			100.5		%		80-120	30-AUG-12
Thallium (Tl)-Total			102.0		%		80-120	30-AUG-12
Tin (Sn)-Total			101.9		%		80-120	30-AUG-12
Titanium (Ti)-Total			102.6		%		80-120	30-AUG-12
Tungsten (W)-Total			98.6		%		80-120	30-AUG-12
Uranium (U)-Total			93.5		%		80-120	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-10 LCS								
Vanadium (V)-Total			104.4		%		80-120	30-AUG-12
Zinc (Zn)-Total			100.5		%		80-120	30-AUG-12
Zirconium (Zr)-Total			95.4		%		80-120	30-AUG-12
WG1536097-2 LCS								
Aluminum (Al)-Total			84.1		%		80-120	30-AUG-12
Antimony (Sb)-Total			97.4		%		80-120	30-AUG-12
Arsenic (As)-Total			92.3		%		80-120	30-AUG-12
Barium (Ba)-Total			92.3		%		80-120	30-AUG-12
Beryllium (Be)-Total			93.8		%		80-120	30-AUG-12
Bismuth (Bi)-Total			96.0		%		80-120	30-AUG-12
Boron (B)-Total			90.9		%		80-120	30-AUG-12
Cadmium (Cd)-Total			96.9		%		80-120	30-AUG-12
Calcium (Ca)-Total			94.5		%		80-120	30-AUG-12
Chromium (Cr)-Total			98.8		%		80-120	30-AUG-12
Cobalt (Co)-Total			95.4		%		80-120	30-AUG-12
Copper (Cu)-Total			91.7		%		80-120	30-AUG-12
Iron (Fe)-Total			92.4		%		80-120	30-AUG-12
Lead (Pb)-Total			96.0		%		80-120	30-AUG-12
Lithium (Li)-Total			91.8		%		80-120	30-AUG-12
Magnesium (Mg)-Total			91.9		%		80-120	30-AUG-12
Manganese (Mn)-Total			95.9		%		80-120	30-AUG-12
Molybdenum (Mo)-Total			91.7		%		80-120	30-AUG-12
Nickel (Ni)-Total			94.1		%		80-120	30-AUG-12
Potassium (K)-Total			93.5		%		80-120	30-AUG-12
Selenium (Se)-Total			90.1		%		80-120	30-AUG-12
Silver (Ag)-Total			94.5		%		80-120	30-AUG-12
Sodium (Na)-Total			88.4		%		80-120	30-AUG-12
Strontium (Sr)-Total			86.9		%		80-120	30-AUG-12
Tellurium (Te)-Total			97.1		%		80-120	30-AUG-12
Thallium (Tl)-Total			95.8		%		80-120	30-AUG-12
Tin (Sn)-Total			96.0		%		80-120	30-AUG-12
Titanium (Ti)-Total			96.3		%		80-120	30-AUG-12
Tungsten (W)-Total			94.3		%		80-120	30-AUG-12
Uranium (U)-Total			90.9		%		80-120	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-2 LCS								
Vanadium (V)-Total			95.9		%		80-120	30-AUG-12
Zinc (Zn)-Total			95.2		%		80-120	30-AUG-12
Zirconium (Zr)-Total			87.9		%		80-120	30-AUG-12
WG1536097-6 LCS								
Aluminum (Al)-Total			87.1		%		80-120	30-AUG-12
Antimony (Sb)-Total			96.7		%		80-120	30-AUG-12
Arsenic (As)-Total			94.9		%		80-120	30-AUG-12
Barium (Ba)-Total			91.8		%		80-120	30-AUG-12
Beryllium (Be)-Total			95.2		%		80-120	30-AUG-12
Bismuth (Bi)-Total			95.4		%		80-120	30-AUG-12
Boron (B)-Total			92.8		%		80-120	30-AUG-12
Cadmium (Cd)-Total			96.3		%		80-120	30-AUG-12
Calcium (Ca)-Total			95.7		%		80-120	30-AUG-12
Chromium (Cr)-Total			101.0		%		80-120	30-AUG-12
Cobalt (Co)-Total			97.8		%		80-120	30-AUG-12
Copper (Cu)-Total			95.6		%		80-120	30-AUG-12
Iron (Fe)-Total			98.1		%		80-120	30-AUG-12
Lead (Pb)-Total			94.6		%		80-120	30-AUG-12
Lithium (Li)-Total			97.9		%		80-120	30-AUG-12
Magnesium (Mg)-Total			96.2		%		80-120	30-AUG-12
Manganese (Mn)-Total			99.4		%		80-120	30-AUG-12
Molybdenum (Mo)-Total			94.4		%		80-120	30-AUG-12
Nickel (Ni)-Total			94.6		%		80-120	30-AUG-12
Potassium (K)-Total			96.4		%		80-120	30-AUG-12
Selenium (Se)-Total			92.0		%		80-120	30-AUG-12
Silver (Ag)-Total			94.7		%		80-120	30-AUG-12
Sodium (Na)-Total			94.6		%		80-120	30-AUG-12
Strontium (Sr)-Total			89.1		%		80-120	30-AUG-12
Tellurium (Te)-Total			95.3		%		80-120	30-AUG-12
Thallium (Tl)-Total			95.2		%		80-120	30-AUG-12
Tin (Sn)-Total			94.9		%		80-120	30-AUG-12
Titanium (Ti)-Total			95.9		%		80-120	30-AUG-12
Tungsten (W)-Total			93.5		%		80-120	30-AUG-12
Uranium (U)-Total			89.9		%		80-120	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-6 LCS								
Vanadium (V)-Total			97.7		%		80-120	30-AUG-12
Zinc (Zn)-Total			97.4		%		80-120	30-AUG-12
Zirconium (Zr)-Total			91.2		%		80-120	30-AUG-12
WG1536097-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	30-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	30-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	30-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	30-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	30-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	30-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	30-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	30-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	30-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	30-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	30-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	30-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	30-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	30-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	30-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	30-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	30-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	30-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	30-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	30-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	30-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	30-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	30-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	30-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	30-AUG-12
Uranium (U)-Total			<0.0050		mg/L		0.005	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-1 MB								
Vanadium (V)-Total			<0.0010		mg/L		0.001	30-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	30-AUG-12
WG1536097-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	30-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	30-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	30-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	30-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	30-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	30-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	30-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	30-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	30-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	30-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	30-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	30-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	30-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	30-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	30-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	30-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	30-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	30-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	30-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	30-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	30-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	30-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	30-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	30-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	30-AUG-12
Uranium (U)-Total			<0.0050		mg/L		0.005	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-5 MB								
Vanadium (V)-Total			<0.0010		mg/L		0.001	30-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	30-AUG-12
WG1536097-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	30-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	30-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	30-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	30-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	30-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	30-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	30-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	30-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	30-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	30-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	30-AUG-12
Iron (Fe)-Total			<0.020		mg/L		0.02	30-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	30-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	30-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	30-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	30-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	30-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	30-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	30-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	30-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	30-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	30-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	30-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	30-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	30-AUG-12
Uranium (U)-Total			<0.0050		mg/L		0.005	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-9 MB								
Vanadium (V)-Total			<0.0010		mg/L		0.001	30-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	30-AUG-12
WG1536097-12 MS		**L1200564-6**						
Aluminum (Al)-Total			101.6		%		70-130	30-AUG-12
Antimony (Sb)-Total			104.5		%		70-130	30-AUG-12
Arsenic (As)-Total			109.2		%		70-130	30-AUG-12
Barium (Ba)-Total			N/A	MS-B	%		-	30-AUG-12
Beryllium (Be)-Total			122.1		%		70-130	30-AUG-12
Bismuth (Bi)-Total			91.8		%		70-130	30-AUG-12
Boron (B)-Total			N/A	MS-B	%		-	30-AUG-12
Cadmium (Cd)-Total			124.6		%		70-130	30-AUG-12
Calcium (Ca)-Total			N/A	MS-B	%		-	30-AUG-12
Chromium (Cr)-Total			117.5		%		70-130	30-AUG-12
Cobalt (Co)-Total			129.3		%		70-130	30-AUG-12
Copper (Cu)-Total			93.9		%		70-130	30-AUG-12
Lead (Pb)-Total			96.8		%		70-130	30-AUG-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	30-AUG-12
Manganese (Mn)-Total			N/A	MS-B	%		-	30-AUG-12
Molybdenum (Mo)-Total			112.1		%		70-130	30-AUG-12
Nickel (Ni)-Total			95.7		%		70-130	30-AUG-12
Potassium (K)-Total			N/A	MS-B	%		-	30-AUG-12
Selenium (Se)-Total			109.3		%		70-130	30-AUG-12
Silver (Ag)-Total			96.3		%		70-130	30-AUG-12
Sodium (Na)-Total			N/A	MS-B	%		-	30-AUG-12
Strontium (Sr)-Total			N/A	MS-B	%		-	30-AUG-12
Tellurium (Te)-Total			111.4		%		70-130	30-AUG-12
Thallium (Tl)-Total			95.2		%		70-130	30-AUG-12
Tin (Sn)-Total			100.9		%		70-130	30-AUG-12
Tungsten (W)-Total			100.4		%		70-130	30-AUG-12
Vanadium (V)-Total			122.9		%		70-130	30-AUG-12
Zinc (Zn)-Total			99.0		%		70-130	30-AUG-12
Zirconium (Zr)-Total			94.3		%		70-130	30-AUG-12
WG1536097-8 MS		**L1200045-3**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427823								
WG1536097-8 MS		**L1200045-3**						
Aluminum (Al)-Total			123.1		%		70-130	30-AUG-12
Antimony (Sb)-Total			103.2		%		70-130	30-AUG-12
Arsenic (As)-Total			109.7		%		70-130	30-AUG-12
Barium (Ba)-Total			N/A	MS-B	%		-	30-AUG-12
Beryllium (Be)-Total			113.3		%		70-130	30-AUG-12
Bismuth (Bi)-Total			97.0		%		70-130	30-AUG-12
Boron (B)-Total			119.4		%		70-130	30-AUG-12
Cadmium (Cd)-Total			126.3		%		70-130	30-AUG-12
Calcium (Ca)-Total			N/A	MS-B	%		-	30-AUG-12
Chromium (Cr)-Total			107.9		%		70-130	30-AUG-12
Cobalt (Co)-Total			103.1		%		70-130	30-AUG-12
Copper (Cu)-Total			98.1		%		70-130	30-AUG-12
Iron (Fe)-Total			111.2		%		70-130	30-AUG-12
Lead (Pb)-Total			99.0		%		70-130	30-AUG-12
Lithium (Li)-Total			125.8		%		70-130	30-AUG-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	30-AUG-12
Manganese (Mn)-Total			124.7		%		70-130	30-AUG-12
Molybdenum (Mo)-Total			99.8		%		70-130	30-AUG-12
Nickel (Ni)-Total			94.8		%		70-130	30-AUG-12
Potassium (K)-Total			N/A	MS-B	%		-	30-AUG-12
Selenium (Se)-Total			95.2		%		70-130	30-AUG-12
Silver (Ag)-Total			101.5		%		70-130	30-AUG-12
Sodium (Na)-Total			121.9		%		70-130	30-AUG-12
Strontium (Sr)-Total			N/A	MS-B	%		-	30-AUG-12
Tellurium (Te)-Total			100.2		%		70-130	30-AUG-12
Thallium (Tl)-Total			98.2		%		70-130	30-AUG-12
Tin (Sn)-Total			102.0		%		70-130	30-AUG-12
Titanium (Ti)-Total			115.3		%		70-130	30-AUG-12
Tungsten (W)-Total			100.7		%		70-130	30-AUG-12
Vanadium (V)-Total			108.7		%		70-130	30-AUG-12
Zinc (Zn)-Total			100.4		%		70-130	30-AUG-12
Zirconium (Zr)-Total			92.5		%		70-130	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427839								
WG1535255-11 DUP		**L1199233-9**						
Aluminum (Al)-Total		0.0540	0.0557		mg/L	3.1	20	30-AUG-12
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	30-AUG-12
Arsenic (As)-Total		0.0011	0.0011		mg/L	3.4	20	30-AUG-12
Barium (Ba)-Total		0.015	0.015		mg/L	1.3	20	30-AUG-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	30-AUG-12
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	30-AUG-12
Calcium (Ca)-Total		19.1	19.5		mg/L	2.0	20	30-AUG-12
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Cobalt (Co)-Total		0.00411	0.00421		mg/L	2.4	20	30-AUG-12
Copper (Cu)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Iron (Fe)-Total		3.97	4.03		mg/L	1.7	20	30-AUG-12
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	30-AUG-12
Magnesium (Mg)-Total		4.23	4.25		mg/L	0.5	20	30-AUG-12
Manganese (Mn)-Total		1.86	1.87		mg/L	0.4	20	30-AUG-12
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	30-AUG-12
Potassium (K)-Total		<0.50	<0.50	RPD-NA	mg/L	N/A	20	30-AUG-12
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	30-AUG-12
Sodium (Na)-Total		1.21	1.21		mg/L	0.6	20	30-AUG-12
Strontium (Sr)-Total		0.0444	0.0457		mg/L	2.9	20	30-AUG-12
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	30-AUG-12
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Titanium (Ti)-Total		<0.0020	0.0020	RPD-NA	mg/L	N/A	20	30-AUG-12
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	30-AUG-12
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	30-AUG-12
Vanadium (V)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	30-AUG-12
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	30-AUG-12
WG1535255-14 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427839								
WG1535255-14 LCS								
Aluminum (Al)-Total			91.5		%		80-120	30-AUG-12
Antimony (Sb)-Total			104.4		%		80-120	30-AUG-12
Arsenic (As)-Total			98.4		%		80-120	30-AUG-12
Barium (Ba)-Total			99.0		%		80-120	30-AUG-12
Beryllium (Be)-Total			103.8		%		80-120	30-AUG-12
Bismuth (Bi)-Total			101.5		%		80-120	30-AUG-12
Boron (B)-Total			93.8		%		80-120	30-AUG-12
Cadmium (Cd)-Total			102.9		%		80-120	30-AUG-12
Calcium (Ca)-Total			100.0		%		80-120	30-AUG-12
Chromium (Cr)-Total			104.4		%		80-120	30-AUG-12
Cobalt (Co)-Total			100.8		%		80-120	30-AUG-12
Copper (Cu)-Total			98.0		%		80-120	30-AUG-12
Iron (Fe)-Total			98.1		%		80-120	30-AUG-12
Lead (Pb)-Total			101.6		%		80-120	30-AUG-12
Lithium (Li)-Total			102.2		%		80-120	30-AUG-12
Magnesium (Mg)-Total			100.6		%		80-120	30-AUG-12
Manganese (Mn)-Total			103.4		%		80-120	30-AUG-12
Molybdenum (Mo)-Total			99.0		%		80-120	30-AUG-12
Nickel (Ni)-Total			99.4		%		80-120	30-AUG-12
Potassium (K)-Total			100.6		%		80-120	30-AUG-12
Selenium (Se)-Total			96.7		%		80-120	30-AUG-12
Silver (Ag)-Total			100.9		%		80-120	30-AUG-12
Sodium (Na)-Total			96.1		%		80-120	30-AUG-12
Strontium (Sr)-Total			92.4		%		80-120	30-AUG-12
Tellurium (Te)-Total			102.2		%		80-120	30-AUG-12
Thallium (Tl)-Total			102.8		%		80-120	30-AUG-12
Tin (Sn)-Total			102.0		%		80-120	30-AUG-12
Titanium (Ti)-Total			103.5		%		80-120	30-AUG-12
Tungsten (W)-Total			99.1		%		80-120	30-AUG-12
Uranium (U)-Total			94.9		%		80-120	30-AUG-12
Vanadium (V)-Total			100.8		%		80-120	30-AUG-12
Zinc (Zn)-Total			101.6		%		80-120	30-AUG-12
Zirconium (Zr)-Total			94.8		%		80-120	30-AUG-12
WG1535255-13 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427839								
WG1535255-13 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	30-AUG-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	30-AUG-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	30-AUG-12
Barium (Ba)-Total			<0.010		mg/L		0.01	30-AUG-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	30-AUG-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	30-AUG-12
Boron (B)-Total			<0.050		mg/L		0.05	30-AUG-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	30-AUG-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	30-AUG-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	30-AUG-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	30-AUG-12
Iron (Fe)-Total			0.041	A	mg/L		0.02	30-AUG-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	30-AUG-12
Lithium (Li)-Total			<0.050		mg/L		0.05	30-AUG-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	30-AUG-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	30-AUG-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	30-AUG-12
Potassium (K)-Total			<0.50		mg/L		0.5	30-AUG-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	30-AUG-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	30-AUG-12
Sodium (Na)-Total			<0.10		mg/L		0.1	30-AUG-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	30-AUG-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	30-AUG-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	30-AUG-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	30-AUG-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	30-AUG-12
Tungsten (W)-Total			<0.010		mg/L		0.01	30-AUG-12
Uranium (U)-Total			<0.0050		mg/L		0.005	30-AUG-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	30-AUG-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	30-AUG-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	30-AUG-12
COMMENTS: No Fe samples <5x LOR in run.								
WG1535255-12 MS		**L1199233-9**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2427839								
WG1535255-12 MS		**L1199233-9**						
Aluminum (Al)-Total			96.1		%		70-130	30-AUG-12
Antimony (Sb)-Total			103.4		%		70-130	30-AUG-12
Arsenic (As)-Total			99.5		%		70-130	30-AUG-12
Barium (Ba)-Total			98.6		%		70-130	30-AUG-12
Beryllium (Be)-Total			113.2		%		70-130	30-AUG-12
Bismuth (Bi)-Total			100.4		%		70-130	30-AUG-12
Boron (B)-Total			103.8		%		70-130	30-AUG-12
Calcium (Ca)-Total			N/A	MS-B	%		-	30-AUG-12
Chromium (Cr)-Total			104.2		%		70-130	30-AUG-12
Cobalt (Co)-Total			102.5		%		70-130	30-AUG-12
Copper (Cu)-Total			102.6		%		70-130	30-AUG-12
Iron (Fe)-Total			N/A	MS-B	%		-	30-AUG-12
Lead (Pb)-Total			102.9		%		70-130	30-AUG-12
Lithium (Li)-Total			120.2		%		70-130	30-AUG-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	30-AUG-12
Manganese (Mn)-Total			N/A	MS-B	%		-	30-AUG-12
Molybdenum (Mo)-Total			99.4		%		70-130	30-AUG-12
Nickel (Ni)-Total			101.6		%		70-130	30-AUG-12
Potassium (K)-Total			107.5		%		70-130	30-AUG-12
Selenium (Se)-Total			105.2		%		70-130	30-AUG-12
Silver (Ag)-Total			104.3		%		70-130	30-AUG-12
Sodium (Na)-Total			88.8		%		70-130	30-AUG-12
Strontium (Sr)-Total			N/A	MS-B	%		-	30-AUG-12
Tellurium (Te)-Total			102.8		%		70-130	30-AUG-12
Thallium (Tl)-Total			101.6		%		70-130	30-AUG-12
Tin (Sn)-Total			103.2		%		70-130	30-AUG-12
Titanium (Ti)-Total			105.6		%		70-130	30-AUG-12
Tungsten (W)-Total			100.1		%		70-130	30-AUG-12
Uranium (U)-Total			103.2		%		70-130	30-AUG-12
Vanadium (V)-Total			105.1		%		70-130	30-AUG-12
Zinc (Zn)-Total			102.7		%		70-130	30-AUG-12
Zirconium (Zr)-Total			95.7		%		70-130	30-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2430558								
WG1536097-14 LCS								
Aluminum (Al)-Total			93.6		%		80-120	04-SEP-12
Antimony (Sb)-Total			106.2		%		80-120	04-SEP-12
Arsenic (As)-Total			106.2		%		80-120	04-SEP-12
Barium (Ba)-Total			99.6		%		80-120	04-SEP-12
Beryllium (Be)-Total			97.7		%		80-120	04-SEP-12
Bismuth (Bi)-Total			103.4		%		80-120	04-SEP-12
Boron (B)-Total			91.3		%		80-120	04-SEP-12
Cadmium (Cd)-Total			105.3		%		80-120	04-SEP-12
Calcium (Ca)-Total			99.6		%		80-120	04-SEP-12
Chromium (Cr)-Total			101.9		%		80-120	04-SEP-12
Cobalt (Co)-Total			99.0		%		80-120	04-SEP-12
Copper (Cu)-Total			100.9		%		80-120	04-SEP-12
Iron (Fe)-Total			109.7		%		80-120	04-SEP-12
Lead (Pb)-Total			102.5		%		80-120	04-SEP-12
Lithium (Li)-Total			99.3		%		80-120	04-SEP-12
Magnesium (Mg)-Total			98.9		%		80-120	04-SEP-12
Manganese (Mn)-Total			104.0		%		80-120	04-SEP-12
Molybdenum (Mo)-Total			104.4		%		80-120	04-SEP-12
Nickel (Ni)-Total			103.0		%		80-120	04-SEP-12
Potassium (K)-Total			100.4		%		80-120	04-SEP-12
Selenium (Se)-Total			102.7		%		80-120	04-SEP-12
Silver (Ag)-Total			107.6		%		80-120	04-SEP-12
Sodium (Na)-Total			100.2		%		80-120	04-SEP-12
Strontium (Sr)-Total			99.5		%		80-120	04-SEP-12
Tellurium (Te)-Total			108.2		%		80-120	04-SEP-12
Thallium (Tl)-Total			103.8		%		80-120	04-SEP-12
Tin (Sn)-Total			105.0		%		80-120	04-SEP-12
Titanium (Ti)-Total			101.6		%		80-120	04-SEP-12
Tungsten (W)-Total			102.1		%		80-120	04-SEP-12
Uranium (U)-Total			100.6		%		80-120	04-SEP-12
Vanadium (V)-Total			101.0		%		80-120	04-SEP-12
Zinc (Zn)-Total			104.4		%		80-120	04-SEP-12
Zirconium (Zr)-Total			99.4		%		80-120	04-SEP-12
WG1536097-13 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2430558								
WG1536097-13 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	04-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	04-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	04-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	04-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	04-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	04-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	04-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	04-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	04-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	04-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	04-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	04-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	04-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	04-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	04-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	04-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	04-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	04-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	04-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	04-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	04-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	04-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	04-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	04-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	04-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	04-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	04-SEP-12
Tungsten (W)-Total			<0.010		mg/L		0.01	04-SEP-12
Uranium (U)-Total			<0.0050		mg/L		0.005	04-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	04-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	04-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	04-SEP-12
NH3-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2426382								
WG1535176-10 LCS								
Ammonia, Total (as N)			97.0		%		85-115	28-AUG-12
WG1535176-2 LCS								
Ammonia, Total (as N)			96.6		%		85-115	28-AUG-12
WG1535176-6 LCS								
Ammonia, Total (as N)			97.7		%		85-115	28-AUG-12
WG1535176-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	28-AUG-12
WG1535176-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	28-AUG-12
WG1535176-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	28-AUG-12
WG1535176-12 MS		**L1199180-18**						
Ammonia, Total (as N)			117.1		%		75-125	28-AUG-12
WG1535176-4 MS		**L1199075-1**						
Ammonia, Total (as N)			88.5		%		75-125	28-AUG-12
WG1535176-8 MS		**L1199114-10**						
Ammonia, Total (as N)			98.2		%		75-125	28-AUG-12
NO2-IC-TB	**Water**							
Batch R2424550								
WG1534702-15 DUP		**L1199233-1**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	24-AUG-12
WG1534702-10 LCS								
Nitrite (as N)			94.9		%		90-110	24-AUG-12
WG1534702-14 LCS								
Nitrite (as N)			96.2		%		90-110	24-AUG-12
WG1534702-18 LCS								
Nitrite (as N)			98.1		%		90-110	24-AUG-12
WG1534702-2 LCS								
Nitrite (as N)			93.3		%		90-110	24-AUG-12
WG1534702-22 LCS								
Nitrite (as N)			96.4		%		90-110	24-AUG-12
WG1534702-6 LCS								
Nitrite (as N)			94.5		%		90-110	24-AUG-12
WG1534702-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-13 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-17 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2424550								
WG1534702-17 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-21 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	24-AUG-12
WG1534702-12 MS		**L1199180-7**						
Nitrite (as N)			94.0		%		75-115	24-AUG-12
WG1534702-16 MS		**L1199233-1**						
Nitrite (as N)			100.4		%		75-115	24-AUG-12
WG1534702-20 MS		**L1199413-1**						
Nitrite (as N)			97.4		%		75-115	24-AUG-12
WG1534702-4 MS		**L1199105-2**						
Nitrite (as N)			99.2		%		75-115	24-AUG-12
WG1534702-8 MS		**L1199128-3**						
Nitrite (as N)			101.8		%		75-115	24-AUG-12
NO3-IC-TB	**Water**							
Batch R2424550								
WG1534702-15 DUP		**L1199233-1**						
Nitrate (as N)		<0.030	<0.030	RPD-NA	mg/L	N/A	20	24-AUG-12
WG1534702-10 LCS								
Nitrate (as N)			101.4		%		90-110	24-AUG-12
WG1534702-14 LCS								
Nitrate (as N)			101.5		%		90-110	24-AUG-12
WG1534702-18 LCS								
Nitrate (as N)			102.1		%		90-110	24-AUG-12
WG1534702-2 LCS								
Nitrate (as N)			101.2		%		90-110	24-AUG-12
WG1534702-22 LCS								
Nitrate (as N)			100.4		%		90-110	24-AUG-12
WG1534702-6 LCS								
Nitrate (as N)			98.3		%		90-110	24-AUG-12
WG1534702-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-13 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-17 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2424550								
WG1534702-17 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-21 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	24-AUG-12
WG1534702-12 MS		**L1199180-7**						
Nitrate (as N)			98.4		%		75-125	24-AUG-12
WG1534702-16 MS		**L1199233-1**						
Nitrate (as N)			105.0		%		75-125	24-AUG-12
WG1534702-20 MS		**L1199413-1**						
Nitrate (as N)			102.7		%		75-125	24-AUG-12
WG1534702-4 MS		**L1199105-2**						
Nitrate (as N)			100.3		%		75-125	24-AUG-12
WG1534702-8 MS		**L1199128-3**						
Nitrate (as N)			102.8		%		75-125	24-AUG-12
OGG-TOT-WT	**Water**							
Batch R2425136								
WG1534340-2 LCS								
Oil and Grease, Total			77.8		%		75-120	27-AUG-12
WG1534340-3 LCSD		**WG1534340-2**						
Oil and Grease, Total		77.8	83		%	6.8	45	27-AUG-12
WG1534340-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	27-AUG-12
Batch R2425707								
WG1535203-2 LCS								
Oil and Grease, Total			88.6		%		75-120	28-AUG-12
WG1535203-3 LCSD		**WG1535203-2**						
Oil and Grease, Total		88.6	93		%	4.5	45	28-AUG-12
WG1535203-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	28-AUG-12
P-T-COL-TB	**Water**							
Batch R2427081								
WG1536441-3 DUP		**L1199233-1**						
Phosphorus (P)-Total		0.0080	0.0085		mg/L	6.3	20	29-AUG-12
WG1536441-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2427081								
WG1536441-2 LCS								
Phosphorus (P)-Total			95.4		%		80-120	29-AUG-12
WG1536441-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	29-AUG-12
WG1536441-4 MS		**L1199233-1**						
Phosphorus (P)-Total			80.0		%		70-130	29-AUG-12
PH-CAP-TB	**Water**							
Batch R2424516								
WG1534369-6 DUP		**L1199233-17**						
pH		7.17	7.18	J	pH	0.01	0.2	24-AUG-12
WG1534369-2 LCS								
pH			5.99		pH		5.9-6.1	24-AUG-12
WG1534369-5 LCS								
pH			6.00		pH		5.9-6.1	24-AUG-12
SO4-IC-TB	**Water**							
Batch R2424550								
WG1534702-15 DUP		**L1199233-1**						
Sulfate (SO4)		1.03	1.04		mg/L	0.3	20	24-AUG-12
WG1534702-10 LCS								
Sulfate (SO4)			98.6		%		90-110	24-AUG-12
WG1534702-14 LCS								
Sulfate (SO4)			98.5		%		90-110	24-AUG-12
WG1534702-18 LCS								
Sulfate (SO4)			99.4		%		90-110	24-AUG-12
WG1534702-2 LCS								
Sulfate (SO4)			99.2		%		90-110	24-AUG-12
WG1534702-22 LCS								
Sulfate (SO4)			98.2		%		90-110	24-AUG-12
WG1534702-6 LCS								
Sulfate (SO4)			98.4		%		90-110	24-AUG-12
WG1534702-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12
WG1534702-13 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12
WG1534702-17 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12
WG1534702-21 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2424550								
WG1534702-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12
WG1534702-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	24-AUG-12
WG1534702-12 MS		**L1199180-7**						
Sulfate (SO4)			93.2		%		75-125	24-AUG-12
WG1534702-16 MS		**L1199233-1**						
Sulfate (SO4)			102.9		%		75-125	24-AUG-12
WG1534702-20 MS		**L1199413-1**						
Sulfate (SO4)			101.5		%		75-125	24-AUG-12
WG1534702-4 MS		**L1199105-2**						
Sulfate (SO4)			102.9		%		75-125	24-AUG-12
WG1534702-8 MS		**L1199128-3**						
Sulfate (SO4)			102.5		%		75-125	24-AUG-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2427442								
WG1536103-3 DUP		**L1199233-12**						
Total Suspended Solids		9.7	9.7		mg/L	0.0	20	29-AUG-12
WG1536103-2 LCS								
Total Suspended Solids			97.4		%		85-115	29-AUG-12
WG1536103-1 MB								
Total Suspended Solids			<2.0		mg/L		2	29-AUG-12
Batch R2427472								
WG1536542-3 DUP		**L1199233-5**						
Total Suspended Solids		53.2	61.9		mg/L	15	20	29-AUG-12
WG1536542-2 LCS								
Total Suspended Solids			109.0		%		85-115	29-AUG-12
WG1536542-1 MB								
Total Suspended Solids			<2.0		mg/L		2	29-AUG-12

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
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

ALS Environmental

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rothers Limited Company www.alsglobal.com

L1199233

L1199233-COFC

Company:	Treasury Metals			tory Information	
Contact:	Mac Potter			g 511 Amend) Table:	
Address:	899 Tree Nursery Rd			Record of Site Condition ☐ Yes ☐ No	
	Wabigoon DN P0V 2W0			PWQO ☑ MISA ☐ MMER ☐ CCME ☐	
Phone:	807-938-6961	Fax:		Guideline Required:	
Email:	mac@treasurymetals.com			TCLP Regulation 558 ☐ Other:	
Project:	Job M0906A01	PO:	M0210-P0115	Service Requested	
Quote #:	Q32690	LSD Goliath Project		☑ Regular TAT (7 Days)	
Invoice To:		Same as Report: ☑ Yes ☐ No		☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:				☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:				Specify Date Required:	
Address:				All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:					
Account Manager	Karen R.	Sampler: MP AT CR			

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
	JCTa	22/08/12	725	Water	X	X	X	X	X	X	X	X	X	X	X		9
	SW4 *	23/08/12	730		X	X	X	X	X	X	X	X	X	X	X		
	SW5 *	↓	830		X	X	X	X	X	X	X	X	X	X	X		
	SW6 *	↓	845		X	X	X	X	X	X	X	X	X	X	X		
	Travel Blank		/	↓	X	X	X	X	X	X	X	X	X	X	X		↓
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		

Special Instructions/Comments

* NO PRESERVATIVE IN TOTAL METALS/MERCURY + DISSOLVED METALS/MERCURY NOT ENOUGH PROVIDED

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: <Original signed by> MARK HOLLER	Date & Time: 23/08/12	Received by:	Date & Time	Temp	Cooling Initiated ☐ Yes ☐ No	Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 19-SEP-12
Report Date: 08-OCT-12 13:20 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1211071

Project P.O. #: M0210-P0115
Job Reference: JOB M0906A01
C of C Numbers:
Legal Site Desc:

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1211071-1	L1211071-2	L1211071-3	L1211071-4	L1211071-5
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
	Sampled Date	17-SEP-12	17-SEP-12	17-SEP-12	17-SEP-12	17-SEP-12
	Sampled Time	09:04	09:55	09:35	10:05	10:39
	Client ID	SW3	TL3	SW2	SW1	JCTA
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	187	270	138	170	222
	Hardness (as CaCO3) (mg/L)	71.4	131	69.0	66.5	114
	pH (pH)	7.45	7.40	7.79	7.59	7.58
	Total Suspended Solids (mg/L)	3.3	57.0	26.5	15.9	40.2
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.0	9.0	2.8	4.0	6.8
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	60.5	130	64.7	81.0	106
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.031
	Chloride (Cl) (mg/L)	16.4	2.09	<0.10	0.49	1.37
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030	0.063
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0145	0.0313	0.0466	0.0120	0.0543
	Sulfate (SO4) (mg/L)	1.64	0.81	0.83	1.44	1.04
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0545	0.666	0.310	0.247	0.555
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	<0.010	0.014	<0.010	0.015	0.015
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	20.3	36.8	17.5	25.2	30.4
	Chromium (Cr)-Total (mg/L)	<0.0010	0.0013	<0.0010	<0.0010	0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	0.00059	<0.00050	<0.00050	0.00096
	Copper (Cu)-Total (mg/L)	<0.0010	0.0011	0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	0.170	1.12	0.914	0.545	1.59
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	4.90	9.81	4.77	4.06	7.98
	Manganese (Mn)-Total (mg/L)	0.0172	0.361	0.0229	0.258	1.09
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<0.50	1.11	0.53	0.92	1.18
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1211071-6 SURFACEWATE 17-SEP-12 11:00 TL1A	L1211071-7 SURFACEWATE 17-SEP-12 11:35 SW10	L1211071-8 SURFACEWATE 17-SEP-12 12:03 SW8	L1211071-9 SURFACEWATE 17-SEP-12 12:30 SW7	L1211071-10 SURFACEWATE 18-SEP-12 08:00 SW9
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	131	154	158	189	307
	Hardness (as CaCO3) (mg/L)	64.8	69.1	73.8	100	148
	pH (pH)	7.16	7.68	7.85	7.86	7.86
	Total Suspended Solids (mg/L)	4.6	54.4	15.4	<2.0	55.9
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	6.8	2.8	2.8	2.4	5.2
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	62.9	73.1	67.6	95.4	163
	Ammonia, Total (as N) (mg/L)	0.081	0.021	<0.020	<0.020	0.023
	Chloride (Cl) (mg/L)	0.15	0.27	0.38	0.28	0.42
	Nitrate (as N) (mg/L)	<0.030	0.051	0.205	0.084	0.228
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0055	0.0055	0.0982	<0.0050	0.0064
	Sulfate (SO4) (mg/L)	<0.30	1.88	7.00	1.14	0.49
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0457	0.0431	0.0632	<0.0050	0.0261
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	<0.010	0.012	<0.010	0.016	0.024
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	16.0	20.3	19.0	33.3	41.1
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	0.00216	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	1.99	1.23	0.752	0.180	0.158
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	4.05	3.03	3.67	3.28	8.77
	Manganese (Mn)-Total (mg/L)	1.23	0.0894	0.0261	0.0747	0.301
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<0.50	0.67	0.84	0.58	1.54
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1211071-11	L1211071-12	L1211071-13	L1211071-14	
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
Sampled Date	18-SEP-12	18-SEP-12	18-SEP-12	17-SEP-12	
Sampled Time	09:30	09:35	09:40		
Client ID	SW4	SW444	FIELD BLANK	TRAVEL BLANK	
Grouping	**Analyte**				
WATER					
Physical Tests	Conductivity (EC) (uS/cm)	108	108	<3.0	<3.0
	Hardness (as CaCO3) (mg/L)	48.1	49.0	<0.51	<0.51
	pH (pH)	7.75	7.75	5.60	5.61
	Total Suspended Solids (mg/L)	7.0	10.4	<2.0	<2.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.0	2.0	<2.0	<2.0
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	45.2	45.1	<5.0	<5.0
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	0.020 RRV
	Chloride (Cl) (mg/L)	3.18	3.24	<0.10	<0.10
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	<0.030
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0248	0.0245	<0.0050	<0.0050
	Sulfate (SO4) (mg/L)	1.84	1.84	<0.30	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.721	0.712	<0.0050	<0.0050
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	0.011	0.011	<0.010	<0.010
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	15.1	12.1	<0.20	<0.20
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	0.0019	0.0021	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	0.440	0.457	<0.020	<0.020
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	2.98	3.00	<0.020	<0.020
	Manganese (Mn)-Total (mg/L)	0.0111	0.0121	<0.0010	<0.0010
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	0.80	0.83	<0.50	<0.50
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1211071-1 SURFACEWATE 17-SEP-12 09:04 SW3	L1211071-2 SURFACEWATE 17-SEP-12 09:55 TL3	L1211071-3 SURFACEWATE 17-SEP-12 09:35 SW2	L1211071-4 SURFACEWATE 17-SEP-12 10:05 SW1	L1211071-5 SURFACEWATE 17-SEP-12 10:39 JCTA
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	10.6	3.23	1.62	2.05	2.66
	Strontium (Sr)-Total (mg/L)	0.0510	0.0788	0.0305	0.0415	0.0514
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0025	0.0295	0.0139	0.0113	0.0226
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	0.0015	<0.0010	<0.0010	0.0012
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0030	<0.0030	<0.0030	0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0061	0.0079	0.0285	<0.0050	0.0092
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.012	<0.010	0.010	0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	20.0 RRV	36.0 RRV	20.3 RRV	21.0	31.6 RRV
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.050	0.266	0.283	0.037	0.325
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	5.24 RRV	10.0 RRV	4.48	3.38	8.53 RRV
	Manganese (Mn)-Dissolved (mg/L)	0.0160	0.379	0.0266	0.0905	0.679
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	0.66	1.26	0.57	1.03	1.34
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	10.6 RRV	3.08 RRV	1.49	1.74	2.67 RRV
	Strontium (Sr)-Dissolved (mg/L)	0.0493 RRV	0.0744 RRV	0.0281	0.0497	0.0620

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1211071-6 SURFACEWATE 17-SEP-12 11:00 TL1A	L1211071-7 SURFACEWATE 17-SEP-12 11:35 SW10	L1211071-8 SURFACEWATE 17-SEP-12 12:03 SW8	L1211071-9 SURFACEWATE 17-SEP-12 12:30 SW7	L1211071-10 SURFACEWATE 18-SEP-12 08:00 SW9
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	1.21	1.58	1.50	1.58	3.91
	Strontium (Sr)-Total (mg/L)	0.0371	0.0340	0.0367	0.0510	0.0687
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.0020	0.0021	0.0034	<0.0020	<0.0020
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0175	0.0126	0.0187	<0.0050	0.0069
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.011	0.010	0.021	0.026
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	18.4	22.1	22.3	34.4 RRV	44
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	0.00217	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.849	0.715	0.486	0.173	0.071
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050 RRV	<0.050 RRV
	Magnesium (Mg)-Dissolved (mg/L)	4.61	3.37	4.42	3.53 RRV	9.08
	Manganese (Mn)-Dissolved (mg/L)	1.26	0.0872	0.0278	0.0719 RRV	0.232
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	<0.50	0.66	0.91	0.73	1.76
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010 RRV	<0.00010 RRV
	Sodium (Na)-Dissolved (mg/L)	1.42	1.80	1.83	1.61 RRV	3.85
	Strontium (Sr)-Dissolved (mg/L)	0.0412	0.0364	0.0412	0.0513 RRV	0.0768

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1211071-11	L1211071-12	L1211071-13	L1211071-14	
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
	Sampled Date	18-SEP-12	18-SEP-12	18-SEP-12	17-SEP-12	
	Sampled Time	09:30	09:35	09:40		
	Client ID	SW4	SW444	FIELD BLANK	TRAVEL BLANK	
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Total (mg/L)	3.07	3.10	<0.10	<0.10	
	Strontium (Sr)-Total (mg/L)	0.0218	0.0231	<0.0010	<0.0010	
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Total (mg/L)	0.0216	0.0226	<0.0020	<0.0020	
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Total (mg/L)	0.0010	0.0011	<0.0010	<0.0010	
	Zinc (Zn)-Total (mg/L)	<0.0030	0.0040	<0.0030	<0.0030	
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0068	0.0076	<0.0050	<0.0050	
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	
	Calcium (Ca)-Dissolved (mg/L)	14.5 RRV	14.7	<0.20	<0.20	
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Copper (Cu)-Dissolved (mg/L)	0.0014	0.0015	<0.0010	<0.0010	
	Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	<0.020	<0.020	
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Magnesium (Mg)-Dissolved (mg/L)	2.87 RRV	2.95 RRV	<0.020	<0.020	
	Manganese (Mn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Potassium (K)-Dissolved (mg/L)	0.73	0.75	<0.50	<0.50	
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	2.81 RRV	2.89 RRV	<0.10	<0.10	
	Strontium (Sr)-Dissolved (mg/L)	0.0241	0.0244	<0.0010	<0.0010	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1211071-1	L1211071-2	L1211071-3	L1211071-4	L1211071-5
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
	Sampled Date	17-SEP-12	17-SEP-12	17-SEP-12	17-SEP-12	17-SEP-12
	Sampled Time	09:04	09:55	09:35	10:05	10:39
	Client ID	SW3	TL3	SW2	SW1	JCTA
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1211071-6 SURFACEWATE 17-SEP-12 11:00 TL1A	L1211071-7 SURFACEWATE 17-SEP-12 11:35 SW10	L1211071-8 SURFACEWATE 17-SEP-12 12:03 SW8	L1211071-9 SURFACEWATE 17-SEP-12 12:30 SW7	L1211071-10 SURFACEWATE 18-SEP-12 08:00 SW9
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1211071-11	L1211071-12	L1211071-13	L1211071-14	
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
	Sampled Date	18-SEP-12	18-SEP-12	18-SEP-12	17-SEP-12	
	Sampled Time	09:30	09:35	09:40		
	Client ID	SW4	SW444	FIELD BLANK	TRAVEL BLANK	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	

* 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)
Matrix Spike	Barium (Ba)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1211071-1, -10, -11, -12, -13, -14, -2, -3, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1211071-10
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1211071-10
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1211071-10
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1211071-10
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1211071-10
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1211071-10
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1211071-10

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237

Reference Information

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2441984								
WG1552260-2 LCS								
Acidity (as CaCO3)			102.4		%		85-115	24-SEP-12
WG1552260-5 LCS								
Acidity (as CaCO3)			103.2		%		85-115	24-SEP-12
WG1552260-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	24-SEP-12
WG1552260-4 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	24-SEP-12
ALK-TOT-CAP-TB	**Water**							
Batch R2439529								
WG1549968-6 DUP		**L1211071-8**						
Alkalinity, Total (as CaCO3)		67.6	68.5		mg/L CaCO3	1.3	20	19-SEP-12
WG1549968-2 LCS								
Alkalinity, Total (as CaCO3)			93.7		%		85-115	19-SEP-12
WG1549968-5 LCS								
Alkalinity, Total (as CaCO3)			93.5		%		85-115	19-SEP-12
WG1549968-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	19-SEP-12
WG1549968-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	19-SEP-12
Batch R2440460								
WG1550195-3 DUP		**L1211071-10**						
Alkalinity, Total (as CaCO3)		163	165		mg/L CaCO3	1.2	20	20-SEP-12
WG1550195-2 LCS								
Alkalinity, Total (as CaCO3)			92.4		%		85-115	20-SEP-12
WG1550195-5 LCS								
Alkalinity, Total (as CaCO3)			92.4		%		85-115	20-SEP-12
WG1550195-8 LCS								
Alkalinity, Total (as CaCO3)			92.5		%		85-115	20-SEP-12
WG1550195-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	20-SEP-12
WG1550195-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	20-SEP-12
WG1550195-7 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	20-SEP-12
CL-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2441474								
WG1550591-3 DUP		**L1211071-4**						
Chloride (Cl)		0.49	0.50		mg/L	1.3	20	19-SEP-12
WG1550591-10 LCS								
Chloride (Cl)			101.0		%		90-110	19-SEP-12
WG1550591-14 LCS								
Chloride (Cl)			100.2		%		90-110	19-SEP-12
WG1550591-18 LCS								
Chloride (Cl)			101.8		%		90-110	19-SEP-12
WG1550591-2 LCS								
Chloride (Cl)			98.9		%		90-110	19-SEP-12
WG1550591-6 LCS								
Chloride (Cl)			100.9		%		90-110	19-SEP-12
WG1550591-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-SEP-12
WG1550591-13 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-SEP-12
WG1550591-17 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-SEP-12
WG1550591-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-SEP-12
WG1550591-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	19-SEP-12
WG1550591-16 MS		**L1211053-6**						
Chloride (Cl)			107.3		%		75-125	19-SEP-12
WG1550591-4 MS		**L1211071-4**						
Chloride (Cl)			109.3		%		75-125	19-SEP-12
WG1550591-8 MS		**L1211159-1**						
Chloride (Cl)			93.0		%		75-125	19-SEP-12
CN-FREE-CFA-VA	**Water**							
Batch R2444687								
WG1554203-27 DUP		**L1211071-8**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1554203-10 LCS								
Cyanide, Free			101.6		%		80-120	26-SEP-12
WG1554203-12 LCS								
Cyanide, Free			101.0		%		80-120	26-SEP-12
WG1554203-16 LCS								
Cyanide, Free			101.4		%		80-120	26-SEP-12
WG1554203-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2444687								
WG1554203-2 LCS								
Cyanide, Free			101.9		%		80-120	26-SEP-12
WG1554203-20 LCS								
Cyanide, Free			101.6		%		80-120	26-SEP-12
WG1554203-26 LCS								
Cyanide, Free			101.6		%		80-120	26-SEP-12
WG1554203-32 LCS								
Cyanide, Free			103.6		%		80-120	26-SEP-12
WG1554203-8 LCS								
Cyanide, Free			101.6		%		80-120	26-SEP-12
WG1554203-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-11 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-15 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-19 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-25 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-31 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-7 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	26-SEP-12
WG1554203-18 MS		**L1210258-4**						
Cyanide, Free			95.8		%		70-130	26-SEP-12
WG1554203-22 MS		**L1210041-1**						
Cyanide, Free			97.2		%		70-130	26-SEP-12
WG1554203-24 MS		**L1211486-5**						
Cyanide, Free			97.3		%		70-130	26-SEP-12
WG1554203-28 MS		**L1211071-8**						
Cyanide, Free			97.2		%		70-130	26-SEP-12
WG1554203-30 MS		**L1211423-2**						
Cyanide, Free			98.2		%		70-130	26-SEP-12
CN-TOT-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-TOT-WT	**Water**							
Batch R2444550								
WG1555111-4 CVS								
Cyanide, Total			95.0		%		85-115	26-SEP-12
WG1555111-5 DUP		**L1211071-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	26-SEP-12
WG1555111-3 LCS								
Cyanide, Total			94.0		%		80-120	26-SEP-12
WG1555111-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	26-SEP-12
CN-WAD-WT	**Water**							
Batch R2442624								
WG1553093-4 CVS								
Cyanide, Weak Acid Diss			98.5		%		85-115	25-SEP-12
WG1553093-5 DUP		**L1211071-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	25-SEP-12
WG1553093-3 LCS								
Cyanide, Weak Acid Diss			98.6		%		80-120	25-SEP-12
WG1553093-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	25-SEP-12
EC-CAP-TB	**Water**							
Batch R2439529								
WG1549968-6 DUP		**L1211071-8**						
Conductivity (EC)		158	158		uS/cm	0.2	10	19-SEP-12
WG1549968-2 LCS								
Conductivity (EC)			102.7		%		90-110	19-SEP-12
WG1549968-5 LCS								
Conductivity (EC)			104.0		%		90-110	19-SEP-12
WG1549968-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	19-SEP-12
WG1549968-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	19-SEP-12
Batch R2440460								
WG1550195-3 DUP		**L1211071-10**						
Conductivity (EC)		307	307		uS/cm	0.2	10	20-SEP-12
WG1550195-2 LCS								
Conductivity (EC)			101.1		%		90-110	20-SEP-12
WG1550195-5 LCS								
Conductivity (EC)			102.0		%		90-110	20-SEP-12
WG1550195-8 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2440460								
WG1550195-8 LCS								
Conductivity (EC)			101.6		%		90-110	20-SEP-12
WG1550195-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	20-SEP-12
WG1550195-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	20-SEP-12
WG1550195-7 MB								
Conductivity (EC)			<3.0		uS/cm		3	20-SEP-12
HG-D-CVAF-TB	**Water**							
Batch R2439686								
WG1550285-3 DUP		**L1211071-11**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1550285-2 LCS								
Mercury (Hg)-Dissolved			96.5		%		80-120	20-SEP-12
WG1550285-6 LCS								
Mercury (Hg)-Dissolved			91.5		%		80-120	20-SEP-12
WG1550285-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	20-SEP-12
WG1550285-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	20-SEP-12
WG1550285-4 MS		**L1211071-11**						
Mercury (Hg)-Dissolved			95.7		%		70-130	20-SEP-12
WG1550285-8 MS		**L1211049-11**						
Mercury (Hg)-Dissolved			88.1		%		70-130	20-SEP-12
HG-T-CVAF-TB	**Water**							
Batch R2439665								
WG1550283-5 DUP		**L1211071-10**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1550283-2 LCS								
Mercury (Hg)-Total			99.2		%		80-120	20-SEP-12
WG1550283-8 LCS								
Mercury (Hg)-Total			96.5		%		80-120	20-SEP-12
WG1550283-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	20-SEP-12
WG1550283-7 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	20-SEP-12
WG1550283-10 MS		**L1211812-6**						
Mercury (Hg)-Total			95.3		%		70-130	20-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2439665								
WG1550283-6 MS		**L1211071-10**						
Mercury (Hg)-Total			96.3		%		70-130	20-SEP-12
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-2 LCS								
Aluminum (Al)-Dissolved			94.0		%		80-120	25-SEP-12
Antimony (Sb)-Dissolved			99.4		%		80-120	25-SEP-12
Arsenic (As)-Dissolved			98.6		%		80-120	25-SEP-12
Barium (Ba)-Dissolved			99.4		%		80-120	25-SEP-12
Beryllium (Be)-Dissolved			94.9		%		80-120	25-SEP-12
Bismuth (Bi)-Dissolved			101.9		%		80-120	25-SEP-12
Boron (B)-Dissolved			88.3		%		80-120	25-SEP-12
Cadmium (Cd)-Dissolved			100.9		%		80-120	25-SEP-12
Calcium (Ca)-Dissolved			102.5		%		80-120	25-SEP-12
Chromium (Cr)-Dissolved			101.0		%		80-120	25-SEP-12
Cobalt (Co)-Dissolved			98.5		%		80-120	25-SEP-12
Copper (Cu)-Dissolved			97.7		%		80-120	25-SEP-12
Iron (Fe)-Dissolved			89.4		%		80-120	25-SEP-12
Lead (Pb)-Dissolved			97.7		%		80-120	25-SEP-12
Lithium (Li)-Dissolved			100.7		%		80-120	25-SEP-12
Magnesium (Mg)-Dissolved			112.4		%		80-120	25-SEP-12
Manganese (Mn)-Dissolved			103.8		%		80-120	25-SEP-12
Molybdenum (Mo)-Dissolved			98.2		%		80-120	25-SEP-12
Nickel (Ni)-Dissolved			100.2		%		80-120	25-SEP-12
Potassium (K)-Dissolved			99.6		%		80-120	25-SEP-12
Selenium (Se)-Dissolved			107.8		%		80-120	25-SEP-12
Silver (Ag)-Dissolved			101.6		%		80-120	25-SEP-12
Sodium (Na)-Dissolved			104.3		%		80-120	25-SEP-12
Strontium (Sr)-Dissolved			97.0		%		80-120	25-SEP-12
Tellurium (Te)-Dissolved			104.9		%		80-120	25-SEP-12
Thallium (Tl)-Dissolved			100.1		%		80-120	25-SEP-12
Tin (Sn)-Dissolved			98.2		%		80-120	25-SEP-12
Titanium (Ti)-Dissolved			97.8		%		80-120	25-SEP-12
Tungsten (W)-Dissolved			98.3		%		80-120	25-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-2 LCS								
Uranium (U)-Dissolved			97.0		%		80-120	25-SEP-12
Vanadium (V)-Dissolved			99.7		%		80-120	25-SEP-12
Zinc (Zn)-Dissolved			104.3		%		80-120	25-SEP-12
Zirconium (Zr)-Dissolved			91.1		%		80-120	25-SEP-12
WG1553052-6 LCS								
Aluminum (Al)-Dissolved			93.0		%		80-120	25-SEP-12
Antimony (Sb)-Dissolved			97.8		%		80-120	25-SEP-12
Arsenic (As)-Dissolved			97.4		%		80-120	25-SEP-12
Barium (Ba)-Dissolved			97.4		%		80-120	25-SEP-12
Beryllium (Be)-Dissolved			93.8		%		80-120	25-SEP-12
Bismuth (Bi)-Dissolved			102.7		%		80-120	25-SEP-12
Boron (B)-Dissolved			90.9		%		80-120	25-SEP-12
Cadmium (Cd)-Dissolved			98.5		%		80-120	25-SEP-12
Calcium (Ca)-Dissolved			100.4		%		80-120	25-SEP-12
Chromium (Cr)-Dissolved			99.8		%		80-120	25-SEP-12
Cobalt (Co)-Dissolved			95.9		%		80-120	25-SEP-12
Copper (Cu)-Dissolved			94.4		%		80-120	25-SEP-12
Iron (Fe)-Dissolved			95.3		%		80-120	25-SEP-12
Lead (Pb)-Dissolved			98.2		%		80-120	25-SEP-12
Lithium (Li)-Dissolved			91.8		%		80-120	25-SEP-12
Magnesium (Mg)-Dissolved			108.0		%		80-120	25-SEP-12
Manganese (Mn)-Dissolved			101.3		%		80-120	25-SEP-12
Molybdenum (Mo)-Dissolved			97.9		%		80-120	25-SEP-12
Nickel (Ni)-Dissolved			97.6		%		80-120	25-SEP-12
Potassium (K)-Dissolved			96.4		%		80-120	25-SEP-12
Selenium (Se)-Dissolved			115.9		%		80-120	25-SEP-12
Silver (Ag)-Dissolved			100.4		%		80-120	25-SEP-12
Sodium (Na)-Dissolved			101.5		%		80-120	25-SEP-12
Strontium (Sr)-Dissolved			97.3		%		80-120	25-SEP-12
Tellurium (Te)-Dissolved			101.2		%		80-120	25-SEP-12
Thallium (Tl)-Dissolved			97.9		%		80-120	25-SEP-12
Tin (Sn)-Dissolved			96.9		%		80-120	25-SEP-12
Titanium (Ti)-Dissolved			97.6		%		80-120	25-SEP-12
Tungsten (W)-Dissolved			96.9		%		80-120	25-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-6 LCS								
Uranium (U)-Dissolved			94.5		%		80-120	25-SEP-12
Vanadium (V)-Dissolved			98.7		%		80-120	25-SEP-12
Zinc (Zn)-Dissolved			101.3		%		80-120	25-SEP-12
Zirconium (Zr)-Dissolved			92.3		%		80-120	25-SEP-12
WG1553052-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	25-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	25-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	25-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	25-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	25-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	25-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	25-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	25-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	25-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	25-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	25-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	25-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	25-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	25-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	25-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	25-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	25-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-1 MB								
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	25-SEP-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	25-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
WG1553052-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	25-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	25-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	25-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	25-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	25-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	25-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	25-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	25-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	25-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	25-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	25-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	25-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	25-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	25-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	25-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	25-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	25-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-5 MB								
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	25-SEP-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	25-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	25-SEP-12
WG1553052-8 MS		**L1211812-1**						
Aluminum (Al)-Dissolved			95.4		%		70-130	25-SEP-12
Antimony (Sb)-Dissolved			101.4		%		70-130	25-SEP-12
Arsenic (As)-Dissolved			100.1		%		70-130	25-SEP-12
Beryllium (Be)-Dissolved			98.4		%		70-130	25-SEP-12
Bismuth (Bi)-Dissolved			92.9		%		70-130	25-SEP-12
Boron (B)-Dissolved			102.9		%		70-130	25-SEP-12
Cadmium (Cd)-Dissolved			125.9		%		70-130	25-SEP-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	25-SEP-12
Chromium (Cr)-Dissolved			98.8		%		70-130	25-SEP-12
Cobalt (Co)-Dissolved			97.8		%		70-130	25-SEP-12
Copper (Cu)-Dissolved			96.4		%		70-130	25-SEP-12
Iron (Fe)-Dissolved			90.3		%		70-130	25-SEP-12
Lead (Pb)-Dissolved			98.9		%		70-130	25-SEP-12
Lithium (Li)-Dissolved			101.6		%		70-130	25-SEP-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	25-SEP-12
Manganese (Mn)-Dissolved			121.0		%		70-130	25-SEP-12
Molybdenum (Mo)-Dissolved			96.1		%		70-130	25-SEP-12
Nickel (Ni)-Dissolved			97.2		%		70-130	25-SEP-12
Potassium (K)-Dissolved			99.1		%		70-130	25-SEP-12
Selenium (Se)-Dissolved			102.4		%		70-130	25-SEP-12
Silver (Ag)-Dissolved			101.0		%		70-130	25-SEP-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	25-SEP-12
Strontium (Sr)-Dissolved			93.9		%		70-130	25-SEP-12
Tellurium (Te)-Dissolved			104.1		%		70-130	25-SEP-12
Thallium (Tl)-Dissolved			96.5		%		70-130	25-SEP-12
Tin (Sn)-Dissolved			100.6		%		70-130	25-SEP-12
Titanium (Ti)-Dissolved			99.96		%		70-130	25-SEP-12
Tungsten (W)-Dissolved			97.8		%		70-130	25-SEP-12
Uranium (U)-Dissolved			101.0		%		70-130	25-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2444871								
WG1553052-8 MS		**L1211812-1**						
Vanadium (V)-Dissolved			101.4		%		70-130	25-SEP-12
Zinc (Zn)-Dissolved			102.4		%		70-130	25-SEP-12
Zirconium (Zr)-Dissolved			94.0		%		70-130	25-SEP-12
Batch R2446803								
WG1557363-2 LCS								
Aluminum (Al)-Dissolved			91.5		%		80-120	28-SEP-12
Antimony (Sb)-Dissolved			97.1		%		80-120	28-SEP-12
Arsenic (As)-Dissolved			92.3		%		80-120	28-SEP-12
Barium (Ba)-Dissolved			98.6		%		80-120	28-SEP-12
Beryllium (Be)-Dissolved			94.6		%		80-120	28-SEP-12
Bismuth (Bi)-Dissolved			96.4		%		80-120	28-SEP-12
Boron (B)-Dissolved			89.3		%		80-120	28-SEP-12
Cadmium (Cd)-Dissolved			98.5		%		80-120	28-SEP-12
Calcium (Ca)-Dissolved			95.7		%		80-120	28-SEP-12
Chromium (Cr)-Dissolved			97.6		%		80-120	28-SEP-12
Cobalt (Co)-Dissolved			94.4		%		80-120	28-SEP-12
Copper (Cu)-Dissolved			90.6		%		80-120	28-SEP-12
Iron (Fe)-Dissolved			99.7		%		80-120	28-SEP-12
Lead (Pb)-Dissolved			94.0		%		80-120	28-SEP-12
Lithium (Li)-Dissolved			86.6		%		80-120	28-SEP-12
Magnesium (Mg)-Dissolved			96.7		%		80-120	28-SEP-12
Manganese (Mn)-Dissolved			95.6		%		80-120	28-SEP-12
Molybdenum (Mo)-Dissolved			94.7		%		80-120	28-SEP-12
Nickel (Ni)-Dissolved			94.3		%		80-120	28-SEP-12
Potassium (K)-Dissolved			95.7		%		80-120	28-SEP-12
Selenium (Se)-Dissolved			102.4		%		80-120	28-SEP-12
Silver (Ag)-Dissolved			101.4		%		80-120	28-SEP-12
Sodium (Na)-Dissolved			96.2		%		80-120	28-SEP-12
Strontium (Sr)-Dissolved			95.8		%		80-120	28-SEP-12
Tellurium (Te)-Dissolved			98.9		%		80-120	28-SEP-12
Thallium (Tl)-Dissolved			94.8		%		80-120	28-SEP-12
Tin (Sn)-Dissolved			96.3		%		80-120	28-SEP-12
Titanium (Ti)-Dissolved			94.9		%		80-120	28-SEP-12
Tungsten (W)-Dissolved			95.4		%		80-120	28-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2446803								
WG1557363-2 LCS								
Uranium (U)-Dissolved			93.4		%		80-120	28-SEP-12
Vanadium (V)-Dissolved			95.2		%		80-120	28-SEP-12
Zinc (Zn)-Dissolved			94.7		%		80-120	28-SEP-12
Zirconium (Zr)-Dissolved			90.8		%		80-120	28-SEP-12
WG1557363-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	28-SEP-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	28-SEP-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	28-SEP-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	28-SEP-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	28-SEP-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	28-SEP-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	28-SEP-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	28-SEP-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	28-SEP-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	28-SEP-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	28-SEP-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	28-SEP-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	28-SEP-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	28-SEP-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	28-SEP-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	28-SEP-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	28-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2446803								
WG1557363-1 MB								
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	28-SEP-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	28-SEP-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	28-SEP-12
Batch R2450603								
WG1558237-2 LCS								
Aluminum (Al)-Dissolved			95.3		%		80-120	02-OCT-12
Antimony (Sb)-Dissolved			101.7		%		80-120	02-OCT-12
Arsenic (As)-Dissolved			99.9		%		80-120	02-OCT-12
Barium (Ba)-Dissolved			100.0		%		80-120	02-OCT-12
Beryllium (Be)-Dissolved			95.4		%		80-120	02-OCT-12
Bismuth (Bi)-Dissolved			102.5		%		80-120	02-OCT-12
Boron (B)-Dissolved			91.2		%		80-120	02-OCT-12
Cadmium (Cd)-Dissolved			104.2		%		80-120	02-OCT-12
Calcium (Ca)-Dissolved			94.3		%		80-120	02-OCT-12
Chromium (Cr)-Dissolved			103.2		%		80-120	02-OCT-12
Cobalt (Co)-Dissolved			103.2		%		80-120	02-OCT-12
Copper (Cu)-Dissolved			103.0		%		80-120	02-OCT-12
Iron (Fe)-Dissolved			108.7		%		80-120	02-OCT-12
Lead (Pb)-Dissolved			101.1		%		80-120	02-OCT-12
Lithium (Li)-Dissolved			117.1		%		80-120	02-OCT-12
Magnesium (Mg)-Dissolved			105.4		%		80-120	02-OCT-12
Manganese (Mn)-Dissolved			104.2		%		80-120	02-OCT-12
Molybdenum (Mo)-Dissolved			99.0		%		80-120	02-OCT-12
Nickel (Ni)-Dissolved			102.1		%		80-120	02-OCT-12
Potassium (K)-Dissolved			96.2		%		80-120	02-OCT-12
Selenium (Se)-Dissolved			106.4		%		80-120	02-OCT-12
Silver (Ag)-Dissolved			104.6		%		80-120	02-OCT-12
Sodium (Na)-Dissolved			101.0		%		80-120	02-OCT-12
Strontium (Sr)-Dissolved			97.6		%		80-120	02-OCT-12
Tellurium (Te)-Dissolved			104.3		%		80-120	02-OCT-12
Thallium (Tl)-Dissolved			100.1		%		80-120	02-OCT-12
Tin (Sn)-Dissolved			101.0		%		80-120	02-OCT-12
Titanium (Ti)-Dissolved			100.9		%		80-120	02-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2450603								
WG1558237-2 LCS								
Tungsten (W)-Dissolved			97.6		%		80-120	02-OCT-12
Uranium (U)-Dissolved			104.6		%		80-120	02-OCT-12
Vanadium (V)-Dissolved			102.4		%		80-120	02-OCT-12
Zinc (Zn)-Dissolved			103.4		%		80-120	02-OCT-12
Zirconium (Zr)-Dissolved			99.2		%		80-120	02-OCT-12
WG1558237-6 LCS								
Aluminum (Al)-Dissolved			99.1		%		80-120	02-OCT-12
Antimony (Sb)-Dissolved			103.9		%		80-120	02-OCT-12
Arsenic (As)-Dissolved			103.5		%		80-120	02-OCT-12
Barium (Ba)-Dissolved			101.4		%		80-120	02-OCT-12
Beryllium (Be)-Dissolved			114.1		%		80-120	02-OCT-12
Bismuth (Bi)-Dissolved			105.7		%		80-120	02-OCT-12
Boron (B)-Dissolved			88.1		%		80-120	02-OCT-12
Cadmium (Cd)-Dissolved			105.0		%		80-120	02-OCT-12
Calcium (Ca)-Dissolved			100.0		%		80-120	02-OCT-12
Chromium (Cr)-Dissolved			104.3		%		80-120	02-OCT-12
Cobalt (Co)-Dissolved			105.7		%		80-120	02-OCT-12
Copper (Cu)-Dissolved			106.3		%		80-120	02-OCT-12
Iron (Fe)-Dissolved			112.2		%		80-120	02-OCT-12
Lead (Pb)-Dissolved			104.2		%		80-120	02-OCT-12
Lithium (Li)-Dissolved			117.7		%		80-120	02-OCT-12
Magnesium (Mg)-Dissolved			110.3		%		80-120	02-OCT-12
Manganese (Mn)-Dissolved			104.3		%		80-120	02-OCT-12
Molybdenum (Mo)-Dissolved			101.8		%		80-120	02-OCT-12
Nickel (Ni)-Dissolved			102.8		%		80-120	02-OCT-12
Potassium (K)-Dissolved			100.3		%		80-120	02-OCT-12
Selenium (Se)-Dissolved			102.2		%		80-120	02-OCT-12
Silver (Ag)-Dissolved			109.5		%		80-120	02-OCT-12
Sodium (Na)-Dissolved			105.6		%		80-120	02-OCT-12
Strontium (Sr)-Dissolved			102.2		%		80-120	02-OCT-12
Tellurium (Te)-Dissolved			101.0		%		80-120	02-OCT-12
Thallium (Tl)-Dissolved			105.0		%		80-120	02-OCT-12
Tin (Sn)-Dissolved			101.4		%		80-120	02-OCT-12
Titanium (Ti)-Dissolved			101.0		%		80-120	02-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2450603								
WG1558237-6 LCS								
Tungsten (W)-Dissolved			100.0		%		80-120	02-OCT-12
Uranium (U)-Dissolved			104.9		%		80-120	02-OCT-12
Vanadium (V)-Dissolved			104.3		%		80-120	02-OCT-12
Zinc (Zn)-Dissolved			106.2		%		80-120	02-OCT-12
Zirconium (Zr)-Dissolved			101.8		%		80-120	02-OCT-12
WG1558237-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	02-OCT-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	02-OCT-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	02-OCT-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	02-OCT-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	02-OCT-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	02-OCT-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	02-OCT-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	02-OCT-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	02-OCT-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	02-OCT-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	02-OCT-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	02-OCT-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	02-OCT-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	02-OCT-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	02-OCT-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	02-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2450603								
WG1558237-1 MB								
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	02-OCT-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	02-OCT-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	02-OCT-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
WG1558237-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	02-OCT-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	02-OCT-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	02-OCT-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	02-OCT-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	02-OCT-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	02-OCT-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	02-OCT-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	02-OCT-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	02-OCT-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	02-OCT-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	02-OCT-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	02-OCT-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	02-OCT-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	02-OCT-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	02-OCT-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	02-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2450603								
WG1558237-5 MB								
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	02-OCT-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	02-OCT-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	02-OCT-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	02-OCT-12
WG1558237-4 MS		**L1215320-1**						
Aluminum (Al)-Dissolved			102.4		%		70-130	02-OCT-12
Antimony (Sb)-Dissolved			108.7		%		70-130	02-OCT-12
Arsenic (As)-Dissolved			112.2		%		70-130	02-OCT-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Beryllium (Be)-Dissolved			112.4		%		70-130	02-OCT-12
Bismuth (Bi)-Dissolved			105.1		%		70-130	02-OCT-12
Cadmium (Cd)-Dissolved			125.6		%		70-130	02-OCT-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Cobalt (Co)-Dissolved			110.9		%		70-130	02-OCT-12
Copper (Cu)-Dissolved			114.1		%		70-130	02-OCT-12
Iron (Fe)-Dissolved			103.0		%		70-130	02-OCT-12
Lead (Pb)-Dissolved			106.1		%		70-130	02-OCT-12
Lithium (Li)-Dissolved			129.6		%		70-130	02-OCT-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Molybdenum (Mo)-Dissolved			106.3		%		70-130	02-OCT-12
Nickel (Ni)-Dissolved			104.4		%		70-130	02-OCT-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Selenium (Se)-Dissolved			116.7		%		70-130	02-OCT-12
Silver (Ag)-Dissolved			103.4		%		70-130	02-OCT-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	02-OCT-12
Tellurium (Te)-Dissolved			112.4		%		70-130	02-OCT-12
Thallium (Tl)-Dissolved			104.2		%		70-130	02-OCT-12
Tin (Sn)-Dissolved			104.6		%		70-130	02-OCT-12
Titanium (Ti)-Dissolved			103.1		%		70-130	02-OCT-12
Tungsten (W)-Dissolved			101.6		%		70-130	02-OCT-12
Vanadium (V)-Dissolved			109.2		%		70-130	02-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2450603								
WG1558237-4 MS		**L1215320-1**						
Zinc (Zn)-Dissolved			111.1		%		70-130	02-OCT-12
Zirconium (Zr)-Dissolved			104.9		%		70-130	02-OCT-12
MET-T-MS-TB	**Water**							
Batch R2442491								
WG1550108-2 LCS								
Aluminum (Al)-Total			82.7		%		80-120	21-SEP-12
Antimony (Sb)-Total			86.7		%		80-120	21-SEP-12
Arsenic (As)-Total			86.4		%		80-120	21-SEP-12
Barium (Ba)-Total			85.6		%		80-120	21-SEP-12
Beryllium (Be)-Total			90.8		%		80-120	21-SEP-12
Bismuth (Bi)-Total			95.3		%		80-120	21-SEP-12
Boron (B)-Total			80.3		%		80-120	21-SEP-12
Cadmium (Cd)-Total			88.3		%		80-120	21-SEP-12
Calcium (Ca)-Total			84.4		%		80-120	21-SEP-12
Chromium (Cr)-Total			87.6		%		80-120	21-SEP-12
Cobalt (Co)-Total			84.9		%		80-120	21-SEP-12
Copper (Cu)-Total			84.6		%		80-120	21-SEP-12
Iron (Fe)-Total			85.8		%		80-120	21-SEP-12
Lead (Pb)-Total			85.7		%		80-120	21-SEP-12
Lithium (Li)-Total			91.9		%		80-120	21-SEP-12
Magnesium (Mg)-Total			94.2		%		80-120	21-SEP-12
Manganese (Mn)-Total			90.8		%		80-120	21-SEP-12
Molybdenum (Mo)-Total			88.5		%		80-120	21-SEP-12
Nickel (Ni)-Total			86.9		%		80-120	21-SEP-12
Potassium (K)-Total			87.2		%		80-120	21-SEP-12
Selenium (Se)-Total			89.8		%		80-120	21-SEP-12
Silver (Ag)-Total			89.0		%		80-120	21-SEP-12
Sodium (Na)-Total			84.1		%		80-120	21-SEP-12
Strontium (Sr)-Total			85.8		%		80-120	21-SEP-12
Tellurium (Te)-Total			88.0		%		80-120	21-SEP-12
Thallium (Tl)-Total			87.9		%		80-120	21-SEP-12
Tin (Sn)-Total			87.0		%		80-120	21-SEP-12
Titanium (Ti)-Total			84.4		%		80-120	21-SEP-12
Tungsten (W)-Total			85.3		%		80-120	21-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2442491								
WG1550108-2 LCS								
Uranium (U)-Total			87.9		%		80-120	21-SEP-12
Vanadium (V)-Total			87.7		%		80-120	21-SEP-12
Zinc (Zn)-Total			87.8		%		80-120	21-SEP-12
Zirconium (Zr)-Total			83.1		%		80-120	21-SEP-12
WG1550108-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	21-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	21-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	21-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	21-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	21-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	21-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	21-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	21-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	21-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	21-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	21-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	21-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	21-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	21-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	21-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	21-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	21-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	21-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	21-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	21-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	21-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	21-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	21-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	21-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	21-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	21-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	21-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	21-SEP-12
Tungsten (W)-Total			<0.010		mg/L		0.01	21-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2442491								
WG1550108-1 MB								
Uranium (U)-Total			<0.0050		mg/L		0.005	21-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	21-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	21-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	21-SEP-12
Batch R2444216								
WG1550108-3 DUP		**L1211071-9**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	24-SEP-12
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	24-SEP-12
Arsenic (As)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Barium (Ba)-Total		0.016	0.017		mg/L	1.4	20	24-SEP-12
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-SEP-12
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	24-SEP-12
Calcium (Ca)-Total		33.3	25.3		mg/L	4.0	20	24-SEP-12
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	24-SEP-12
Copper (Cu)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Iron (Fe)-Total		0.180	0.185		mg/L	3.0	20	24-SEP-12
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-SEP-12
Magnesium (Mg)-Total		3.28	2.44		mg/L	2.4	20	24-SEP-12
Manganese (Mn)-Total		0.0747	0.0531		mg/L	3.7	20	24-SEP-12
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	24-SEP-12
Potassium (K)-Total		0.58	0.60		mg/L	3.4	20	24-SEP-12
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	24-SEP-12
Sodium (Na)-Total		1.58	1.18		mg/L	0.9	20	24-SEP-12
Strontium (Sr)-Total		0.0510	0.0429		mg/L	3.4	20	24-SEP-12
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	24-SEP-12
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Titanium (Ti)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2444216								
WG1550108-3 DUP		**L1211071-9**						
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	24-SEP-12
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	24-SEP-12
Vanadium (V)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	24-SEP-12
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-SEP-12
WG1550108-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	24-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	24-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	24-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	24-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	24-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	24-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	24-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	24-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	24-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	24-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	24-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	24-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	24-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	24-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	24-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	24-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	24-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	24-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	24-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	24-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	24-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	24-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	24-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	24-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2444216								
WG1550108-5 MB								
Tungsten (W)-Total			<0.010		mg/L		0.01	24-SEP-12
Uranium (U)-Total			<0.0050		mg/L		0.005	24-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	24-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	24-SEP-12
WG1550108-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	24-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	24-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	24-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	24-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	24-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	24-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	24-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	24-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	24-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	24-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	24-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	24-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	24-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	24-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	24-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	24-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	24-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	24-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	24-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	24-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	24-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	24-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	24-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	24-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2444216								
WG1550108-9 MB								
Tungsten (W)-Total			<0.010		mg/L		0.01	24-SEP-12
Uranium (U)-Total			<0.0050		mg/L		0.005	24-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	24-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	24-SEP-12
WG1550108-12 MS		**L1211810-1**						
Aluminum (Al)-Total			122.1		%		70-130	24-SEP-12
Antimony (Sb)-Total			100.3		%		70-130	24-SEP-12
Arsenic (As)-Total			96.9		%		70-130	24-SEP-12
Barium (Ba)-Total			N/A	MS-B	%		-	24-SEP-12
Beryllium (Be)-Total			112.1		%		70-130	24-SEP-12
Bismuth (Bi)-Total			91.0		%		70-130	24-SEP-12
Boron (B)-Total			95.8		%		70-130	24-SEP-12
Cadmium (Cd)-Total			124.3		%		70-130	24-SEP-12
Calcium (Ca)-Total			N/A	MS-B	%		-	24-SEP-12
Chromium (Cr)-Total			102.2		%		70-130	24-SEP-12
Cobalt (Co)-Total			94.2		%		70-130	24-SEP-12
Copper (Cu)-Total			109.1		%		70-130	24-SEP-12
Iron (Fe)-Total			101.9		%		70-130	24-SEP-12
Lead (Pb)-Total			97.7		%		70-130	24-SEP-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	24-SEP-12
Molybdenum (Mo)-Total			103.0		%		70-130	24-SEP-12
Nickel (Ni)-Total			94.3		%		70-130	24-SEP-12
Potassium (K)-Total			N/A	MS-B	%		-	24-SEP-12
Selenium (Se)-Total			111.6		%		70-130	24-SEP-12
Silver (Ag)-Total			99.9		%		70-130	24-SEP-12
Sodium (Na)-Total			N/A	MS-B	%		-	24-SEP-12
Strontium (Sr)-Total			N/A	MS-B	%		-	24-SEP-12
Tellurium (Te)-Total			102.1		%		70-130	24-SEP-12
Thallium (Tl)-Total			93.0		%		70-130	24-SEP-12
Tin (Sn)-Total			100.7		%		70-130	24-SEP-12
Titanium (Ti)-Total			106.5		%		70-130	24-SEP-12
Tungsten (W)-Total			98.8		%		70-130	24-SEP-12
Uranium (U)-Total			97.4		%		70-130	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2444216								
WG1550108-12 MS		**L1211810-1**						
Vanadium (V)-Total			113.6		%		70-130	24-SEP-12
Zinc (Zn)-Total			99.9		%		70-130	24-SEP-12
Zirconium (Zr)-Total			98.0		%		70-130	24-SEP-12
WG1550108-4 MS		**L1211071-9**						
Aluminum (Al)-Total			97.6		%		70-130	24-SEP-12
Antimony (Sb)-Total			100.2		%		70-130	24-SEP-12
Arsenic (As)-Total			100.3		%		70-130	24-SEP-12
Beryllium (Be)-Total			97.5		%		70-130	24-SEP-12
Bismuth (Bi)-Total			93.8		%		70-130	24-SEP-12
Boron (B)-Total			86.2		%		70-130	24-SEP-12
Cadmium (Cd)-Total			122.6		%		70-130	24-SEP-12
Calcium (Ca)-Total			N/A	MS-B	%		-	24-SEP-12
Chromium (Cr)-Total			91.8		%		70-130	24-SEP-12
Cobalt (Co)-Total			84.8		%		70-130	24-SEP-12
Copper (Cu)-Total			101.6		%		70-130	24-SEP-12
Iron (Fe)-Total			95.4		%		70-130	24-SEP-12
Lead (Pb)-Total			93.5		%		70-130	24-SEP-12
Lithium (Li)-Total			91.4		%		70-130	24-SEP-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	24-SEP-12
Manganese (Mn)-Total			N/A	MS-B	%		-	24-SEP-12
Molybdenum (Mo)-Total			99.5		%		70-130	24-SEP-12
Nickel (Ni)-Total			97.2		%		70-130	24-SEP-12
Potassium (K)-Total			96.9		%		70-130	24-SEP-12
Selenium (Se)-Total			94.6		%		70-130	24-SEP-12
Silver (Ag)-Total			102.2		%		70-130	24-SEP-12
Sodium (Na)-Total			96.2		%		70-130	24-SEP-12
Strontium (Sr)-Total			N/A	MS-B	%		-	24-SEP-12
Tellurium (Te)-Total			99.7		%		70-130	24-SEP-12
Thallium (Tl)-Total			94.7		%		70-130	24-SEP-12
Tin (Sn)-Total			99.3		%		70-130	24-SEP-12
Titanium (Ti)-Total			94.1		%		70-130	24-SEP-12
Tungsten (W)-Total			95.7		%		70-130	24-SEP-12
Uranium (U)-Total			98.8		%		70-130	24-SEP-12
Vanadium (V)-Total			99.4		%		70-130	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2444216								
WG1550108-4 MS		**L1211071-9**						
Zinc (Zn)-Total			97.8		%		70-130	24-SEP-12
Zirconium (Zr)-Total			101.9		%		70-130	24-SEP-12
WG1550108-8 MS		**L1211376-1**						
Antimony (Sb)-Total			102.8		%		70-130	24-SEP-12
Arsenic (As)-Total			113.5		%		70-130	24-SEP-12
Beryllium (Be)-Total			108.9		%		70-130	24-SEP-12
Bismuth (Bi)-Total			93.4		%		70-130	24-SEP-12
Boron (B)-Total			104.1		%		70-130	24-SEP-12
Cadmium (Cd)-Total			124.7		%		70-130	24-SEP-12
Calcium (Ca)-Total			N/A	MS-B	%		-	24-SEP-12
Chromium (Cr)-Total			99.3		%		70-130	24-SEP-12
Cobalt (Co)-Total			103.8		%		70-130	24-SEP-12
Copper (Cu)-Total			116.4		%		70-130	24-SEP-12
Iron (Fe)-Total			107.7		%		70-130	24-SEP-12
Lead (Pb)-Total			95.4		%		70-130	24-SEP-12
Lithium (Li)-Total			122.6		%		70-130	24-SEP-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	24-SEP-12
Manganese (Mn)-Total			N/A	MS-B	%		-	24-SEP-12
Molybdenum (Mo)-Total			109.2		%		70-130	24-SEP-12
Nickel (Ni)-Total			101.0		%		70-130	24-SEP-12
Potassium (K)-Total			N/A	MS-B	%		-	24-SEP-12
Selenium (Se)-Total			104.1		%		70-130	24-SEP-12
Silver (Ag)-Total			99.9		%		70-130	24-SEP-12
Sodium (Na)-Total			N/A	MS-B	%		-	24-SEP-12
Strontium (Sr)-Total			N/A	MS-B	%		-	24-SEP-12
Tellurium (Te)-Total			104.2		%		70-130	24-SEP-12
Thallium (Tl)-Total			94.3		%		70-130	24-SEP-12
Tin (Sn)-Total			97.6		%		70-130	24-SEP-12
Titanium (Ti)-Total			98.8		%		70-130	24-SEP-12
Uranium (U)-Total			106.5		%		70-130	24-SEP-12
Vanadium (V)-Total			106.2		%		70-130	24-SEP-12
Zinc (Zn)-Total			101.3		%		70-130	24-SEP-12
Zirconium (Zr)-Total			96.1		%		70-130	24-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2446794								
WG1550108-14 LCS								
Aluminum (Al)-Total			82.6		%		80-120	28-SEP-12
Antimony (Sb)-Total			85.9		%		80-120	28-SEP-12
Arsenic (As)-Total			82.1		%		80-120	28-SEP-12
Barium (Ba)-Total			86.9		%		80-120	28-SEP-12
Beryllium (Be)-Total			84.6		%		80-120	28-SEP-12
Bismuth (Bi)-Total			86.5		%		80-120	28-SEP-12
Boron (B)-Total			80.7		%		80-120	28-SEP-12
Cadmium (Cd)-Total			87.6		%		80-120	28-SEP-12
Calcium (Ca)-Total			85.4		%		80-120	28-SEP-12
Chromium (Cr)-Total			87.7		%		80-120	28-SEP-12
Cobalt (Co)-Total			85.4		%		80-120	28-SEP-12
Copper (Cu)-Total			82.2		%		80-120	28-SEP-12
Iron (Fe)-Total			90.3		%		80-120	28-SEP-12
Lead (Pb)-Total			83.9		%		80-120	28-SEP-12
Lithium (Li)-Total			87.4		%		80-120	28-SEP-12
Magnesium (Mg)-Total			87.8		%		80-120	28-SEP-12
Manganese (Mn)-Total			86.8		%		80-120	28-SEP-12
Molybdenum (Mo)-Total			85.6		%		80-120	28-SEP-12
Nickel (Ni)-Total			85.2		%		80-120	28-SEP-12
Potassium (K)-Total			84.7		%		80-120	28-SEP-12
Selenium (Se)-Total			94.9		%		80-120	28-SEP-12
Silver (Ag)-Total			88.8		%		80-120	28-SEP-12
Sodium (Na)-Total			88.0		%		80-120	28-SEP-12
Strontium (Sr)-Total			85.0		%		80-120	28-SEP-12
Tellurium (Te)-Total			91.8		%		80-120	28-SEP-12
Thallium (Tl)-Total			85.6		%		80-120	28-SEP-12
Tin (Sn)-Total			85.2		%		80-120	28-SEP-12
Titanium (Ti)-Total			84.6		%		80-120	28-SEP-12
Tungsten (W)-Total			84.6		%		80-120	28-SEP-12
Uranium (U)-Total			85.6		%		80-120	28-SEP-12
Vanadium (V)-Total			83.8		%		80-120	28-SEP-12
Zinc (Zn)-Total			84.8		%		80-120	28-SEP-12
Zirconium (Zr)-Total			83.5		%		80-120	28-SEP-12
WG1550108-13 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2446794								
WG1550108-13 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	28-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	28-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	28-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	28-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	28-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	28-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	28-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	28-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	28-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	28-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	28-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	28-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	28-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	28-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	28-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	28-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	28-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	28-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	28-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	28-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	28-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	28-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	28-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	28-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	28-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	28-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	28-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	28-SEP-12
Tungsten (W)-Total			<0.010		mg/L		0.01	28-SEP-12
Uranium (U)-Total			<0.0050		mg/L		0.005	28-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	28-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	28-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	28-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2446847								
WG1550108-16 LCS								
Aluminum (Al)-Total			86.8		%		80-120	27-SEP-12
Antimony (Sb)-Total			89.6		%		80-120	27-SEP-12
Arsenic (As)-Total			88.1		%		80-120	27-SEP-12
Barium (Ba)-Total			85.9		%		80-120	27-SEP-12
Beryllium (Be)-Total			94.8		%		80-120	27-SEP-12
Bismuth (Bi)-Total			89.2		%		80-120	27-SEP-12
Boron (B)-Total			83.9		%		80-120	27-SEP-12
Cadmium (Cd)-Total			91.2		%		80-120	27-SEP-12
Calcium (Ca)-Total			95.1		%		80-120	27-SEP-12
Chromium (Cr)-Total			91.8		%		80-120	27-SEP-12
Cobalt (Co)-Total			89.6		%		80-120	27-SEP-12
Copper (Cu)-Total			85.3		%		80-120	27-SEP-12
Iron (Fe)-Total			97.8		%		80-120	27-SEP-12
Lead (Pb)-Total			87.0		%		80-120	27-SEP-12
Lithium (Li)-Total			97.3		%		80-120	27-SEP-12
Magnesium (Mg)-Total			95.6		%		80-120	27-SEP-12
Manganese (Mn)-Total			91.0		%		80-120	27-SEP-12
Molybdenum (Mo)-Total			85.0		%		80-120	27-SEP-12
Nickel (Ni)-Total			86.7		%		80-120	27-SEP-12
Potassium (K)-Total			94.6		%		80-120	27-SEP-12
Selenium (Se)-Total			86.0		%		80-120	27-SEP-12
Silver (Ag)-Total			89.3		%		80-120	27-SEP-12
Sodium (Na)-Total			94.5		%		80-120	27-SEP-12
Strontium (Sr)-Total			84.8		%		80-120	27-SEP-12
Tellurium (Te)-Total			94.4		%		80-120	27-SEP-12
Thallium (Tl)-Total			87.5		%		80-120	27-SEP-12
Tin (Sn)-Total			90.7		%		80-120	27-SEP-12
Titanium (Ti)-Total			88.3		%		80-120	27-SEP-12
Tungsten (W)-Total			84.6		%		80-120	27-SEP-12
Uranium (U)-Total			84.4		%		80-120	27-SEP-12
Vanadium (V)-Total			89.7		%		80-120	27-SEP-12
Zinc (Zn)-Total			90.3		%		80-120	27-SEP-12
Zirconium (Zr)-Total			85.8		%		80-120	27-SEP-12
WG1550108-15 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2446847								
WG1550108-15 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	27-SEP-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	27-SEP-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	27-SEP-12
Barium (Ba)-Total			<0.010		mg/L		0.01	27-SEP-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	27-SEP-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	27-SEP-12
Boron (B)-Total			<0.050		mg/L		0.05	27-SEP-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	27-SEP-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	27-SEP-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	27-SEP-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	27-SEP-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	27-SEP-12
Iron (Fe)-Total			<0.020		mg/L		0.02	27-SEP-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	27-SEP-12
Lithium (Li)-Total			<0.050		mg/L		0.05	27-SEP-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	27-SEP-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	27-SEP-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	27-SEP-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	27-SEP-12
Potassium (K)-Total			<0.50		mg/L		0.5	27-SEP-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	27-SEP-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	27-SEP-12
Sodium (Na)-Total			<0.10		mg/L		0.1	27-SEP-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	27-SEP-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	27-SEP-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	27-SEP-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	27-SEP-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	27-SEP-12
Tungsten (W)-Total			<0.010		mg/L		0.01	27-SEP-12
Uranium (U)-Total			<0.0050		mg/L		0.005	27-SEP-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	27-SEP-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	27-SEP-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	27-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2448351								
WG1550108-18 LCS								
Aluminum (Al)-Total			81.7		%		80-120	01-OCT-12
Antimony (Sb)-Total			81.3		%		80-120	01-OCT-12
Arsenic (As)-Total			84.2		%		80-120	01-OCT-12
Barium (Ba)-Total			81.4		%		80-120	01-OCT-12
Beryllium (Be)-Total			80.7		%		80-120	01-OCT-12
Bismuth (Bi)-Total			83.4		%		80-120	01-OCT-12
Boron (B)-Total			81.3		%		80-120	01-OCT-12
Cadmium (Cd)-Total			84.6		%		80-120	01-OCT-12
Calcium (Ca)-Total			80.3		%		80-120	01-OCT-12
Chromium (Cr)-Total			87.4		%		80-120	01-OCT-12
Cobalt (Co)-Total			84.6		%		80-120	01-OCT-12
Copper (Cu)-Total			91.0		%		80-120	01-OCT-12
Iron (Fe)-Total			80.5		%		80-120	01-OCT-12
Lead (Pb)-Total			82.9		%		80-120	01-OCT-12
Lithium (Li)-Total			88.2		%		80-120	01-OCT-12
Magnesium (Mg)-Total			91.0		%		80-120	01-OCT-12
Manganese (Mn)-Total			85.5		%		80-120	01-OCT-12
Molybdenum (Mo)-Total			80.1		%		80-120	01-OCT-12
Nickel (Ni)-Total			85.0		%		80-120	01-OCT-12
Potassium (K)-Total			83.2		%		80-120	01-OCT-12
Selenium (Se)-Total			80.2		%		80-120	01-OCT-12
Silver (Ag)-Total			84.6		%		80-120	01-OCT-12
Sodium (Na)-Total			84.9		%		80-120	01-OCT-12
Strontium (Sr)-Total			80.6		%		80-120	01-OCT-12
Tellurium (Te)-Total			84.0		%		80-120	01-OCT-12
Thallium (Tl)-Total			81.8		%		80-120	01-OCT-12
Tin (Sn)-Total			82.0		%		80-120	01-OCT-12
Titanium (Ti)-Total			83.2		%		80-120	01-OCT-12
Tungsten (W)-Total			80.0		%		80-120	01-OCT-12
Uranium (U)-Total			80.5		%		80-120	01-OCT-12
Vanadium (V)-Total			85.4		%		80-120	01-OCT-12
Zinc (Zn)-Total			83.0		%		80-120	01-OCT-12
Zirconium (Zr)-Total			80.5		%		80-120	01-OCT-12
WG1550108-17 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2448351								
WG1550108-17 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	01-OCT-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	01-OCT-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	01-OCT-12
Barium (Ba)-Total			<0.010		mg/L		0.01	01-OCT-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	01-OCT-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	01-OCT-12
Boron (B)-Total			<0.050		mg/L		0.05	01-OCT-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	01-OCT-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	01-OCT-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	01-OCT-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	01-OCT-12
Iron (Fe)-Total			<0.020		mg/L		0.02	01-OCT-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	01-OCT-12
Lithium (Li)-Total			<0.050		mg/L		0.05	01-OCT-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	01-OCT-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	01-OCT-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	01-OCT-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	01-OCT-12
Potassium (K)-Total			<0.50		mg/L		0.5	01-OCT-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	01-OCT-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	01-OCT-12
Sodium (Na)-Total			<0.10		mg/L		0.1	01-OCT-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	01-OCT-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	01-OCT-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	01-OCT-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	01-OCT-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	01-OCT-12
Tungsten (W)-Total			<0.010		mg/L		0.01	01-OCT-12
Uranium (U)-Total			<0.0050		mg/L		0.005	01-OCT-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	01-OCT-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	01-OCT-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	01-OCT-12
NH3-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2440302								
WG1549982-7 DUP		**L1211071-2**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	20-SEP-12
WG1549982-10 LCS								
Ammonia, Total (as N)			97.2		%		85-115	20-SEP-12
WG1549982-14 LCS								
Ammonia, Total (as N)			96.8		%		85-115	20-SEP-12
WG1549982-2 LCS								
Ammonia, Total (as N)			95.8		%		85-115	20-SEP-12
WG1549982-6 LCS								
Ammonia, Total (as N)			96.7		%		85-115	20-SEP-12
WG1549982-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-SEP-12
WG1549982-13 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-SEP-12
WG1549982-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-SEP-12
WG1549982-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-SEP-12
WG1549982-12 MS		**L1211178-2**						
Ammonia, Total (as N)			77.2		%		75-125	20-SEP-12
WG1549982-16 MS		**L1211866-1**						
Ammonia, Total (as N)			92.2		%		75-125	20-SEP-12
WG1549982-4 MS		**L1210726-10**						
Ammonia, Total (as N)			89.9		%		75-125	20-SEP-12
WG1549982-8 MS		**L1211071-2**						
Ammonia, Total (as N)			92.6		%		75-125	20-SEP-12
Batch R2441407								
WG1551886-2 LCS								
Ammonia, Total (as N)			97.3		%		85-115	22-SEP-12
WG1551886-6 LCS								
Ammonia, Total (as N)			98.4		%		85-115	22-SEP-12
WG1551886-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	22-SEP-12
WG1551886-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	22-SEP-12
WG1551886-4 MS		**L1212545-1**						
Ammonia, Total (as N)			96.0		%		75-125	22-SEP-12
WG1551886-8 MS		**L1212553-2**						
Ammonia, Total (as N)			123.2		%		75-125	22-SEP-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2441474								
WG1550591-3 DUP		**L1211071-4**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	19-SEP-12
WG1550591-10 LCS								
Nitrite (as N)			99.6		%		90-110	19-SEP-12
WG1550591-14 LCS								
Nitrite (as N)			98.2		%		90-110	19-SEP-12
WG1550591-18 LCS								
Nitrite (as N)			98.7		%		90-110	19-SEP-12
WG1550591-2 LCS								
Nitrite (as N)			95.5		%		90-110	19-SEP-12
WG1550591-6 LCS								
Nitrite (as N)			96.0		%		90-110	19-SEP-12
WG1550591-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	19-SEP-12
WG1550591-13 MB								
Nitrite (as N)			<0.020		mg/L		0.02	19-SEP-12
WG1550591-17 MB								
Nitrite (as N)			<0.020		mg/L		0.02	19-SEP-12
WG1550591-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	19-SEP-12
WG1550591-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	19-SEP-12
WG1550591-16 MS		**L1211053-6**						
Nitrite (as N)			102.7		%		75-115	19-SEP-12
WG1550591-4 MS		**L1211071-4**						
Nitrite (as N)			101.2		%		75-115	19-SEP-12
WG1550591-8 MS		**L1211159-1**						
Nitrite (as N)			93.4		%		75-115	19-SEP-12
NO3-IC-TB	**Water**							
Batch R2441474								
WG1550591-3 DUP		**L1211071-4**						
Nitrate (as N)		<0.030	<0.030	RPD-NA	mg/L	N/A	20	19-SEP-12
WG1550591-10 LCS								
Nitrate (as N)			102.3		%		90-110	19-SEP-12
WG1550591-14 LCS								
Nitrate (as N)			101.7		%		90-110	19-SEP-12
WG1550591-18 LCS								
Nitrate (as N)			104.4		%		90-110	19-SEP-12
WG1550591-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2441474								
WG1550591-2 LCS								
Nitrate (as N)			100.7		%		90-110	19-SEP-12
WG1550591-6 LCS								
Nitrate (as N)			101.8		%		90-110	19-SEP-12
WG1550591-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	19-SEP-12
WG1550591-13 MB								
Nitrate (as N)			<0.030		mg/L		0.03	19-SEP-12
WG1550591-17 MB								
Nitrate (as N)			<0.030		mg/L		0.03	19-SEP-12
WG1550591-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	19-SEP-12
WG1550591-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	19-SEP-12
WG1550591-16 MS		**L1211053-6**						
Nitrate (as N)			102.9		%		75-125	19-SEP-12
WG1550591-4 MS		**L1211071-4**						
Nitrate (as N)			106.8		%		75-125	19-SEP-12
WG1550591-8 MS		**L1211159-1**						
Nitrate (as N)			92.8		%		75-125	19-SEP-12
OGG-TOT-WT	**Water**							
Batch R2440968								
WG1550876-2 LCS								
Oil and Grease, Total			85.0		%		75-120	21-SEP-12
WG1550876-3 LCSD		**WG1550876-2**						
Oil and Grease, Total		85.0	85		%	0.6	45	21-SEP-12
WG1550876-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	21-SEP-12
Batch R2441518								
WG1551353-2 LCS								
Oil and Grease, Total			91.6		%		75-120	21-SEP-12
WG1551353-3 LCSD		**WG1551353-2**						
Oil and Grease, Total		91.6	94		%	2.2	45	21-SEP-12
WG1551353-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	21-SEP-12
P-T-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2440787								
WG1550939-2 LCS								
Phosphorus (P)-Total			97.5		%		80-120	21-SEP-12
WG1550939-6 LCS								
Phosphorus (P)-Total			97.3		%		80-120	21-SEP-12
WG1550939-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	21-SEP-12
WG1550939-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	21-SEP-12
WG1550939-4 MS		**L1211376-1**						
Phosphorus (P)-Total			87.0		%		70-130	21-SEP-12
WG1550939-8 MS		**L1211812-4**						
Phosphorus (P)-Total			91.1		%		70-130	21-SEP-12
PH-CAP-TB	**Water**							
Batch R2439529								
WG1549968-6 DUP		**L1211071-8**						
pH		7.85	7.85	J	pH	0.01	0.2	19-SEP-12
WG1549968-2 LCS								
pH			6.00		pH		5.9-6.1	19-SEP-12
WG1549968-5 LCS								
pH			6.02		pH		5.9-6.1	19-SEP-12
Batch R2440460								
WG1550195-3 DUP		**L1211071-10**						
pH		7.86	7.92	J	pH	0.05	0.2	20-SEP-12
WG1550195-2 LCS								
pH			6.01		pH		5.9-6.1	20-SEP-12
WG1550195-5 LCS								
pH			6.02		pH		5.9-6.1	20-SEP-12
WG1550195-8 LCS								
pH			6.01		pH		5.9-6.1	20-SEP-12
SO4-IC-TB	**Water**							
Batch R2441474								
WG1550591-3 DUP		**L1211071-4**						
Sulfate (SO4)		1.44	1.45		mg/L	0.2	20	19-SEP-12
WG1550591-10 LCS								
Sulfate (SO4)			107.5		%		90-110	19-SEP-12
WG1550591-14 LCS								
Sulfate (SO4)			105.2		%		90-110	19-SEP-12
WG1550591-18 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2441474								
WG1550591-18 LCS								
Sulfate (SO4)			108.0		%		90-110	19-SEP-12
WG1550591-2 LCS								
Sulfate (SO4)			104.8		%		90-110	19-SEP-12
WG1550591-6 LCS								
Sulfate (SO4)			107.1		%		90-110	19-SEP-12
WG1550591-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	19-SEP-12
WG1550591-13 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	19-SEP-12
WG1550591-17 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	19-SEP-12
WG1550591-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	19-SEP-12
WG1550591-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	19-SEP-12
WG1550591-16 MS		**L1211053-6**						
Sulfate (SO4)			111.9		%		75-125	19-SEP-12
WG1550591-4 MS		**L1211071-4**						
Sulfate (SO4)			115.0		%		75-125	19-SEP-12
WG1550591-8 MS		**L1211159-1**						
Sulfate (SO4)			94.9		%		75-125	19-SEP-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2439781								
WG1549492-3 DUP		**L1211071-10**						
Total Suspended Solids		55.9	53.2		mg/L	4.9	20	19-SEP-12
WG1549492-2 LCS								
Total Suspended Solids			102.2		%		85-115	19-SEP-12
WG1549492-1 MB								
Total Suspended Solids			<2.0		mg/L		2	19-SEP-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

ALS Environmental

L1211071-COFC

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03578

Company:	TREASURY METALS
Contact:	MAC POTTER
Address:	893 TREE NURSERY RD
	WABIGOON ON
Phone:	807 938 6961 Fax:
Email:	mac@treasurymetals.com
Project:	Job M0906A01 PO: M0210-P0115
Quote #	Q32690 LSD 60 MTH PROJECT
Invoice To:	Same as Report: ☒ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	KOREN RUTECKAGE
Sampler:	MP + CR

mation

nd) Table: ____

Record of Site Condition ☐ Yes ☐ No

PWQO ☒ MISA ☐ MMER ☐ CCME ☐

Guideline Required:

TCLP Regulation 558 ☐ Other:

Service Requested

☒ Regular TAT (7 Days)

☐ Priority TAT 50% Surcharge (3-5 Days)

☐ Emergency TAT 100% Surcharge (1-2 Days)

Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk., pH, Conductivity	Cl, NO3, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-Free-Col-VA	Ammonia, Total Phosphorus	O&G	Total Metals + Hg	Dissolved Metals + Hg	Hardness		Number of Containers
								P	P	P	P	P	P	F/P			
1	SW3	17/09/12	9:04	WATER	X	X	X	X	X	X	X	X	X	X	X		9
2	TZ3		9:55														
3	SW2		9:35														
4	SW1		10:05														
5	JCTa		10:39														
6	TZ1a		11:01														
7	~~TZ2~~ SW10		11:35														
8	SW8		12:03														
9	SW7		12:30														
10	SW9	18/09/12	8:00														
11	SW4	↓	9:30	↓													

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: <Original signed by>	Date & Time: 1050 18/09/12	Received by: <Original signed by>	Date & Time: 9:15 Sept 19/12	Temp: 8.9	Cooling initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: 9:30 Sept 19/12	Observations: Yes / No? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

ALS Environmental

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Company www.alsglobal.com

03579

Company:	
Contact:	SEE PAGE 1
Address:	
Phone:	Fax:
Email:	
Project:	PO:
Quote #	
Invoice To:	Same as Report: ☐ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	KR.
Sampler:	MA + CR

ormation
end) Table:____
☐ Yes ☐ No
PWQO ☒ MISA ☐ MMER ☐ CCME ☐
Guideline Required:
TCLP Regulation 558 ☐ Other:

Service Requested
☒ Regular TAT (7 Days)
☐ Priority TAT 50% Surcharge (3-5 Days)
☐ Emergency TAT 100% Surcharge (1-2 Days)
Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples
Are any samples taken from a regulated DW System? ☐ Yes ☐ No
If yes, an authorized DW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request
Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	ALK, pH, Conductivity	Cl, NO3, NO2, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-Free-Col-VA	Ammonia, Total, Phos	O&G	Total Metals + Hg	Dissolved Metals + Hg	Hardness	Number of Containers
							P	P								
12	SW444	18109110	935	WATER	x	x	x	x	x	x	x	x	x	x	x	9
13	Field Blank	18109112	940		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓
14	Travel Blank	—	—	↓												

Special Instructions / Comments

TL2a, SW11 - DRY, SW5, SW6 - CANNOT ENTER

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: <Original signed by>	Date & Time: 1045 18109112	Received by:	Date & Time: 0915 Sept.19112 KLM	Temp: 8.9	Cooling Initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: 9:30 Sept.19112	Observations: (Yes) No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 02-NOV-12
Report Date: 19-NOV-12 14:48 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1232517

Project P.O. #: M0210-P0115
Job Reference: JOB M0906A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1232517-1 WATER 31-OCT-12 SW3	L1232517-2 WATER 31-OCT-12 SW2	L1232517-3 WATER 31-OCT-12 SW1	L1232517-4 WATER 31-OCT-12 TL3	L1232517-5 WATER 31-OCT-12 TL1A
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	150	139	86.9	82.9	54.0
	Hardness (as CaCO3) (mg/L)	53.2	66.6	42.4	40.8	26.5
	pH (pH)	7.27	7.41	7.09	7.10	6.70
	Total Suspended Solids (mg/L)	3.5	17.2	4.0	6.9	5.7
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	3.0	2.6	4.0	4.4	5.4
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	51.2	63.3	38.8	33.8	20.2
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Chloride (Cl) (mg/L)	12.4	2.20	0.76	1.37	0.87
	Nitrate (as N) (mg/L)	<0.030	<0.030	<0.030	0.064	0.070
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0160	0.0268	0.0086	0.0225	0.0240
	Sulfate (SO4) (mg/L)	1.63	1.02	1.72	2.50	1.78
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0293	1.07	0.0404	0.321	0.239
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.0060 DLA	<0.00060	<0.0060 DLA	<0.0060 DLA
	Arsenic (As)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Barium (Ba)-Total (mg/L)	<0.010	<0.10 DLA	<0.010	<0.10 DLA	<0.10 DLA
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Boron (B)-Total (mg/L)	<0.050	<0.50 DLA	<0.050	<0.50 DLA	<0.50 DLA
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.00017 DLA	<0.000017	<0.00017 DLA	<0.00017 DLA
	Calcium (Ca)-Total (mg/L)	13.0	21.6	12.3	11.4	9.0
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.0050 DLA	<0.00050	<0.0050 DLA	<0.0050 DLA
	Copper (Cu)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Iron (Fe)-Total (mg/L)	0.072	1.63	0.308	1.05	1.82
	Lead (Pb)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Lithium (Li)-Total (mg/L)	<0.050	<0.50 DLA	<0.050	<0.50 DLA	<0.50 DLA
	Magnesium (Mg)-Total (mg/L)	3.14	6.67	1.98	3.12	2.23
	Manganese (Mn)-Total (mg/L)	0.0059	0.055	0.0123	0.029	0.085
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.020 DLA	<0.0020	<0.020 DLA	<0.020 DLA
	Potassium (K)-Total (mg/L)	1.00	<5.0 DLA	0.89	<5.0 DLA	<5.0 DLA
	Selenium (Se)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1232517-6 WATER 31-OCT-12 TL2A	L1232517-7 WATER 31-OCT-12 TL22	L1232517-8 WATER 31-OCT-12 SW7	L1232517-9 WATER 31-OCT-12 SW8	L1232517-10 WATER 31-OCT-12 SW9
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	142	141	64.0	131	146
	Hardness (as CaCO3) (mg/L)	66.4	67.5	33.0	61.6	70.5
	pH (pH)	7.12	7.13	7.13	7.61	7.41
	Total Suspended Solids (mg/L)	6.9	14.4	5.0	5.2	3.1
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	7.0	8.0	3.4	3.0	4.8
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	63.5	62.9	25.5	62.8	69.8
	Ammonia, Total (as N) (mg/L)	0.040	0.033	<0.020	<0.020	<0.020
	Chloride (Cl) (mg/L)	0.93	0.94	0.43	0.41	0.56
	Nitrate (as N) (mg/L)	<0.030	<0.030	0.138	0.059	0.137
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0423	0.0483	0.0110	<0.0050	0.0111
	Sulfate (SO4) (mg/L)	2.08	2.08	2.82	0.86	1.16
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.243	0.588	0.213	<0.050 DLA	0.0586
	Antimony (Sb)-Total (mg/L)	<0.0060 DLA	<0.0060 DLA	<0.0060 DLA	<0.0060 DLA	<0.00060
	Arsenic (As)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Barium (Ba)-Total (mg/L)	<0.10 DLA	<0.10 DLA	<0.10 DLA	<0.10 DLA	0.012
	Beryllium (Be)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Boron (B)-Total (mg/L)	<0.50 DLA	<0.50 DLA	<0.50 DLA	<0.50 DLA	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.00017 DLA	<0.00017 DLA	<0.00017 DLA	<0.00017 DLA	<0.000017
	Calcium (Ca)-Total (mg/L)	19.0	20.7	11.0	22.4	21.5
	Chromium (Cr)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.0050 DLA	<0.0050 DLA	<0.0050 DLA	<0.0050 DLA	<0.00050
	Copper (Cu)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Iron (Fe)-Total (mg/L)	0.76	1.11	0.85	0.54	0.414
	Lead (Pb)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Lithium (Li)-Total (mg/L)	<0.50 DLA	<0.50 DLA	<0.50 DLA	<0.50 DLA	<0.050
	Magnesium (Mg)-Total (mg/L)	6.05	6.64	1.95	1.79	4.43
	Manganese (Mn)-Total (mg/L)	0.056 DLA	0.068 DLA	0.032 DLA	0.073 DLA	0.0940 DTC
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.020 DLA	<0.020 DLA	<0.020 DLA	<0.020 DLA	<0.0020
	Potassium (K)-Total (mg/L)	<5.0 DLA	<5.0 DLA	<5.0 DLA	<5.0 DLA	1.26
	Selenium (Se)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-11	L1232517-12	L1232517-13		
	Description	WATER	WATER	WATER		
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12		
	Sampled Time					
	Client ID	SW10	FIELD BALNK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	90.0	<3.0	<3.0		
	Hardness (as CaCO3) (mg/L)	43.9	<0.51	<0.51		
	pH (pH)	7.33	5.48	5.62		
	Total Suspended Solids (mg/L)	4.8	<2.0	<2.0		
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	5.0	<2.0	<2.0		
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	41.0	<5.0	<5.0		
	Ammonia, Total (as N) (mg/L)	0.027	<0.020	0.050 RRV		
	Chloride (Cl) (mg/L)	0.40	<0.10	<0.10		
	Nitrate (as N) (mg/L)	0.060	<0.030	<0.030		
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020		
	Phosphorus (P)-Total (mg/L)	0.0142	<0.0050	<0.0050		
	Sulfate (SO4) (mg/L)	1.93	<0.30	<0.30		
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020		
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020		
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050		
Total Metals	Aluminum (Al)-Total (mg/L)	0.104	<0.0050	<0.0050		
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060		
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Total (mg/L)	<0.010	<0.010	<0.010		
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017		
	Calcium (Ca)-Total (mg/L)	14.5	<0.20	<0.20		
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050		
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Iron (Fe)-Total (mg/L)	1.54	<0.020	<0.020		
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050		
	Magnesium (Mg)-Total (mg/L)	2.13	<0.020	<0.020		
	Manganese (Mn)-Total (mg/L)	0.123	<0.0010	<0.0010		
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020		
	Potassium (K)-Total (mg/L)	<0.50	<0.50	<0.50		
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-1	L1232517-2	L1232517-3	L1232517-4	L1232517-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12
	Sampled Time					
	Client ID	SW3	SW2	SW1	TL3	TL1A
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.0010 DLA	<0.00010	<0.0010 DLA	<0.0010 DLA
	Sodium (Na)-Total (mg/L)	6.99	2.7	1.37	1.6	1.3
	Strontium (Sr)-Total (mg/L)	0.0296	0.038	0.0216	0.023	0.019
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.0030 DLA	<0.00030	<0.0030 DLA	<0.0030 DLA
	Tin (Sn)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Titanium (Ti)-Total (mg/L)	<0.0020	0.047	<0.0020	<0.020 DLA	<0.020 DLA
	Tungsten (W)-Total (mg/L)	<0.010	<0.10 DLA	<0.010	<0.10 DLA	<0.10 DLA
	Uranium (U)-Total (mg/L)	<0.0050	<0.050 DLA	<0.0050	<0.050 DLA	<0.050 DLA
	Vanadium (V)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.030 DLA	<0.0030	<0.030 DLA	<0.030 DLA
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.010 DLA	<0.0010	<0.010 DLA	<0.010 DLA
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0061	0.0383	0.0183	0.0803	0.110
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	15.1	18.1	13.4	11.3	7.52
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.022	0.201	0.150	0.541	0.818
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	3.75	5.21	2.19	3.04	1.87
	Manganese (Mn)-Dissolved (mg/L)	0.0046	0.0188	0.0106	0.0228	0.0359
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	1.08	1.50	0.95	0.87	<0.50
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	8.07	2.22	1.45	1.75	1.19
	Strontium (Sr)-Dissolved (mg/L)	0.0359	0.0313	0.0226	0.0235	0.0160

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-6	L1232517-7	L1232517-8	L1232517-9	L1232517-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12
	Sampled Time					
	Client ID	TL2A	TL22	SW7	SW8	SW9
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.0010 DLA	<0.0010 DLA	<0.0010 DLA	<0.0010 DLA	<0.00010
	Sodium (Na)-Total (mg/L)	2.9	3.1	1.1	<1.0 DLA	2.30
	Strontium (Sr)-Total (mg/L)	0.041	0.047	0.021	0.029	0.0392
	Tellurium (Te)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.0030 DLA	<0.0030 DLA	<0.0030 DLA	<0.0030 DLA	<0.00030
	Tin (Sn)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.020 DLA	0.021	<0.020 DLA	<0.020 DLA	<0.0020
	Tungsten (W)-Total (mg/L)	<0.10 DLA	<0.10 DLA	<0.10 DLA	<0.10 DLA	<0.010
	Uranium (U)-Total (mg/L)	<0.050 DLA	<0.050 DLA	<0.050 DLA	<0.050 DLA	<0.0050
	Vanadium (V)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.030 DLA	<0.030 DLA	<0.030 DLA	<0.030 DLA	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.010 DLA	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0678	0.0705	0.168	<0.0050	0.0493
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.012	0.012	<0.010	0.014	0.012
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	17.5	17.8	10.2	21.7	21.0
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.421	0.413	0.670	0.173	0.223
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	5.48	5.63	1.85	1.83	4.42
	Manganese (Mn)-Dissolved (mg/L)	0.0431	0.0406	0.0271	0.0630	0.209 DTC
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	2.92	2.98	<0.50	0.59	1.21
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	2.69	2.77	1.12	1.03	2.34
	Strontium (Sr)-Dissolved (mg/L)	0.0402	0.0401	0.0209	0.0282	0.0374

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-11	L1232517-12	L1232517-13		
	Description	WATER	WATER	WATER		
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12		
	Sampled Time					
	Client ID	SW10	FIELD BALNK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Total (mg/L)	1.43	<0.10	<0.10		
	Strontium (Sr)-Total (mg/L)	0.0254	<0.0010	<0.0010		
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Total (mg/L)	0.0030	<0.0020	<0.0020		
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Total (mg/L)	0.0011	<0.0010	<0.0010		
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030		
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0900	<0.0050	<0.0050		
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060		
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017		
	Calcium (Ca)-Dissolved (mg/L)	14.1	<0.20	<0.20		
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050		
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Iron (Fe)-Dissolved (mg/L)	1.15	<0.020	<0.020		
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Magnesium (Mg)-Dissolved (mg/L)	2.13	<0.020	<0.020		
	Manganese (Mn)-Dissolved (mg/L)	0.108	<0.0010	<0.0010		
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	<0.50		
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Dissolved (mg/L)	1.45	<0.10	<0.10		
	Strontium (Sr)-Dissolved (mg/L)	0.0241	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1232517-1 WATER 31-OCT-12 SW3	L1232517-2 WATER 31-OCT-12 SW2	L1232517-3 WATER 31-OCT-12 SW1	L1232517-4 WATER 31-OCT-12 TL3	L1232517-5 WATER 31-OCT-12 TL1A
	Sample ID					
	Description					
	Sampled Date					
	Sampled Time					
	Client ID					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	0.0021	0.0026
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0046	0.0041	0.0055
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-6	L1232517-7	L1232517-8	L1232517-9	L1232517-10
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12	31-OCT-12
	Sampled Time					
	Client ID	TL2A	TL22	SW7	SW8	SW9
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	0.0033	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0076	0.0038	0.0048
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1232517-11	L1232517-12	L1232517-13		
	Description	WATER	WATER	WATER		
	Sampled Date	31-OCT-12	31-OCT-12	31-OCT-12		
	Sampled Time					
	Client ID	SW10	FIELD BALNK	TRAVEL BLANK		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	0.0022	<0.0020	<0.0020		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	0.0052	<0.0030	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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	Lead (Pb)-Total	A	L1232517-3
Matrix Spike	Chloride (Cl)	MS-B	L1232517-13
Matrix Spike	Ammonia, Total (as N)	MS-B	L1232517-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Boron (B)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Barium (Ba)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Iron (Fe)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1232517-1, -10, -11, -12, -13, -2, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L1232517-13
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1232517-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1232517-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1232517-3
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1232517-3
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1232517-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1232517-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1232517-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1232517-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1232517-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1232517-3
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1232517-3
Matrix Spike	Boron (B)-Dissolved	MS-B	L1232517-3
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1232517-3
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1232517-3
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1232517-3
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1232517-3
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1232517-3
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1232517-3
Matrix Spike	Uranium (U)-Dissolved	MS-B	L1232517-3

Qualifiers for Individual Parameters Listed:

Qualifier	Description
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
DLA	Detection Limit Adjusted For required dilution

Reference Information

DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM
Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex. When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference			
CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet
Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A
This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)
Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.			
NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B
Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.			
P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)
Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.			
PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)
Aqueous matrices are analyzed using gravimetry			

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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2470054								
WG1581596-2 LCS								
Acidity (as CaCO3)			99.2		%		85-115	07-NOV-12
WG1581596-5 LCS								
Acidity (as CaCO3)			98.4		%		85-115	07-NOV-12
WG1581596-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	07-NOV-12
WG1581596-4 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	07-NOV-12
ALK-TOT-CAP-TB	**Water**							
Batch R2469148								
WG1579983-3 DUP		**L1232517-1**						
Alkalinity, Total (as CaCO3)		51.2	51.0		mg/L CaCO3	0.4	20	03-NOV-12
WG1579983-2 LCS								
Alkalinity, Total (as CaCO3)			91.9		%		85-115	03-NOV-12
WG1579983-5 LCS								
Alkalinity, Total (as CaCO3)			92.3		%		85-115	03-NOV-12
WG1579983-8 LCS								
Alkalinity, Total (as CaCO3)			92.7		%		85-115	03-NOV-12
WG1579983-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	03-NOV-12
WG1579983-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	03-NOV-12
WG1579983-7 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	03-NOV-12
CL-IC-TB	**Water**							
Batch R2469040								
WG1580561-10 LCS								
Chloride (Cl)			98.1		%		90-110	04-NOV-12
WG1580561-14 LCS								
Chloride (Cl)			99.6		%		90-110	04-NOV-12
WG1580561-18 LCS								
Chloride (Cl)			97.7		%		90-110	04-NOV-12
WG1580561-2 LCS								
Chloride (Cl)			99.4		%		90-110	04-NOV-12
WG1580561-6 LCS								
Chloride (Cl)			102.0		%		90-110	04-NOV-12
WG1580561-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	04-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2469040								
WG1580561-13 MB								
Chloride (Cl)			<0.10		mg/L		0.1	04-NOV-12
WG1580561-17 MB								
Chloride (Cl)			<0.10		mg/L		0.1	04-NOV-12
WG1580561-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	04-NOV-12
WG1580561-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	04-NOV-12
WG1580561-12 MS		**L1232441-24**						
Chloride (Cl)			103.0		%		75-125	04-NOV-12
WG1580561-16 MS		**L1232661-1**						
Chloride (Cl)			104.8		%		75-125	04-NOV-12
WG1580561-4 MS		**L1232481-3**						
Chloride (Cl)			99.6		%		75-125	04-NOV-12
WG1580561-8 MS		**L1232686-6**						
Chloride (Cl)			107.0		%		75-125	04-NOV-12
Batch R2470518								
WG1582083-10 LCS								
Chloride (Cl)			103.1		%		90-110	06-NOV-12
WG1582083-14 LCS								
Chloride (Cl)			103.3		%		90-110	06-NOV-12
WG1582083-18 LCS								
Chloride (Cl)			103.5		%		90-110	06-NOV-12
WG1582083-2 LCS								
Chloride (Cl)			99.6		%		90-110	06-NOV-12
WG1582083-6 LCS								
Chloride (Cl)			102.8		%		90-110	06-NOV-12
WG1582083-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	06-NOV-12
WG1582083-13 MB								
Chloride (Cl)			<0.10		mg/L		0.1	06-NOV-12
WG1582083-17 MB								
Chloride (Cl)			<0.10		mg/L		0.1	06-NOV-12
WG1582083-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	06-NOV-12
WG1582083-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	06-NOV-12
WG1582083-12 MS		**L1232686-15**						
Chloride (Cl)			109.6		%		75-125	06-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2470518								
WG1582083-16 MS		**L1232895-5**						
Chloride (Cl)			N/A	MS-B	%		-	06-NOV-12
WG1582083-4 MS		**L1232441-11**						
Chloride (Cl)			107.4		%		75-125	06-NOV-12
WG1582083-8 MS		**L1232476-8**						
Chloride (Cl)			94.0		%		75-125	06-NOV-12
CN-FREE-CFA-VA	**Water**							
Batch R2469454								
WG1580431-3 DUP		**L1232517-6**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	05-NOV-12
WG1580431-10 LCS								
Cyanide, Free			99.0		%		80-120	05-NOV-12
WG1580431-2 LCS								
Cyanide, Free			99.4		%		80-120	05-NOV-12
WG1580431-6 LCS								
Cyanide, Free			99.5		%		80-120	05-NOV-12
WG1580431-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	05-NOV-12
WG1580431-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	05-NOV-12
WG1580431-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	05-NOV-12
WG1580431-4 MS		**L1232517-6**						
Cyanide, Free			96.2		%		70-130	05-NOV-12
WG1580431-8 MS		**L1232603-3**						
Cyanide, Free			97.3		%		70-130	05-NOV-12
CN-TOT-WT	**Water**							
Batch R2470604								
WG1581957-4 CVS								
Cyanide, Total			93.0		%		85-115	07-NOV-12
WG1581957-3 LCS								
Cyanide, Total			97.6		%		80-120	07-NOV-12
WG1581957-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	07-NOV-12
CN-WAD-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-WT	**Water**							
Batch R2470600								
WG1581974-4 CVS								
Cyanide, Weak Acid Diss			95.0		%		85-115	07-NOV-12
WG1581974-3 LCS								
Cyanide, Weak Acid Diss			102.6		%		80-120	07-NOV-12
WG1581974-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	07-NOV-12
EC-CAP-TB	**Water**							
Batch R2469148								
WG1579983-3 DUP		**L1232517-1**						
Conductivity (EC)		150	150		uS/cm	0.3	10	03-NOV-12
WG1579983-2 LCS								
Conductivity (EC)			100.0		%		90-110	03-NOV-12
WG1579983-5 LCS								
Conductivity (EC)			102.9		%		90-110	03-NOV-12
WG1579983-8 LCS								
Conductivity (EC)			102.5		%		90-110	03-NOV-12
WG1579983-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	03-NOV-12
WG1579983-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	03-NOV-12
WG1579983-7 MB								
Conductivity (EC)			<3.0		uS/cm		3	03-NOV-12
HG-D-CVAF-TB	**Water**							
Batch R2468865								
WG1580142-3 DUP		**L1232517-10**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	05-NOV-12
WG1580142-7 DUP		**L1232517-11**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	05-NOV-12
WG1580142-2 LCS								
Mercury (Hg)-Dissolved			96.7		%		80-120	05-NOV-12
WG1580142-6 LCS								
Mercury (Hg)-Dissolved			100.5		%		80-120	05-NOV-12
WG1580142-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	05-NOV-12
WG1580142-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	05-NOV-12
WG1580142-4 MS		**L1232517-10**						
Mercury (Hg)-Dissolved			103.3		%		70-130	05-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-TB	**Water**							
Batch R2468865								
WG1580142-8 MS		**L1232517-11**						
Mercury (Hg)-Dissolved			101.4		%		70-130	05-NOV-12
HG-T-CVAF-TB	**Water**							
Batch R2468845								
WG1580129-15 DUP		**L1232517-11**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	05-NOV-12
WG1580129-10 LCS								
Mercury (Hg)-Total			101.8		%		80-120	05-NOV-12
WG1580129-14 LCS								
Mercury (Hg)-Total			100.5		%		80-120	05-NOV-12
WG1580129-2 LCS								
Mercury (Hg)-Total			101.3		%		80-120	05-NOV-12
WG1580129-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	05-NOV-12
WG1580129-13 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	05-NOV-12
WG1580129-9 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	05-NOV-12
WG1580129-12 MS		**L1232686-16**						
Mercury (Hg)-Total			97.2		%		70-130	05-NOV-12
WG1580129-16 MS		**L1232517-11**						
Mercury (Hg)-Total			102.6		%		70-130	05-NOV-12
WG1580129-8 MS		**L1232481-17**						
Mercury (Hg)-Total			97.0		%		70-130	05-NOV-12
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-15 DUP		**L1232517-1**						
Aluminum (Al)-Dissolved		0.0061	0.0064		mg/L	4.3	20	09-NOV-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	09-NOV-12
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Barium (Ba)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	09-NOV-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	09-NOV-12
Cadmium (Cd)-Dissolved		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	09-NOV-12
Calcium (Ca)-Dissolved		15.1	15.4		mg/L	1.6	20	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-15 DUP		**L1232517-1**						
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	09-NOV-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Iron (Fe)-Dissolved		0.022	0.023		mg/L	7.7	20	09-NOV-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	09-NOV-12
Magnesium (Mg)-Dissolved		3.75	3.83		mg/L	2.2	20	09-NOV-12
Manganese (Mn)-Dissolved		0.0046	0.0047		mg/L	3.1	20	09-NOV-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	09-NOV-12
Potassium (K)-Dissolved		1.08	1.11		mg/L	2.4	20	09-NOV-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	09-NOV-12
Sodium (Na)-Dissolved		8.07	8.16		mg/L	1.0	20	09-NOV-12
Strontium (Sr)-Dissolved		0.0359	0.0358		mg/L	0.2	20	09-NOV-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	09-NOV-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	09-NOV-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	09-NOV-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	09-NOV-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
Zinc (Zn)-Dissolved		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	09-NOV-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	09-NOV-12
WG1583101-10 LCS								
Aluminum (Al)-Dissolved			90.4		%		80-120	09-NOV-12
Antimony (Sb)-Dissolved			101.6		%		80-120	09-NOV-12
Arsenic (As)-Dissolved			99.7		%		80-120	09-NOV-12
Barium (Ba)-Dissolved			97.2		%		80-120	09-NOV-12
Beryllium (Be)-Dissolved			98.1		%		80-120	09-NOV-12
Bismuth (Bi)-Dissolved			103.1		%		80-120	09-NOV-12
Boron (B)-Dissolved			90.2		%		80-120	09-NOV-12
Cadmium (Cd)-Dissolved			101.5		%		80-120	09-NOV-12
Calcium (Ca)-Dissolved			95.8		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-10 LCS								
Chromium (Cr)-Dissolved			97.3		%		80-120	09-NOV-12
Cobalt (Co)-Dissolved			95.5		%		80-120	09-NOV-12
Copper (Cu)-Dissolved			99.3		%		80-120	09-NOV-12
Iron (Fe)-Dissolved			102.6		%		80-120	09-NOV-12
Lead (Pb)-Dissolved			98.7		%		80-120	09-NOV-12
Lithium (Li)-Dissolved			107.3		%		80-120	09-NOV-12
Magnesium (Mg)-Dissolved			96.4		%		80-120	09-NOV-12
Manganese (Mn)-Dissolved			94.5		%		80-120	09-NOV-12
Molybdenum (Mo)-Dissolved			98.0		%		80-120	09-NOV-12
Nickel (Ni)-Dissolved			98.8		%		80-120	09-NOV-12
Potassium (K)-Dissolved			95.1		%		80-120	09-NOV-12
Selenium (Se)-Dissolved			96.9		%		80-120	09-NOV-12
Silver (Ag)-Dissolved			101.0		%		80-120	09-NOV-12
Sodium (Na)-Dissolved			98.5		%		80-120	09-NOV-12
Strontium (Sr)-Dissolved			96.4		%		80-120	09-NOV-12
Tellurium (Te)-Dissolved			101.8		%		80-120	09-NOV-12
Thallium (Tl)-Dissolved			99.8		%		80-120	09-NOV-12
Tin (Sn)-Dissolved			98.0		%		80-120	09-NOV-12
Titanium (Ti)-Dissolved			98.6		%		80-120	09-NOV-12
Tungsten (W)-Dissolved			99.1		%		80-120	09-NOV-12
Uranium (U)-Dissolved			94.6		%		80-120	09-NOV-12
Vanadium (V)-Dissolved			96.6		%		80-120	09-NOV-12
Zinc (Zn)-Dissolved			99.5		%		80-120	09-NOV-12
Zirconium (Zr)-Dissolved			95.1		%		80-120	09-NOV-12
WG1583101-14 LCS								
Aluminum (Al)-Dissolved			90.0		%		80-120	09-NOV-12
Antimony (Sb)-Dissolved			99.6		%		80-120	09-NOV-12
Arsenic (As)-Dissolved			97.6		%		80-120	09-NOV-12
Barium (Ba)-Dissolved			95.1		%		80-120	09-NOV-12
Beryllium (Be)-Dissolved			92.6		%		80-120	09-NOV-12
Bismuth (Bi)-Dissolved			99.8		%		80-120	09-NOV-12
Boron (B)-Dissolved			80.4		%		80-120	09-NOV-12
Cadmium (Cd)-Dissolved			100.1		%		80-120	09-NOV-12
Calcium (Ca)-Dissolved			95.1		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-14 LCS								
Chromium (Cr)-Dissolved			95.6		%		80-120	09-NOV-12
Cobalt (Co)-Dissolved			97.8		%		80-120	09-NOV-12
Copper (Cu)-Dissolved			97.3		%		80-120	09-NOV-12
Iron (Fe)-Dissolved			95.5		%		80-120	09-NOV-12
Lead (Pb)-Dissolved			97.6		%		80-120	09-NOV-12
Lithium (Li)-Dissolved			99.4		%		80-120	09-NOV-12
Magnesium (Mg)-Dissolved			94.2		%		80-120	09-NOV-12
Manganese (Mn)-Dissolved			93.5		%		80-120	09-NOV-12
Molybdenum (Mo)-Dissolved			96.2		%		80-120	09-NOV-12
Nickel (Ni)-Dissolved			97.0		%		80-120	09-NOV-12
Potassium (K)-Dissolved			95.4		%		80-120	09-NOV-12
Selenium (Se)-Dissolved			99.0		%		80-120	09-NOV-12
Silver (Ag)-Dissolved			98.9		%		80-120	09-NOV-12
Sodium (Na)-Dissolved			96.3		%		80-120	09-NOV-12
Strontium (Sr)-Dissolved			93.8		%		80-120	09-NOV-12
Tellurium (Te)-Dissolved			105.4		%		80-120	09-NOV-12
Thallium (Tl)-Dissolved			97.4		%		80-120	09-NOV-12
Tin (Sn)-Dissolved			96.4		%		80-120	09-NOV-12
Titanium (Ti)-Dissolved			100.0		%		80-120	09-NOV-12
Tungsten (W)-Dissolved			99.3		%		80-120	09-NOV-12
Uranium (U)-Dissolved			93.2		%		80-120	09-NOV-12
Vanadium (V)-Dissolved			94.3		%		80-120	09-NOV-12
Zinc (Zn)-Dissolved			98.2		%		80-120	09-NOV-12
Zirconium (Zr)-Dissolved			93.2		%		80-120	09-NOV-12
WG1583101-2 LCS								
Aluminum (Al)-Dissolved			91.9		%		80-120	09-NOV-12
Antimony (Sb)-Dissolved			102.3		%		80-120	09-NOV-12
Arsenic (As)-Dissolved			98.9		%		80-120	09-NOV-12
Barium (Ba)-Dissolved			97.4		%		80-120	09-NOV-12
Beryllium (Be)-Dissolved			97.9		%		80-120	09-NOV-12
Bismuth (Bi)-Dissolved			101.0		%		80-120	09-NOV-12
Boron (B)-Dissolved			87.0		%		80-120	09-NOV-12
Cadmium (Cd)-Dissolved			102.1		%		80-120	09-NOV-12
Calcium (Ca)-Dissolved			97.6		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-2 LCS								
Chromium (Cr)-Dissolved			98.1		%		80-120	09-NOV-12
Cobalt (Co)-Dissolved			98.3		%		80-120	09-NOV-12
Copper (Cu)-Dissolved			97.9		%		80-120	09-NOV-12
Iron (Fe)-Dissolved			90.8		%		80-120	09-NOV-12
Lead (Pb)-Dissolved			98.2		%		80-120	09-NOV-12
Lithium (Li)-Dissolved			110.2		%		80-120	09-NOV-12
Magnesium (Mg)-Dissolved			97.3		%		80-120	09-NOV-12
Manganese (Mn)-Dissolved			95.6		%		80-120	09-NOV-12
Molybdenum (Mo)-Dissolved			102.9		%		80-120	09-NOV-12
Nickel (Ni)-Dissolved			97.9		%		80-120	09-NOV-12
Potassium (K)-Dissolved			97.6		%		80-120	09-NOV-12
Selenium (Se)-Dissolved			99.7		%		80-120	09-NOV-12
Silver (Ag)-Dissolved			102.4		%		80-120	09-NOV-12
Sodium (Na)-Dissolved			98.6		%		80-120	09-NOV-12
Strontium (Sr)-Dissolved			95.6		%		80-120	09-NOV-12
Tellurium (Te)-Dissolved			100.6		%		80-120	09-NOV-12
Thallium (Tl)-Dissolved			97.1		%		80-120	09-NOV-12
Tin (Sn)-Dissolved			99.1		%		80-120	09-NOV-12
Titanium (Ti)-Dissolved			99.2		%		80-120	09-NOV-12
Tungsten (W)-Dissolved			99.0		%		80-120	09-NOV-12
Uranium (U)-Dissolved			93.2		%		80-120	09-NOV-12
Vanadium (V)-Dissolved			97.4		%		80-120	09-NOV-12
Zinc (Zn)-Dissolved			100.6		%		80-120	09-NOV-12
Zirconium (Zr)-Dissolved			96.8		%		80-120	09-NOV-12
WG1583101-6 LCS								
Aluminum (Al)-Dissolved			90.0		%		80-120	09-NOV-12
Antimony (Sb)-Dissolved			100.1		%		80-120	09-NOV-12
Arsenic (As)-Dissolved			97.0		%		80-120	09-NOV-12
Barium (Ba)-Dissolved			94.4		%		80-120	09-NOV-12
Beryllium (Be)-Dissolved			98.5		%		80-120	09-NOV-12
Bismuth (Bi)-Dissolved			104.8		%		80-120	09-NOV-12
Boron (B)-Dissolved			80.4		%		80-120	09-NOV-12
Cadmium (Cd)-Dissolved			100.8		%		80-120	09-NOV-12
Calcium (Ca)-Dissolved			96.2		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-6 LCS								
Chromium (Cr)-Dissolved			98.7		%		80-120	09-NOV-12
Cobalt (Co)-Dissolved			98.9		%		80-120	09-NOV-12
Copper (Cu)-Dissolved			97.7		%		80-120	09-NOV-12
Iron (Fe)-Dissolved			96.7		%		80-120	09-NOV-12
Lead (Pb)-Dissolved			96.5		%		80-120	09-NOV-12
Lithium (Li)-Dissolved			108.8		%		80-120	09-NOV-12
Magnesium (Mg)-Dissolved			99.2		%		80-120	09-NOV-12
Manganese (Mn)-Dissolved			95.8		%		80-120	09-NOV-12
Molybdenum (Mo)-Dissolved			94.7		%		80-120	09-NOV-12
Nickel (Ni)-Dissolved			95.8		%		80-120	09-NOV-12
Potassium (K)-Dissolved			97.5		%		80-120	09-NOV-12
Selenium (Se)-Dissolved			94.5		%		80-120	09-NOV-12
Silver (Ag)-Dissolved			99.7		%		80-120	09-NOV-12
Sodium (Na)-Dissolved			100.2		%		80-120	09-NOV-12
Strontium (Sr)-Dissolved			92.1		%		80-120	09-NOV-12
Tellurium (Te)-Dissolved			102.5		%		80-120	09-NOV-12
Thallium (Tl)-Dissolved			97.2		%		80-120	09-NOV-12
Tin (Sn)-Dissolved			98.2		%		80-120	09-NOV-12
Titanium (Ti)-Dissolved			101.7		%		80-120	09-NOV-12
Tungsten (W)-Dissolved			97.3		%		80-120	09-NOV-12
Uranium (U)-Dissolved			92.8		%		80-120	09-NOV-12
Vanadium (V)-Dissolved			99.2		%		80-120	09-NOV-12
Zinc (Zn)-Dissolved			97.6		%		80-120	09-NOV-12
Zirconium (Zr)-Dissolved			92.4		%		80-120	09-NOV-12
WG1583101-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-1 MB								
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	09-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	09-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
WG1583101-13 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-13 MB								
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	09-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	09-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
WG1583101-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-5 MB								
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	09-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	09-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
WG1583101-9 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-9 MB								
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	09-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	09-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	09-NOV-12
WG1583101-12 MS		**L1232441-30**						
Aluminum (Al)-Dissolved			94.2		%		70-130	09-NOV-12
Antimony (Sb)-Dissolved			101.7		%		70-130	09-NOV-12
Arsenic (As)-Dissolved			107.8		%		70-130	09-NOV-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Beryllium (Be)-Dissolved			101.1		%		70-130	09-NOV-12
Boron (B)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Cadmium (Cd)-Dissolved			122.6		%		70-130	09-NOV-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Chromium (Cr)-Dissolved			95.3		%		70-130	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-12 MS		**L1232441-30**						
Cobalt (Co)-Dissolved			99.98		%		70-130	09-NOV-12
Copper (Cu)-Dissolved			96.7		%		70-130	09-NOV-12
Iron (Fe)-Dissolved			98.5		%		70-130	09-NOV-12
Lead (Pb)-Dissolved			97.2		%		70-130	09-NOV-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Molybdenum (Mo)-Dissolved			95.7		%		70-130	09-NOV-12
Nickel (Ni)-Dissolved			97.1		%		70-130	09-NOV-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Selenium (Se)-Dissolved			92.7		%		70-130	09-NOV-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Thallium (Tl)-Dissolved			94.3		%		70-130	09-NOV-12
Tin (Sn)-Dissolved			100.1		%		70-130	09-NOV-12
Titanium (Ti)-Dissolved			98.4		%		70-130	09-NOV-12
Tungsten (W)-Dissolved			102.6		%		70-130	09-NOV-12
Uranium (U)-Dissolved			96.9		%		70-130	09-NOV-12
Vanadium (V)-Dissolved			101.9		%		70-130	09-NOV-12
Zinc (Zn)-Dissolved			102.4		%		70-130	09-NOV-12
Zirconium (Zr)-Dissolved			92.5		%		70-130	09-NOV-12
WG1583101-16 MS		**L1232517-1**						
Aluminum (Al)-Dissolved			108.9		%		70-130	09-NOV-12
Antimony (Sb)-Dissolved			115.6		%		70-130	09-NOV-12
Arsenic (As)-Dissolved			121.0		%		70-130	09-NOV-12
Beryllium (Be)-Dissolved			123.6		%		70-130	09-NOV-12
Bismuth (Bi)-Dissolved			108.0		%		70-130	09-NOV-12
Boron (B)-Dissolved			103.0		%		70-130	09-NOV-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Chromium (Cr)-Dissolved			115.9		%		70-130	09-NOV-12
Cobalt (Co)-Dissolved			119.6		%		70-130	09-NOV-12
Copper (Cu)-Dissolved			115.5		%		70-130	09-NOV-12
Iron (Fe)-Dissolved			117.2		%		70-130	09-NOV-12
Lead (Pb)-Dissolved			113.1		%		70-130	09-NOV-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Manganese (Mn)-Dissolved			116.7		%		70-130	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2472910								
WG1583101-16 MS		**L1232517-1**						
Molybdenum (Mo)-Dissolved			110.4		%		70-130	09-NOV-12
Nickel (Ni)-Dissolved			112.9		%		70-130	09-NOV-12
Potassium (K)-Dissolved			111.6		%		70-130	09-NOV-12
Selenium (Se)-Dissolved			128.1		%		70-130	09-NOV-12
Silver (Ag)-Dissolved			116.6		%		70-130	09-NOV-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	09-NOV-12
Tellurium (Te)-Dissolved			121.7		%		70-130	09-NOV-12
Thallium (Tl)-Dissolved			109.1		%		70-130	09-NOV-12
Tin (Sn)-Dissolved			115.4		%		70-130	09-NOV-12
Titanium (Ti)-Dissolved			116.1		%		70-130	09-NOV-12
Tungsten (W)-Dissolved			115.0		%		70-130	09-NOV-12
Uranium (U)-Dissolved			113.7		%		70-130	09-NOV-12
Vanadium (V)-Dissolved			117.5		%		70-130	09-NOV-12
Zinc (Zn)-Dissolved			118.0		%		70-130	09-NOV-12
Zirconium (Zr)-Dissolved			110.7		%		70-130	09-NOV-12
Batch R2475157								
WG1586190-10 LCS								
Aluminum (Al)-Dissolved			89.5		%		80-120	15-NOV-12
Antimony (Sb)-Dissolved			103.5		%		80-120	15-NOV-12
Arsenic (As)-Dissolved			101.5		%		80-120	15-NOV-12
Barium (Ba)-Dissolved			96.1		%		80-120	15-NOV-12
Beryllium (Be)-Dissolved			98.1		%		80-120	15-NOV-12
Bismuth (Bi)-Dissolved			97.7		%		80-120	15-NOV-12
Boron (B)-Dissolved			99.4		%		80-120	15-NOV-12
Cadmium (Cd)-Dissolved			101.3		%		80-120	15-NOV-12
Calcium (Ca)-Dissolved			99.5		%		80-120	15-NOV-12
Chromium (Cr)-Dissolved			98.7		%		80-120	15-NOV-12
Cobalt (Co)-Dissolved			97.0		%		80-120	15-NOV-12
Copper (Cu)-Dissolved			98.7		%		80-120	15-NOV-12
Iron (Fe)-Dissolved			100.0		%		80-120	15-NOV-12
Lead (Pb)-Dissolved			97.2		%		80-120	15-NOV-12
Lithium (Li)-Dissolved			92.6		%		80-120	15-NOV-12
Magnesium (Mg)-Dissolved			99.5		%		80-120	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-10 LCS								
Manganese (Mn)-Dissolved			97.4		%		80-120	15-NOV-12
Molybdenum (Mo)-Dissolved			100.0		%		80-120	15-NOV-12
Nickel (Ni)-Dissolved			100.3		%		80-120	15-NOV-12
Potassium (K)-Dissolved			100.6		%		80-120	15-NOV-12
Selenium (Se)-Dissolved			94.5		%		80-120	15-NOV-12
Silver (Ag)-Dissolved			102.3		%		80-120	15-NOV-12
Sodium (Na)-Dissolved			100.9		%		80-120	15-NOV-12
Strontium (Sr)-Dissolved			97.1		%		80-120	15-NOV-12
Tellurium (Te)-Dissolved			105.1		%		80-120	15-NOV-12
Thallium (Tl)-Dissolved			97.4		%		80-120	15-NOV-12
Tin (Sn)-Dissolved			101.5		%		80-120	15-NOV-12
Titanium (Ti)-Dissolved			98.2		%		80-120	15-NOV-12
Tungsten (W)-Dissolved			99.6		%		80-120	15-NOV-12
Uranium (U)-Dissolved			93.9		%		80-120	15-NOV-12
Vanadium (V)-Dissolved			98.0		%		80-120	15-NOV-12
Zinc (Zn)-Dissolved			100.8		%		80-120	15-NOV-12
Zirconium (Zr)-Dissolved			97.1		%		80-120	15-NOV-12
WG1586190-14 LCS								
Aluminum (Al)-Dissolved			89.2		%		80-120	15-NOV-12
Antimony (Sb)-Dissolved			104.4		%		80-120	15-NOV-12
Arsenic (As)-Dissolved			99.3		%		80-120	15-NOV-12
Barium (Ba)-Dissolved			96.5		%		80-120	15-NOV-12
Beryllium (Be)-Dissolved			95.2		%		80-120	15-NOV-12
Bismuth (Bi)-Dissolved			96.3		%		80-120	15-NOV-12
Boron (B)-Dissolved			80.3		%		80-120	15-NOV-12
Cadmium (Cd)-Dissolved			101.6		%		80-120	15-NOV-12
Calcium (Ca)-Dissolved			96.5		%		80-120	15-NOV-12
Chromium (Cr)-Dissolved			99.6		%		80-120	15-NOV-12
Cobalt (Co)-Dissolved			96.9		%		80-120	15-NOV-12
Copper (Cu)-Dissolved			95.4		%		80-120	15-NOV-12
Iron (Fe)-Dissolved			95.4		%		80-120	15-NOV-12
Lead (Pb)-Dissolved			95.8		%		80-120	15-NOV-12
Lithium (Li)-Dissolved			98.1		%		80-120	15-NOV-12
Magnesium (Mg)-Dissolved			96.8		%		80-120	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-14 LCS								
Manganese (Mn)-Dissolved			96.0		%		80-120	15-NOV-12
Molybdenum (Mo)-Dissolved			98.0		%		80-120	15-NOV-12
Nickel (Ni)-Dissolved			96.1		%		80-120	15-NOV-12
Potassium (K)-Dissolved			99.9		%		80-120	15-NOV-12
Selenium (Se)-Dissolved			110.4		%		80-120	15-NOV-12
Silver (Ag)-Dissolved			103.8		%		80-120	15-NOV-12
Sodium (Na)-Dissolved			100.3		%		80-120	15-NOV-12
Strontium (Sr)-Dissolved			95.8		%		80-120	15-NOV-12
Tellurium (Te)-Dissolved			104.4		%		80-120	15-NOV-12
Thallium (Tl)-Dissolved			95.4		%		80-120	15-NOV-12
Tin (Sn)-Dissolved			100.4		%		80-120	15-NOV-12
Titanium (Ti)-Dissolved			104.1		%		80-120	15-NOV-12
Tungsten (W)-Dissolved			97.6		%		80-120	15-NOV-12
Uranium (U)-Dissolved			90.7		%		80-120	15-NOV-12
Vanadium (V)-Dissolved			97.6		%		80-120	15-NOV-12
Zinc (Zn)-Dissolved			97.7		%		80-120	15-NOV-12
Zirconium (Zr)-Dissolved			94.9		%		80-120	15-NOV-12
WG1586190-2 LCS								
Aluminum (Al)-Dissolved			92.1		%		80-120	15-NOV-12
Antimony (Sb)-Dissolved			104.5		%		80-120	15-NOV-12
Arsenic (As)-Dissolved			100.4		%		80-120	15-NOV-12
Barium (Ba)-Dissolved			97.1		%		80-120	15-NOV-12
Beryllium (Be)-Dissolved			108.6		%		80-120	15-NOV-12
Bismuth (Bi)-Dissolved			101.7		%		80-120	15-NOV-12
Boron (B)-Dissolved			94.8		%		80-120	15-NOV-12
Cadmium (Cd)-Dissolved			104.7		%		80-120	15-NOV-12
Calcium (Ca)-Dissolved			100.6		%		80-120	15-NOV-12
Chromium (Cr)-Dissolved			102.2		%		80-120	15-NOV-12
Cobalt (Co)-Dissolved			100.2		%		80-120	15-NOV-12
Copper (Cu)-Dissolved			99.8		%		80-120	15-NOV-12
Iron (Fe)-Dissolved			104.7		%		80-120	15-NOV-12
Lead (Pb)-Dissolved			99.96		%		80-120	15-NOV-12
Lithium (Li)-Dissolved			104.2		%		80-120	15-NOV-12
Magnesium (Mg)-Dissolved			101.0		%		80-120	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch	**R2475157**							
WG1586190-2	**LCS**							
Manganese (Mn)-Dissolved			100.7		%		80-120	15-NOV-12
Molybdenum (Mo)-Dissolved			99.4		%		80-120	15-NOV-12
Nickel (Ni)-Dissolved			99.6		%		80-120	15-NOV-12
Potassium (K)-Dissolved			102.4		%		80-120	15-NOV-12
Selenium (Se)-Dissolved			110.0		%		80-120	15-NOV-12
Silver (Ag)-Dissolved			104.6		%		80-120	15-NOV-12
Sodium (Na)-Dissolved			103.2		%		80-120	15-NOV-12
Strontium (Sr)-Dissolved			96.2		%		80-120	15-NOV-12
Tellurium (Te)-Dissolved			107.5		%		80-120	15-NOV-12
Thallium (Tl)-Dissolved			101.3		%		80-120	15-NOV-12
Tin (Sn)-Dissolved			102.6		%		80-120	15-NOV-12
Titanium (Ti)-Dissolved			103.4		%		80-120	15-NOV-12
Tungsten (W)-Dissolved			102.4		%		80-120	15-NOV-12
Uranium (U)-Dissolved			94.8		%		80-120	15-NOV-12
Vanadium (V)-Dissolved			100.8		%		80-120	15-NOV-12
Zinc (Zn)-Dissolved			102.2		%		80-120	15-NOV-12
Zirconium (Zr)-Dissolved			97.8		%		80-120	15-NOV-12
WG1586190-6	**LCS**							
Aluminum (Al)-Dissolved			91.0		%		80-120	15-NOV-12
Antimony (Sb)-Dissolved			106.2		%		80-120	15-NOV-12
Arsenic (As)-Dissolved			99.3		%		80-120	15-NOV-12
Barium (Ba)-Dissolved			96.6		%		80-120	15-NOV-12
Beryllium (Be)-Dissolved			101.1		%		80-120	15-NOV-12
Bismuth (Bi)-Dissolved			102.2		%		80-120	15-NOV-12
Boron (B)-Dissolved			91.5		%		80-120	15-NOV-12
Cadmium (Cd)-Dissolved			104.4		%		80-120	15-NOV-12
Calcium (Ca)-Dissolved			98.8		%		80-120	15-NOV-12
Chromium (Cr)-Dissolved			100.9		%		80-120	15-NOV-12
Cobalt (Co)-Dissolved			99.5		%		80-120	15-NOV-12
Copper (Cu)-Dissolved			97.4		%		80-120	15-NOV-12
Iron (Fe)-Dissolved			101.3		%		80-120	15-NOV-12
Lead (Pb)-Dissolved			99.8		%		80-120	15-NOV-12
Lithium (Li)-Dissolved			103.3		%		80-120	15-NOV-12
Magnesium (Mg)-Dissolved			98.5		%		80-120	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch	**R2475157**							
WG1586190-6	**LCS**							
Manganese (Mn)-Dissolved			100.0		%		80-120	15-NOV-12
Molybdenum (Mo)-Dissolved			96.6		%		80-120	15-NOV-12
Nickel (Ni)-Dissolved			96.8		%		80-120	15-NOV-12
Potassium (K)-Dissolved			101.3		%		80-120	15-NOV-12
Selenium (Se)-Dissolved			105.5		%		80-120	15-NOV-12
Silver (Ag)-Dissolved			104.7		%		80-120	15-NOV-12
Sodium (Na)-Dissolved			102.2		%		80-120	15-NOV-12
Strontium (Sr)-Dissolved			94.5		%		80-120	15-NOV-12
Tellurium (Te)-Dissolved			109.0		%		80-120	15-NOV-12
Thallium (Tl)-Dissolved			99.4		%		80-120	15-NOV-12
Tin (Sn)-Dissolved			101.9		%		80-120	15-NOV-12
Titanium (Ti)-Dissolved			101.4		%		80-120	15-NOV-12
Tungsten (W)-Dissolved			101.6		%		80-120	15-NOV-12
Uranium (U)-Dissolved			95.0		%		80-120	15-NOV-12
Vanadium (V)-Dissolved			100.2		%		80-120	15-NOV-12
Zinc (Zn)-Dissolved			100.6		%		80-120	15-NOV-12
Zirconium (Zr)-Dissolved			92.7		%		80-120	15-NOV-12
WG1586190-1	**MB**							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	15-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	15-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	15-NOV-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	15-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	15-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-1 MB								
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	15-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	15-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	15-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	15-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	15-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
WG1586190-13 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	15-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	15-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	15-NOV-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	15-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	15-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch	**R2475157**							
WG1586190-13	**MB**							
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	15-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	15-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	15-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	15-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	15-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
WG1586190-5	**MB**							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	15-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	15-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	15-NOV-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	15-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	15-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch	**R2475157**							
WG1586190-5	**MB**							
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	15-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	15-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	15-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	15-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	15-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
WG1586190-9	**MB**							
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	15-NOV-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	15-NOV-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	15-NOV-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	15-NOV-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	15-NOV-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	15-NOV-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-9 MB								
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	15-NOV-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	15-NOV-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	15-NOV-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	15-NOV-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	15-NOV-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	15-NOV-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	15-NOV-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	15-NOV-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	15-NOV-12
WG1586190-12 MS		**L1232905-17**						
Aluminum (Al)-Dissolved			99.0		%		70-130	15-NOV-12
Antimony (Sb)-Dissolved			108.6		%		70-130	15-NOV-12
Arsenic (As)-Dissolved			119.1		%		70-130	15-NOV-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Beryllium (Be)-Dissolved			114.8		%		70-130	15-NOV-12
Bismuth (Bi)-Dissolved			86.9		%		70-130	15-NOV-12
Boron (B)-Dissolved			88.4		%		70-130	15-NOV-12
Cadmium (Cd)-Dissolved			123.9		%		70-130	15-NOV-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Chromium (Cr)-Dissolved			107.0		%		70-130	15-NOV-12
Cobalt (Co)-Dissolved			105.3		%		70-130	15-NOV-12
Copper (Cu)-Dissolved			94.5		%		70-130	15-NOV-12
Iron (Fe)-Dissolved			97.8		%		70-130	15-NOV-12
Lead (Pb)-Dissolved			98.9		%		70-130	15-NOV-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-12 MS		**L1232905-17**						
Molybdenum (Mo)-Dissolved			100.6		%		70-130	15-NOV-12
Nickel (Ni)-Dissolved			95.0		%		70-130	15-NOV-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Tellurium (Te)-Dissolved			115.9		%		70-130	15-NOV-12
Thallium (Tl)-Dissolved			97.0		%		70-130	15-NOV-12
Tin (Sn)-Dissolved			103.3		%		70-130	15-NOV-12
Titanium (Ti)-Dissolved			110.9		%		70-130	15-NOV-12
Tungsten (W)-Dissolved			104.0		%		70-130	15-NOV-12
Vanadium (V)-Dissolved			111.2		%		70-130	15-NOV-12
Zinc (Zn)-Dissolved			101.6		%		70-130	15-NOV-12
Zirconium (Zr)-Dissolved			100.3		%		70-130	15-NOV-12
WG1586190-16 MS		**L1233618-7**						
Aluminum (Al)-Dissolved			92.8		%		70-130	15-NOV-12
Antimony (Sb)-Dissolved			107.2		%		70-130	15-NOV-12
Arsenic (As)-Dissolved			110.3		%		70-130	15-NOV-12
Barium (Ba)-Dissolved			104.4		%		70-130	15-NOV-12
Beryllium (Be)-Dissolved			108.7		%		70-130	15-NOV-12
Bismuth (Bi)-Dissolved			93.2		%		70-130	15-NOV-12
Boron (B)-Dissolved			101.8		%		70-130	15-NOV-12
Cadmium (Cd)-Dissolved			126.1		%		70-130	15-NOV-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Chromium (Cr)-Dissolved			103.5		%		70-130	15-NOV-12
Cobalt (Co)-Dissolved			103.9		%		70-130	15-NOV-12
Copper (Cu)-Dissolved			107.6		%		70-130	15-NOV-12
Iron (Fe)-Dissolved			98.9		%		70-130	15-NOV-12
Lead (Pb)-Dissolved			102.6		%		70-130	15-NOV-12
Lithium (Li)-Dissolved			101.3		%		70-130	15-NOV-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Manganese (Mn)-Dissolved			103.4		%		70-130	15-NOV-12
Molybdenum (Mo)-Dissolved			99.2		%		70-130	15-NOV-12
Nickel (Ni)-Dissolved			99.1		%		70-130	15-NOV-12
Potassium (K)-Dissolved			113.1		%		70-130	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-16 MS		**L1233618-7**						
Selenium (Se)-Dissolved			111.8		%		70-130	15-NOV-12
Silver (Ag)-Dissolved			105.4		%		70-130	15-NOV-12
Sodium (Na)-Dissolved			102.1		%		70-130	15-NOV-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Tellurium (Te)-Dissolved			109.3		%		70-130	15-NOV-12
Thallium (Tl)-Dissolved			100.0		%		70-130	15-NOV-12
Tin (Sn)-Dissolved			102.7		%		70-130	15-NOV-12
Titanium (Ti)-Dissolved			106.8		%		70-130	15-NOV-12
Tungsten (W)-Dissolved			104.2		%		70-130	15-NOV-12
Uranium (U)-Dissolved			105.6		%		70-130	15-NOV-12
Vanadium (V)-Dissolved			105.8		%		70-130	15-NOV-12
Zinc (Zn)-Dissolved			105.9		%		70-130	15-NOV-12
Zirconium (Zr)-Dissolved			97.4		%		70-130	15-NOV-12
WG1586190-8 MS		**L1232905-3**						
Aluminum (Al)-Dissolved			103.6		%		70-130	15-NOV-12
Antimony (Sb)-Dissolved			124.4		%		70-130	15-NOV-12
Barium (Ba)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Beryllium (Be)-Dissolved			123.7		%		70-130	15-NOV-12
Bismuth (Bi)-Dissolved			90.3		%		70-130	15-NOV-12
Boron (B)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Chromium (Cr)-Dissolved			110.5		%		70-130	15-NOV-12
Cobalt (Co)-Dissolved			116.2		%		70-130	15-NOV-12
Copper (Cu)-Dissolved			106.0		%		70-130	15-NOV-12
Iron (Fe)-Dissolved			110.4		%		70-130	15-NOV-12
Lead (Pb)-Dissolved			104.1		%		70-130	15-NOV-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Molybdenum (Mo)-Dissolved			119.1		%		70-130	15-NOV-12
Nickel (Ni)-Dissolved			104.1		%		70-130	15-NOV-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Selenium (Se)-Dissolved			128.3		%		70-130	15-NOV-12
Silver (Ag)-Dissolved			110.3		%		70-130	15-NOV-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	15-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2475157								
WG1586190-8 MS		**L1232905-3**						
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Thallium (Tl)-Dissolved			103.6		%		70-130	15-NOV-12
Tin (Sn)-Dissolved			121.0		%		70-130	15-NOV-12
Titanium (Ti)-Dissolved			126.7		%		70-130	15-NOV-12
Tungsten (W)-Dissolved			120.4		%		70-130	15-NOV-12
Uranium (U)-Dissolved			N/A	MS-B	%		-	15-NOV-12
Vanadium (V)-Dissolved			117.4		%		70-130	15-NOV-12
Zinc (Zn)-Dissolved			109.9		%		70-130	15-NOV-12
Zirconium (Zr)-Dissolved			116.8		%		70-130	15-NOV-12
MET-T-MS-TB	**Water**							
Batch R2472658								
WG1580112-2 LCS								
Aluminum (Al)-Total			91.1		%		80-120	09-NOV-12
Antimony (Sb)-Total			102.8		%		80-120	09-NOV-12
Arsenic (As)-Total			96.2		%		80-120	09-NOV-12
Barium (Ba)-Total			99.2		%		80-120	09-NOV-12
Beryllium (Be)-Total			101.3		%		80-120	09-NOV-12
Bismuth (Bi)-Total			101.8		%		80-120	09-NOV-12
Boron (B)-Total			94.4		%		80-120	09-NOV-12
Cadmium (Cd)-Total			102.2		%		80-120	09-NOV-12
Calcium (Ca)-Total			98.6		%		80-120	09-NOV-12
Chromium (Cr)-Total			97.1		%		80-120	09-NOV-12
Cobalt (Co)-Total			95.7		%		80-120	09-NOV-12
Copper (Cu)-Total			97.0		%		80-120	09-NOV-12
Iron (Fe)-Total			94.9		%		80-120	09-NOV-12
Lead (Pb)-Total			98.7		%		80-120	09-NOV-12
Lithium (Li)-Total			103.5		%		80-120	09-NOV-12
Magnesium (Mg)-Total			98.0		%		80-120	09-NOV-12
Manganese (Mn)-Total			95.2		%		80-120	09-NOV-12
Molybdenum (Mo)-Total			99.7		%		80-120	09-NOV-12
Nickel (Ni)-Total			98.2		%		80-120	09-NOV-12
Potassium (K)-Total			97.1		%		80-120	09-NOV-12
Selenium (Se)-Total			98.8		%		80-120	09-NOV-12
Silver (Ag)-Total			103.2		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2472658								
WG1580112-2 LCS								
Sodium (Na)-Total			98.6		%		80-120	09-NOV-12
Strontium (Sr)-Total			95.4		%		80-120	09-NOV-12
Tellurium (Te)-Total			105.1		%		80-120	09-NOV-12
Thallium (Tl)-Total			98.0		%		80-120	09-NOV-12
Tin (Sn)-Total			99.5		%		80-120	09-NOV-12
Titanium (Ti)-Total			100.6		%		80-120	09-NOV-12
Tungsten (W)-Total			99.2		%		80-120	09-NOV-12
Uranium (U)-Total			93.6		%		80-120	09-NOV-12
Vanadium (V)-Total			98.2		%		80-120	09-NOV-12
Zinc (Zn)-Total			100.2		%		80-120	09-NOV-12
Zirconium (Zr)-Total			96.0		%		80-120	09-NOV-12
WG1580112-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	09-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	09-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	09-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	09-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2472658								
WG1580112-1 MB								
Sodium (Na)-Total			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Batch R2472665								
WG1581686-2 LCS								
Aluminum (Al)-Total			90.5		%		80-120	09-NOV-12
Antimony (Sb)-Total			103.4		%		80-120	09-NOV-12
Arsenic (As)-Total			100.6		%		80-120	09-NOV-12
Barium (Ba)-Total			98.4		%		80-120	09-NOV-12
Beryllium (Be)-Total			99.98		%		80-120	09-NOV-12
Bismuth (Bi)-Total			103.3		%		80-120	09-NOV-12
Boron (B)-Total			97.6		%		80-120	09-NOV-12
Cadmium (Cd)-Total			102.7		%		80-120	09-NOV-12
Calcium (Ca)-Total			98.0		%		80-120	09-NOV-12
Chromium (Cr)-Total			98.2		%		80-120	09-NOV-12
Cobalt (Co)-Total			97.6		%		80-120	09-NOV-12
Copper (Cu)-Total			102.1		%		80-120	09-NOV-12
Iron (Fe)-Total			92.9		%		80-120	09-NOV-12
Lead (Pb)-Total			99.9		%		80-120	09-NOV-12
Lithium (Li)-Total			100.5		%		80-120	09-NOV-12
Magnesium (Mg)-Total			97.8		%		80-120	09-NOV-12
Manganese (Mn)-Total			96.1		%		80-120	09-NOV-12
Molybdenum (Mo)-Total			101.9		%		80-120	09-NOV-12
Nickel (Ni)-Total			100.6		%		80-120	09-NOV-12
Potassium (K)-Total			96.7		%		80-120	09-NOV-12
Selenium (Se)-Total			104.5		%		80-120	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2472665								
WG1581686-2 LCS								
Silver (Ag)-Total			103.3		%		80-120	09-NOV-12
Sodium (Na)-Total			98.2		%		80-120	09-NOV-12
Strontium (Sr)-Total			96.8		%		80-120	09-NOV-12
Tellurium (Te)-Total			102.7		%		80-120	09-NOV-12
Thallium (Tl)-Total			99.2		%		80-120	09-NOV-12
Tin (Sn)-Total			99.6		%		80-120	09-NOV-12
Titanium (Ti)-Total			101.5		%		80-120	09-NOV-12
Tungsten (W)-Total			101.3		%		80-120	09-NOV-12
Uranium (U)-Total			97.6		%		80-120	09-NOV-12
Vanadium (V)-Total			99.1		%		80-120	09-NOV-12
Zinc (Zn)-Total			102.6		%		80-120	09-NOV-12
Zirconium (Zr)-Total			99.7		%		80-120	09-NOV-12
WG1581686-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	09-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	09-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	09-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	09-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	09-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	09-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	09-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	09-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	09-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	09-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	09-NOV-12
Lead (Pb)-Total			0.0027	A	mg/L		0.001	09-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	09-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	09-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	09-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	09-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	09-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	09-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	09-NOV-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	09-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2472665								
WG1581686-1 MB								
Sodium (Na)-Total			<0.10		mg/L		0.1	09-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	09-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	09-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	09-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	09-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	09-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	09-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	09-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	09-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	09-NOV-12
Batch R2473531								
WG1580112-10 LCS								
Aluminum (Al)-Total			87.0		%		80-120	12-NOV-12
Antimony (Sb)-Total			96.8		%		80-120	12-NOV-12
Arsenic (As)-Total			99.5		%		80-120	12-NOV-12
Barium (Ba)-Total			91.4		%		80-120	12-NOV-12
Beryllium (Be)-Total			100.8		%		80-120	12-NOV-12
Bismuth (Bi)-Total			99.2		%		80-120	12-NOV-12
Boron (B)-Total			95.9		%		80-120	12-NOV-12
Cadmium (Cd)-Total			99.3		%		80-120	12-NOV-12
Calcium (Ca)-Total			96.5		%		80-120	12-NOV-12
Chromium (Cr)-Total			100.2		%		80-120	12-NOV-12
Cobalt (Co)-Total			97.0		%		80-120	12-NOV-12
Copper (Cu)-Total			100.1		%		80-120	12-NOV-12
Iron (Fe)-Total			86.7		%		80-120	12-NOV-12
Lead (Pb)-Total			98.7		%		80-120	12-NOV-12
Lithium (Li)-Total			99.8		%		80-120	12-NOV-12
Magnesium (Mg)-Total			97.9		%		80-120	12-NOV-12
Manganese (Mn)-Total			94.6		%		80-120	12-NOV-12
Molybdenum (Mo)-Total			100.2		%		80-120	12-NOV-12
Nickel (Ni)-Total			100.8		%		80-120	12-NOV-12
Potassium (K)-Total			99.6		%		80-120	12-NOV-12
Selenium (Se)-Total			99.5		%		80-120	12-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473531								
WG1580112-10 LCS								
Silver (Ag)-Total			95.6		%		80-120	12-NOV-12
Sodium (Na)-Total			96.5		%		80-120	12-NOV-12
Strontium (Sr)-Total			92.6		%		80-120	12-NOV-12
Tellurium (Te)-Total			98.9		%		80-120	12-NOV-12
Thallium (Tl)-Total			98.9		%		80-120	12-NOV-12
Tin (Sn)-Total			93.2		%		80-120	12-NOV-12
Titanium (Ti)-Total			92.7		%		80-120	12-NOV-12
Tungsten (W)-Total			99.0		%		80-120	12-NOV-12
Uranium (U)-Total			89.8		%		80-120	12-NOV-12
Vanadium (V)-Total			94.0		%		80-120	12-NOV-12
Zinc (Zn)-Total			100.3		%		80-120	12-NOV-12
Zirconium (Zr)-Total			93.2		%		80-120	12-NOV-12
WG1580112-6 LCS								
Aluminum (Al)-Total			92.1		%		80-120	12-NOV-12
Antimony (Sb)-Total			100.2		%		80-120	12-NOV-12
Arsenic (As)-Total			103.9		%		80-120	12-NOV-12
Barium (Ba)-Total			98.6		%		80-120	12-NOV-12
Beryllium (Be)-Total			103.7		%		80-120	12-NOV-12
Bismuth (Bi)-Total			99.6		%		80-120	12-NOV-12
Boron (B)-Total			98.1		%		80-120	12-NOV-12
Cadmium (Cd)-Total			101.7		%		80-120	12-NOV-12
Calcium (Ca)-Total			98.6		%		80-120	12-NOV-12
Chromium (Cr)-Total			103.5		%		80-120	12-NOV-12
Cobalt (Co)-Total			101.3		%		80-120	12-NOV-12
Copper (Cu)-Total			105.8		%		80-120	12-NOV-12
Iron (Fe)-Total			103.0		%		80-120	12-NOV-12
Lead (Pb)-Total			99.9		%		80-120	12-NOV-12
Lithium (Li)-Total			106.4		%		80-120	12-NOV-12
Magnesium (Mg)-Total			104.0		%		80-120	12-NOV-12
Manganese (Mn)-Total			99.0		%		80-120	12-NOV-12
Molybdenum (Mo)-Total			108.2		%		80-120	12-NOV-12
Nickel (Ni)-Total			106.2		%		80-120	12-NOV-12
Potassium (K)-Total			102.9		%		80-120	12-NOV-12
Selenium (Se)-Total			100.5		%		80-120	12-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473531								
WG1580112-6 LCS								
Silver (Ag)-Total			98.3		%		80-120	12-NOV-12
Sodium (Na)-Total			104.5		%		80-120	12-NOV-12
Strontium (Sr)-Total			97.4		%		80-120	12-NOV-12
Tellurium (Te)-Total			103.7		%		80-120	12-NOV-12
Thallium (Tl)-Total			103.7		%		80-120	12-NOV-12
Tin (Sn)-Total			99.0		%		80-120	12-NOV-12
Titanium (Ti)-Total			100.4		%		80-120	12-NOV-12
Tungsten (W)-Total			99.0		%		80-120	12-NOV-12
Uranium (U)-Total			93.2		%		80-120	12-NOV-12
Vanadium (V)-Total			100.4		%		80-120	12-NOV-12
Zinc (Zn)-Total			102.9		%		80-120	12-NOV-12
Zirconium (Zr)-Total			101.7		%		80-120	12-NOV-12
WG1580112-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	12-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	12-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	12-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	12-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	12-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	12-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	12-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	12-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	12-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	12-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	12-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	12-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	12-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	12-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	12-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	12-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	12-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	12-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	12-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	12-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	12-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473531								
WG1580112-5 MB								
Silver (Ag)-Total			<0.00010		mg/L		0.0001	12-NOV-12
Sodium (Na)-Total			<0.10		mg/L		0.1	12-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	12-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	12-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	12-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	12-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	12-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	12-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	12-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	12-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	12-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	12-NOV-12
WG1580112-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	12-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	12-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	12-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	12-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	12-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	12-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	12-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	12-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	12-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	12-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	12-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	12-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	12-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	12-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	12-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	12-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	12-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	12-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	12-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	12-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	12-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473531								
WG1580112-9 MB								
Silver (Ag)-Total			<0.00010		mg/L		0.0001	12-NOV-12
Sodium (Na)-Total			<0.10		mg/L		0.1	12-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	12-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	12-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	12-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	12-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	12-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	12-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	12-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	12-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	12-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	12-NOV-12
WG1580112-4 MS		**L1232422-10**						
Aluminum (Al)-Total			101.1		%		70-130	12-NOV-12
Antimony (Sb)-Total			103.9		%		70-130	12-NOV-12
Arsenic (As)-Total			111.5		%		70-130	12-NOV-12
Beryllium (Be)-Total			112.3		%		70-130	12-NOV-12
Bismuth (Bi)-Total			90.8		%		70-130	12-NOV-12
Boron (B)-Total			106.4		%		70-130	12-NOV-12
Cadmium (Cd)-Total			124.7		%		70-130	12-NOV-12
Calcium (Ca)-Total			N/A	MS-B	%		-	12-NOV-12
Chromium (Cr)-Total			109.9		%		70-130	12-NOV-12
Cobalt (Co)-Total			109.7		%		70-130	12-NOV-12
Copper (Cu)-Total			102.1		%		70-130	12-NOV-12
Iron (Fe)-Total			107.7		%		70-130	12-NOV-12
Lead (Pb)-Total			97.4		%		70-130	12-NOV-12
Lithium (Li)-Total			108.3		%		70-130	12-NOV-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	12-NOV-12
Manganese (Mn)-Total			N/A	MS-B	%		-	12-NOV-12
Molybdenum (Mo)-Total			113.5		%		70-130	12-NOV-12
Nickel (Ni)-Total			102.2		%		70-130	12-NOV-12
Potassium (K)-Total			113.2		%		70-130	12-NOV-12
Selenium (Se)-Total			101.5		%		70-130	12-NOV-12
Silver (Ag)-Total			100.1		%		70-130	12-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473531								
WG1580112-4 MS		**L1232422-10**						
Sodium (Na)-Total			122.8		%		70-130	12-NOV-12
Strontium (Sr)-Total			N/A	MS-B	%		-	12-NOV-12
Tellurium (Te)-Total			107.4		%		70-130	12-NOV-12
Thallium (Tl)-Total			95.8		%		70-130	12-NOV-12
Tin (Sn)-Total			102.6		%		70-130	12-NOV-12
Titanium (Ti)-Total			108.4		%		70-130	12-NOV-12
Tungsten (W)-Total			101.8		%		70-130	12-NOV-12
Uranium (U)-Total			95.5		%		70-130	12-NOV-12
Vanadium (V)-Total			109.9		%		70-130	12-NOV-12
Zinc (Zn)-Total			99.7		%		70-130	12-NOV-12
Zirconium (Zr)-Total			108.3		%		70-130	12-NOV-12
Batch R2473708								
WG1581686-6 LCS								
Aluminum (Al)-Total			93.6		%		80-120	13-NOV-12
Antimony (Sb)-Total			99.9		%		80-120	13-NOV-12
Arsenic (As)-Total			105.2		%		80-120	13-NOV-12
Barium (Ba)-Total			95.0		%		80-120	13-NOV-12
Beryllium (Be)-Total			97.9		%		80-120	13-NOV-12
Bismuth (Bi)-Total			102.2		%		80-120	13-NOV-12
Boron (B)-Total			102.8		%		80-120	13-NOV-12
Cadmium (Cd)-Total			101.2		%		80-120	13-NOV-12
Calcium (Ca)-Total			99.8		%		80-120	13-NOV-12
Chromium (Cr)-Total			103.6		%		80-120	13-NOV-12
Cobalt (Co)-Total			97.8		%		80-120	13-NOV-12
Copper (Cu)-Total			107.4		%		80-120	13-NOV-12
Iron (Fe)-Total			100.6		%		80-120	13-NOV-12
Lead (Pb)-Total			99.0		%		80-120	13-NOV-12
Lithium (Li)-Total			97.8		%		80-120	13-NOV-12
Magnesium (Mg)-Total			104.5		%		80-120	13-NOV-12
Manganese (Mn)-Total			100.8		%		80-120	13-NOV-12
Molybdenum (Mo)-Total			106.2		%		80-120	13-NOV-12
Nickel (Ni)-Total			105.3		%		80-120	13-NOV-12
Potassium (K)-Total			103.6		%		80-120	13-NOV-12
Selenium (Se)-Total			111.0		%		80-120	13-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473708								
WG1581686-6 LCS								
Silver (Ag)-Total			102.9		%		80-120	13-NOV-12
Sodium (Na)-Total			103.1		%		80-120	13-NOV-12
Strontium (Sr)-Total			100.1		%		80-120	13-NOV-12
Tellurium (Te)-Total			101.3		%		80-120	13-NOV-12
Thallium (Tl)-Total			102.3		%		80-120	13-NOV-12
Tin (Sn)-Total			103.3		%		80-120	13-NOV-12
Titanium (Ti)-Total			105.0		%		80-120	13-NOV-12
Tungsten (W)-Total			99.3		%		80-120	13-NOV-12
Uranium (U)-Total			93.6		%		80-120	13-NOV-12
Vanadium (V)-Total			101.7		%		80-120	13-NOV-12
Zinc (Zn)-Total			105.3		%		80-120	13-NOV-12
Zirconium (Zr)-Total			100.7		%		80-120	13-NOV-12
WG1581686-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	13-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	13-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	13-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	13-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	13-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	13-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	13-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	13-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	13-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	13-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	13-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	13-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	13-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	13-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	13-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	13-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	13-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	13-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	13-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	13-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	13-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473708								
WG1581686-5 MB								
Silver (Ag)-Total			<0.00010		mg/L		0.0001	13-NOV-12
Sodium (Na)-Total			<0.10		mg/L		0.1	13-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	13-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	13-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	13-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	13-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	13-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	13-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	13-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	13-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	13-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	13-NOV-12
Batch R2473747								
WG1580112-14 LCS								
Aluminum (Al)-Total			91.7		%		80-120	13-NOV-12
Antimony (Sb)-Total			97.6		%		80-120	13-NOV-12
Arsenic (As)-Total			103.8		%		80-120	13-NOV-12
Barium (Ba)-Total			93.0		%		80-120	13-NOV-12
Beryllium (Be)-Total			103.9		%		80-120	13-NOV-12
Bismuth (Bi)-Total			102.4		%		80-120	13-NOV-12
Boron (B)-Total			101.5		%		80-120	13-NOV-12
Cadmium (Cd)-Total			98.9		%		80-120	13-NOV-12
Calcium (Ca)-Total			97.1		%		80-120	13-NOV-12
Chromium (Cr)-Total			101.8		%		80-120	13-NOV-12
Cobalt (Co)-Total			96.0		%		80-120	13-NOV-12
Copper (Cu)-Total			105.9		%		80-120	13-NOV-12
Iron (Fe)-Total			98.2		%		80-120	13-NOV-12
Lead (Pb)-Total			99.7		%		80-120	13-NOV-12
Lithium (Li)-Total			97.0		%		80-120	13-NOV-12
Magnesium (Mg)-Total			100.9		%		80-120	13-NOV-12
Manganese (Mn)-Total			98.7		%		80-120	13-NOV-12
Molybdenum (Mo)-Total			103.8		%		80-120	13-NOV-12
Nickel (Ni)-Total			103.6		%		80-120	13-NOV-12
Potassium (K)-Total			101.9		%		80-120	13-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473747								
WG1580112-14 LCS								
Selenium (Se)-Total			108.1		%		80-120	13-NOV-12
Silver (Ag)-Total			100.5		%		80-120	13-NOV-12
Sodium (Na)-Total			100.0		%		80-120	13-NOV-12
Strontium (Sr)-Total			97.6		%		80-120	13-NOV-12
Tellurium (Te)-Total			96.7		%		80-120	13-NOV-12
Thallium (Tl)-Total			103.4		%		80-120	13-NOV-12
Tin (Sn)-Total			101.3		%		80-120	13-NOV-12
Titanium (Ti)-Total			100.8		%		80-120	13-NOV-12
Tungsten (W)-Total			99.0		%		80-120	13-NOV-12
Uranium (U)-Total			96.9		%		80-120	13-NOV-12
Vanadium (V)-Total			99.0		%		80-120	13-NOV-12
Zinc (Zn)-Total			103.9		%		80-120	13-NOV-12
Zirconium (Zr)-Total			94.4		%		80-120	13-NOV-12
WG1580112-13 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	13-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	13-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	13-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	13-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	13-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	13-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	13-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	13-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	13-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	13-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	13-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	13-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	13-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	13-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	13-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	13-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	13-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	13-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	13-NOV-12
Potassium (K)-Total			<0.50		mg/L		0.5	13-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473747								
WG1580112-13 MB								
Selenium (Se)-Total			<0.0010		mg/L		0.001	13-NOV-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	13-NOV-12
Sodium (Na)-Total			<0.10		mg/L		0.1	13-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	13-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	13-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	13-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	13-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	13-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	13-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	13-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	13-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	13-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	13-NOV-12
WG1580112-12 MS		**L1232547-3**						
Aluminum (Al)-Total			N/A	MS-B	%		-	13-NOV-12
Antimony (Sb)-Total			98.7		%		70-130	13-NOV-12
Arsenic (As)-Total			110.5		%		70-130	13-NOV-12
Barium (Ba)-Total			N/A	MS-B	%		-	13-NOV-12
Beryllium (Be)-Total			106.1		%		70-130	13-NOV-12
Bismuth (Bi)-Total			94.3		%		70-130	13-NOV-12
Boron (B)-Total			97.0		%		70-130	13-NOV-12
Cadmium (Cd)-Total			124.6		%		70-130	13-NOV-12
Calcium (Ca)-Total			N/A	MS-B	%		-	13-NOV-12
Chromium (Cr)-Total			105.0		%		70-130	13-NOV-12
Cobalt (Co)-Total			99.3		%		70-130	13-NOV-12
Copper (Cu)-Total			106.6		%		70-130	13-NOV-12
Iron (Fe)-Total			N/A	MS-B	%		-	13-NOV-12
Lead (Pb)-Total			99.7		%		70-130	13-NOV-12
Lithium (Li)-Total			129.5		%		70-130	13-NOV-12
Magnesium (Mg)-Total			N/A	MS-B	%		-	13-NOV-12
Manganese (Mn)-Total			N/A	MS-B	%		-	13-NOV-12
Molybdenum (Mo)-Total			108.9		%		70-130	13-NOV-12
Nickel (Ni)-Total			104.6		%		70-130	13-NOV-12
Potassium (K)-Total			N/A	MS-B	%		-	13-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2473747								
WG1580112-12 MS		**L1232547-3**						
Selenium (Se)-Total			117.7		%		70-130	13-NOV-12
Silver (Ag)-Total			105.9		%		70-130	13-NOV-12
Sodium (Na)-Total			N/A	MS-B	%		-	13-NOV-12
Strontium (Sr)-Total			N/A	MS-B	%		-	13-NOV-12
Tellurium (Te)-Total			98.9		%		70-130	13-NOV-12
Thallium (Tl)-Total			97.7		%		70-130	13-NOV-12
Tin (Sn)-Total			104.5		%		70-130	13-NOV-12
Titanium (Ti)-Total			103.0		%		70-130	13-NOV-12
Tungsten (W)-Total			103.6		%		70-130	13-NOV-12
Uranium (U)-Total			106.7		%		70-130	13-NOV-12
Vanadium (V)-Total			109.3		%		70-130	13-NOV-12
Zinc (Zn)-Total			104.5		%		70-130	13-NOV-12
Zirconium (Zr)-Total			101.0		%		70-130	13-NOV-12
Batch R2476534								
WG1581686-10 LCS								
Aluminum (Al)-Total			90.3		%		80-120	16-NOV-12
Antimony (Sb)-Total			100.6		%		80-120	16-NOV-12
Arsenic (As)-Total			100.9		%		80-120	16-NOV-12
Barium (Ba)-Total			93.8		%		80-120	16-NOV-12
Beryllium (Be)-Total			105.5		%		80-120	16-NOV-12
Bismuth (Bi)-Total			99.4		%		80-120	16-NOV-12
Boron (B)-Total			101.6		%		80-120	16-NOV-12
Cadmium (Cd)-Total			100.5		%		80-120	16-NOV-12
Calcium (Ca)-Total			102.6		%		80-120	16-NOV-12
Chromium (Cr)-Total			105.3		%		80-120	16-NOV-12
Cobalt (Co)-Total			98.6		%		80-120	16-NOV-12
Copper (Cu)-Total			99.1		%		80-120	16-NOV-12
Iron (Fe)-Total			104.3		%		80-120	16-NOV-12
Lead (Pb)-Total			95.7		%		80-120	16-NOV-12
Lithium (Li)-Total			103.3		%		80-120	16-NOV-12
Magnesium (Mg)-Total			99.7		%		80-120	16-NOV-12
Manganese (Mn)-Total			99.4		%		80-120	16-NOV-12
Molybdenum (Mo)-Total			104.0		%		80-120	16-NOV-12
Nickel (Ni)-Total			101.0		%		80-120	16-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2476534								
WG1581686-10 LCS								
Potassium (K)-Total			101.4		%		80-120	16-NOV-12
Selenium (Se)-Total			94.8		%		80-120	16-NOV-12
Silver (Ag)-Total			101.7		%		80-120	16-NOV-12
Sodium (Na)-Total			103.9		%		80-120	16-NOV-12
Strontium (Sr)-Total			99.5		%		80-120	16-NOV-12
Tellurium (Te)-Total			96.8		%		80-120	16-NOV-12
Thallium (Tl)-Total			98.0		%		80-120	16-NOV-12
Tin (Sn)-Total			100.7		%		80-120	16-NOV-12
Titanium (Ti)-Total			102.6		%		80-120	16-NOV-12
Tungsten (W)-Total			100.8		%		80-120	16-NOV-12
Uranium (U)-Total			94.2		%		80-120	16-NOV-12
Vanadium (V)-Total			101.6		%		80-120	16-NOV-12
Zinc (Zn)-Total			100.4		%		80-120	16-NOV-12
Zirconium (Zr)-Total			95.7		%		80-120	16-NOV-12
WG1581686-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	16-NOV-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	16-NOV-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	16-NOV-12
Barium (Ba)-Total			<0.010		mg/L		0.01	16-NOV-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	16-NOV-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	16-NOV-12
Boron (B)-Total			<0.050		mg/L		0.05	16-NOV-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	16-NOV-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	16-NOV-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	16-NOV-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	16-NOV-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	16-NOV-12
Iron (Fe)-Total			<0.020		mg/L		0.02	16-NOV-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	16-NOV-12
Lithium (Li)-Total			<0.050		mg/L		0.05	16-NOV-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	16-NOV-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	16-NOV-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	16-NOV-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	16-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2476534								
WG1581686-9 MB								
Potassium (K)-Total			<0.50		mg/L		0.5	16-NOV-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	16-NOV-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	16-NOV-12
Sodium (Na)-Total			<0.10		mg/L		0.1	16-NOV-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	16-NOV-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	16-NOV-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	16-NOV-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	16-NOV-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	16-NOV-12
Tungsten (W)-Total			<0.010		mg/L		0.01	16-NOV-12
Uranium (U)-Total			<0.0050		mg/L		0.005	16-NOV-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	16-NOV-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	16-NOV-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	16-NOV-12
NH3-COL-TB	**Water**							
Batch R2471031								
WG1580762-11 DUP		**L1232517-9**						
Ammonia, Total (as N)		<0.020	0.020	RPD-NA	mg/L	N/A	20	06-NOV-12
WG1580762-10 LCS								
Ammonia, Total (as N)			92.8		%		85-115	06-NOV-12
WG1580762-14 LCS								
Ammonia, Total (as N)			92.9		%		85-115	06-NOV-12
WG1580762-18 LCS								
Ammonia, Total (as N)			93.4		%		85-115	06-NOV-12
WG1580762-2 LCS								
Ammonia, Total (as N)			91.8		%		85-115	06-NOV-12
WG1580762-6 LCS								
Ammonia, Total (as N)			93.2		%		85-115	06-NOV-12
WG1580762-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1580762-13 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1580762-17 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1580762-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	06-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2471031								
WG1580762-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1580762-12 MS		**L1232517-9**						
Ammonia, Total (as N)			94.1		%		75-125	06-NOV-12
WG1580762-16 MS		**L1232661-12**						
Ammonia, Total (as N)			91.7		%		75-125	06-NOV-12
WG1580762-20 MS		**L1232686-18**						
Ammonia, Total (as N)			90.8		%		75-125	06-NOV-12
WG1580762-4 MS		**L1232396-3**						
Ammonia, Total (as N)			91.9		%		75-125	06-NOV-12
WG1580762-8 MS		**L1232476-7**						
Ammonia, Total (as N)			N/A	MS-B	%		-	06-NOV-12
Batch R2474483								
WG1584052-10 LCS								
Ammonia, Total (as N)			92.2		%		85-115	10-NOV-12
WG1584052-2 LCS								
Ammonia, Total (as N)			92.1		%		85-115	10-NOV-12
WG1584052-6 LCS								
Ammonia, Total (as N)			92.4		%		85-115	10-NOV-12
WG1584052-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	10-NOV-12
WG1584052-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	10-NOV-12
WG1584052-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	10-NOV-12
WG1584052-12 MS		**L1235616-4**						
Ammonia, Total (as N)			N/A	MS-B	%		-	10-NOV-12
WG1584052-4 MS		**L1234984-1**						
Ammonia, Total (as N)			90.4		%		75-125	10-NOV-12
WG1584052-8 MS		**L1235292-2**						
Ammonia, Total (as N)			81.5		%		75-125	10-NOV-12
NO2-IC-TB	**Water**							
Batch R2469040								
WG1580561-10 LCS								
Nitrite (as N)			94.4		%		90-110	04-NOV-12
WG1580561-14 LCS								
Nitrite (as N)			96.2		%		90-110	04-NOV-12
WG1580561-18 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2469040								
WG1580561-18 LCS								
Nitrite (as N)			96.6		%		90-110	04-NOV-12
WG1580561-2 LCS								
Nitrite (as N)			94.2		%		90-110	04-NOV-12
WG1580561-6 LCS								
Nitrite (as N)			97.0		%		90-110	04-NOV-12
WG1580561-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	04-NOV-12
WG1580561-13 MB								
Nitrite (as N)			<0.020		mg/L		0.02	04-NOV-12
WG1580561-17 MB								
Nitrite (as N)			<0.020		mg/L		0.02	04-NOV-12
WG1580561-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	04-NOV-12
WG1580561-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	04-NOV-12
WG1580561-12 MS		**L1232441-24**						
Nitrite (as N)			100.8		%		75-115	04-NOV-12
WG1580561-16 MS		**L1232661-1**						
Nitrite (as N)			102.1		%		75-115	04-NOV-12
WG1580561-4 MS		**L1232481-3**						
Nitrite (as N)			98.9		%		75-115	04-NOV-12
WG1580561-8 MS		**L1232686-6**						
Nitrite (as N)			102.7		%		75-115	04-NOV-12
Batch R2470518								
WG1582083-10 LCS								
Nitrite (as N)			96.3		%		90-110	06-NOV-12
WG1582083-14 LCS								
Nitrite (as N)			100.1		%		90-110	06-NOV-12
WG1582083-18 LCS								
Nitrite (as N)			98.6		%		90-110	06-NOV-12
WG1582083-2 LCS								
Nitrite (as N)			96.1		%		90-110	06-NOV-12
WG1582083-6 LCS								
Nitrite (as N)			103.3		%		90-110	06-NOV-12
WG1582083-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1582083-13 MB								
Nitrite (as N)			<0.020		mg/L		0.02	06-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2470518								
WG1582083-17 MB								
Nitrite (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1582083-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1582083-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	06-NOV-12
WG1582083-12 MS		**L1232686-15**						
Nitrite (as N)			112.0		%		75-115	06-NOV-12
WG1582083-16 MS		**L1232895-5**						
Nitrite (as N)			102.7		%		75-115	06-NOV-12
WG1582083-4 MS		**L1232441-11**						
Nitrite (as N)			103.7		%		75-115	06-NOV-12
WG1582083-8 MS		**L1232476-8**						
Nitrite (as N)			102.2		%		75-115	06-NOV-12
NO3-IC-TB	**Water**							
Batch R2469040								
WG1580561-10 LCS								
Nitrate (as N)			98.7		%		90-110	04-NOV-12
WG1580561-14 LCS								
Nitrate (as N)			100.5		%		90-110	04-NOV-12
WG1580561-18 LCS								
Nitrate (as N)			98.0		%		90-110	04-NOV-12
WG1580561-2 LCS								
Nitrate (as N)			99.8		%		90-110	04-NOV-12
WG1580561-6 LCS								
Nitrate (as N)			102.4		%		90-110	04-NOV-12
WG1580561-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	04-NOV-12
WG1580561-13 MB								
Nitrate (as N)			<0.030		mg/L		0.03	04-NOV-12
WG1580561-17 MB								
Nitrate (as N)			<0.030		mg/L		0.03	04-NOV-12
WG1580561-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	04-NOV-12
WG1580561-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	04-NOV-12
WG1580561-12 MS		**L1232441-24**						
Nitrate (as N)			102.8		%		75-125	04-NOV-12
WG1580561-16 MS		**L1232661-1**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2469040								
WG1580561-16 MS		**L1232661-1**						
Nitrate (as N)			105.2		%		75-125	04-NOV-12
WG1580561-4 MS		**L1232481-3**						
Nitrate (as N)			98.8		%		75-125	04-NOV-12
WG1580561-8 MS		**L1232686-6**						
Nitrate (as N)			108.5		%		75-125	04-NOV-12
Batch R2470518								
WG1582083-10 LCS								
Nitrate (as N)			103.1		%		90-110	06-NOV-12
WG1582083-14 LCS								
Nitrate (as N)			101.6		%		90-110	06-NOV-12
WG1582083-18 LCS								
Nitrate (as N)			103.2		%		90-110	06-NOV-12
WG1582083-2 LCS								
Nitrate (as N)			100.9		%		90-110	06-NOV-12
WG1582083-6 LCS								
Nitrate (as N)			103.1		%		90-110	06-NOV-12
WG1582083-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	06-NOV-12
WG1582083-13 MB								
Nitrate (as N)			<0.030		mg/L		0.03	06-NOV-12
WG1582083-17 MB								
Nitrate (as N)			<0.030		mg/L		0.03	06-NOV-12
WG1582083-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	06-NOV-12
WG1582083-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	06-NOV-12
WG1582083-12 MS		**L1232686-15**						
Nitrate (as N)			107.9		%		75-125	06-NOV-12
WG1582083-16 MS		**L1232895-5**						
Nitrate (as N)			100.8		%		75-125	06-NOV-12
WG1582083-4 MS		**L1232441-11**						
Nitrate (as N)			101.1		%		75-125	06-NOV-12
WG1582083-8 MS		**L1232476-8**						
Nitrate (as N)			97.9		%		75-125	06-NOV-12
OGG-TOT-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
OGG-TOT-WT	**Water**							
Batch R2469906								
WG1580198-2 LCS								
Oil and Grease, Total			92.6		%		70-130	05-NOV-12
WG1580198-3 LCSD		**WG1580198-2**						
Oil and Grease, Total		92.6	95		%	2.3	40	05-NOV-12
WG1580198-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	05-NOV-12
Batch R2469908								
WG1580628-2 LCS								
Oil and Grease, Total			94.0		%		70-130	06-NOV-12
WG1580628-3 LCSD		**WG1580628-2**						
Oil and Grease, Total		94.0	96		%	2.5	40	06-NOV-12
WG1580628-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	06-NOV-12
P-T-COL-TB	**Water**							
Batch R2469122								
WG1580199-10 LCS								
Phosphorus (P)-Total			102.8		%		80-120	05-NOV-12
WG1580199-2 LCS								
Phosphorus (P)-Total			103.7		%		80-120	05-NOV-12
WG1580199-6 LCS								
Phosphorus (P)-Total			103.6		%		80-120	05-NOV-12
WG1580199-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	05-NOV-12
WG1580199-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	05-NOV-12
WG1580199-9 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	05-NOV-12
WG1580199-12 MS		**L1232601-2**						
Phosphorus (P)-Total			90.9		%		70-130	05-NOV-12
WG1580199-4 MS		**L1232422-10**						
Phosphorus (P)-Total			89.4		%		70-130	05-NOV-12
WG1580199-8 MS		**L1232481-16**						
Phosphorus (P)-Total			85.5		%		70-130	05-NOV-12
PH-CAP-TB	**Water**							
Batch R2469148								
WG1579983-3 DUP		**L1232517-1**						
pH		7.27	7.26	J	pH	0.02	0.2	03-NOV-12
WG1579983-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-CAP-TB	**Water**							
Batch R2469148								
WG1579983-2 LCS								
pH			5.99		pH		5.9-6.1	03-NOV-12
WG1579983-5 LCS								
pH			6.01		pH		5.9-6.1	03-NOV-12
WG1579983-8 LCS								
pH			6.01		pH		5.9-6.1	03-NOV-12
SO4-IC-TB	**Water**							
Batch R2469040								
WG1580561-10 LCS								
Sulfate (SO4)			100.6		%		90-110	04-NOV-12
WG1580561-14 LCS								
Sulfate (SO4)			102.3		%		90-110	04-NOV-12
WG1580561-18 LCS								
Sulfate (SO4)			100.3		%		90-110	04-NOV-12
WG1580561-2 LCS								
Sulfate (SO4)			102.0		%		90-110	04-NOV-12
WG1580561-6 LCS								
Sulfate (SO4)			104.7		%		90-110	04-NOV-12
WG1580561-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	04-NOV-12
WG1580561-13 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	04-NOV-12
WG1580561-17 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	04-NOV-12
WG1580561-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	04-NOV-12
WG1580561-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	04-NOV-12
WG1580561-12 MS		**L1232441-24**						
Sulfate (SO4)			102.1		%		75-125	04-NOV-12
WG1580561-16 MS		**L1232661-1**						
Sulfate (SO4)			107.6		%		75-125	04-NOV-12
WG1580561-4 MS		**L1232481-3**						
Sulfate (SO4)			101.4		%		75-125	04-NOV-12
WG1580561-8 MS		**L1232686-6**						
Sulfate (SO4)			109.1		%		75-125	04-NOV-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2470518								
WG1582083-10 LCS								
Sulfate (SO4)			105.7		%		90-110	06-NOV-12
WG1582083-14 LCS								
Sulfate (SO4)			106.0		%		90-110	06-NOV-12
WG1582083-18 LCS								
Sulfate (SO4)			106.1		%		90-110	06-NOV-12
WG1582083-2 LCS								
Sulfate (SO4)			102.2		%		90-110	06-NOV-12
WG1582083-6 LCS								
Sulfate (SO4)			105.5		%		90-110	06-NOV-12
WG1582083-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	06-NOV-12
WG1582083-13 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	06-NOV-12
WG1582083-17 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	06-NOV-12
WG1582083-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	06-NOV-12
WG1582083-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	06-NOV-12
WG1582083-12 MS		**L1232686-15**						
Sulfate (SO4)			112.5		%		75-125	06-NOV-12
WG1582083-16 MS		**L1232895-5**						
Sulfate (SO4)			103.6		%		75-125	06-NOV-12
WG1582083-4 MS		**L1232441-11**						
Sulfate (SO4)			110.7		%		75-125	06-NOV-12
WG1582083-8 MS		**L1232476-8**						
Sulfate (SO4)			99.9		%		75-125	06-NOV-12
SOLIDS-TOTSUS-TB	**Water**							
Batch R2470548								
WG1581528-2 LCS								
Total Suspended Solids			100.6		%		85-115	07-NOV-12
WG1581528-1 MB								
Total Suspended Solids			<2.0		mg/L		2	07-NOV-12

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
A	Method Blank exceeds ALS DQO. Refer to narrative comments for further information.
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Leachable Anions & Nutrients							
Anions by Ion Chromatography							
	13	31-OCT-12	06-NOV-12 21:59	5	6	days	EHT
Anions by Ion Chromatography							
	13	31-OCT-12	06-NOV-12 21:59	5	6	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 L1232517 were received on 02-NOV-12 11:15.

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.

ALS Environmental

L1232517-COFC

P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
Bell Brothers Limited Company www.alsglobal.com

L1232517

Company:	Treasury Metals
Contact:	Mac Potter
Address:	899 Tree Nursery Rd
	Wabigoon ON P0V 2W0
Phone:	807-938-6961 Fax:
Email:	mac@treasurymetals.com
Project:	Job M0906A01 PO: M0210-P0115
Quote #	Q32690 LSD Goliath Project
Invoice To:	Same as Report: ☑ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	Karen R. Sampler:

Regulatory Information

- ☐ O. Reg 153 (O. Reg 511 Amend) Table:
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☑ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (FP)	Hardness		Number of Containers
1	SW3	OCT 31/12		WATER	X	X	X	X	X	X	X	X	X	X	X		9
2	SW2				X	X	X	X	X	X	X	X	X	X	X		
3	SW1				X	X	X	X	X	X	X	X	X	X	X		
4	TL3				X	X	X	X	X	X	X	X	X	X	X		
5	TL1a				X	X	X	X	X	X	X	X	X	X	X		
6	TL2a				X	X	X	X	X	X	X	X	X	X	X		
7	TL22				X	X	X	X	X	X	X	X	X	X	X		
8	~~TL7~~ SW7				X	X	X	X	X	X	X	X	X	X	X		
9	SW8				X	X	X	X	X	X	X	X	X	X	X		
10	SW9				X	X	X	X	X	X	X	X	X	X	X		
11	SW10				X	X	X	X	X	X	X	X	X	X	X		

Special Instructions / Comments

EMPTY CONTAINERS RETURNED. SEDIMENT + BENTHOS + SW CONTAINERS

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by:	Date & Time	Received by:	Date & Time	Temp	Cooling Initiated	Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
<Original signed by> MACKENZIE POTTER	NOV 1 2012 1:47 PM	<Original signed by>	02-Nov-12 11:15	4.35	☒ Yes ☐ No	<Original signed by>	02 NOV 12 11:45	

**Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

ALS Environment

L1232517-COFC

o P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
mpbell Brothers Limited Company www.alsglobal.com

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P011S
Quote #	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler:	

Regulatory Information

- ☑ O. Reg 153 (O. Reg 511 Amend) Table: ___
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☐ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☑ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
12	Field Blank	OCT 31/12		WATER	X	X	X	X	X	X	X	X	X	X	X		9
13	Travel Blank	↓		↓	X	X	X	X	X	X	X	X	X	X	X		9
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		
					X	X	X	X	X	X	X	X	X	X	X		

Special Instructions / Comments

SHIPMENT RELEASE (client use)

Released by:	Date & Time
<Original signed by> MACKENZIE POTTER	1:47 PM NOV 1, 2012

SHIPMENT RECEPTION (lab use only)

Received by:	Date & Time	Temp	Cooling Initiated
<Original signed by>	02-Nov-12 11:15	4.35	☑ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
<Original signed by>	11:45 02-NOV-12	

(4.3, 3.1) (2.1, 1.9) (5.5, 3.2) (2.6, 1.7)
3.7 2 2.15

TREASURY METALS INC.
ATTN: Mac Potter
899 Tree Nursery Rd
Wabigoon ON P0V 2W0

Date Received: 29-NOV-12
Report Date: 07-DEC-12 15:18 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1243259

Project P.O. #: M0210-P0115
Job Reference: M0906A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1243259-1	L1243259-2	L1243259-3	L1243259-4	L1243259-5
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12
Sampled Time	13:00	13:00	13:00	13:00	13:00
Client ID	TRAVEL BLANK	FIELD BLANK	DUPLICATE	TL1A	TL3
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (EC) (uS/cm)	<3.0	<3.0	122	70.3	108
Hardness (as CaCO3) (mg/L)	<0.51	<0.51	57.3	34.1	53.4
pH (pH)	5.44	5.55	7.17	6.70	7.20
Total Suspended Solids (mg/L)	<2.0	<2.0	<2.0	2.2	97.6
Anions and Nutrients					
Acidity (as CaCO3) (mg/L)	<2.0	3.0	5.2	5.4	6.4
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	<5.0	57.5	27.3	47.4
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	0.029	0.021
Chloride (Cl) (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
Nitrate-N (NO3-N) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite-N (NO2-N) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus (P)-Total (mg/L)	<0.0050	<0.0050	0.0068	0.0265	0.106
Sulphate (SO4) (mg/L)	<2.0	<2.0	<2.0	2.2	2.2
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050 USF	<0.0050 USF	<0.0050 USF	<0.0050 USF	<0.0050 USF
Total Metals					
Aluminum (Al)-Total (mg/L)	<0.0050	<0.0050	0.090	0.156	0.659
Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.0060 DLA	<0.0060 DLA	<0.0060 DLA
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Barium (Ba)-Total (mg/L)	<0.010	<0.010	<0.10 DLA	<0.10 DLA	<0.10 DLA
Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Boron (B)-Total (mg/L)	<0.050	<0.050	<0.50 DLA	<0.50 DLA	<0.50 DLA
Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.00017	<0.00017	<0.00017
Calcium (Ca)-Total (mg/L)	<0.20	<0.20	19.1 DLA	9.6 DLA	15.8 DLA
Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.0050 DLA	<0.0050 DLA	<0.0050 DLA
Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Iron (Fe)-Total (mg/L)	<0.020	<0.020	0.45 DLA	1.79 DLA	2.04 DLA
Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.50 DLA	<0.50 DLA	<0.50 DLA
Magnesium (Mg)-Total (mg/L)	<0.020	<0.020	2.90	2.44	4.31
Manganese (Mn)-Total (mg/L)	<0.0010	<0.0010	0.051	0.095	0.140
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010 DLA	<0.000010 DLA	<0.000010 DLA
Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.020 DLA	<0.020 DLA	<0.020 DLA
Potassium (K)-Total (mg/L)	<0.50	<0.50	<5.0 DLA	<5.0 DLA	<5.0 DLA
Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1243259-6	L1243259-7	L1243259-8	L1243259-9	L1243259-10
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
Sampled Date	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12
Sampled Time	13:00	13:00	13:00	13:00	13:00
Client ID	SW1	SW2	SW3	SW7	SW8
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (EC) (uS/cm)	122	141	139	102	157
Hardness (as CaCO3) (mg/L)	60.8	73.9	55.2	49.6	75.4
pH (pH)	7.16	7.38	7.22	7.39	7.76
Total Suspended Solids (mg/L)	<2.0	10.8	<2.0	3.4	<2.0
Anions and Nutrients					
Acidity (as CaCO3) (mg/L)	5.4	4.8	4.8	5.0	3.8
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	57.9	67.8	49.0	43.0	77.6
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	0.023	0.074
Chloride (Cl) (mg/L)	<2.0	<2.0	9.2	<2.0	<2.0
Nitrate-N (NO3-N) (mg/L)	<0.10	<0.10	<0.10	0.32	0.11
Nitrite-N (NO2-N) (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
Phosphorus (P)-Total (mg/L)	0.0061	0.0223	0.0129	0.0107	<0.0050
Sulphate (SO4) (mg/L)	<2.0	<2.0	2.7	4.5	<2.0
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050 USF	<0.0050 USF	<0.0050 USF	<0.0050 USF	<0.0050 USF
Total Metals					
Aluminum (Al)-Total (mg/L)	0.087	0.555	0.0809	0.148	0.0148
Antimony (Sb)-Total (mg/L)	<0.0060 DLA	<0.00060	<0.00060	<0.0060 DLA	<0.00060
Arsenic (As)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Barium (Ba)-Total (mg/L)	<0.10 DLA	0.017	<0.010	<0.10 DLA	0.017
Beryllium (Be)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Bismuth (Bi)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Boron (B)-Total (mg/L)	<0.50 DLA	<0.050	<0.050	<0.50 DLA	<0.050
Cadmium (Cd)-Total (mg/L)	<0.00017 DLA	<0.000017	<0.000017	<0.00017 DLA	<0.000017
Calcium (Ca)-Total (mg/L)	19.7	20.7	17.0	16.3	28.2
Chromium (Cr)-Total (mg/L)	<0.010 DLA	0.0012	<0.0010	<0.010 DLA	<0.0010
Cobalt (Co)-Total (mg/L)	<0.0050 DLA	<0.00050	<0.00050	<0.0050 DLA	<0.00050
Copper (Cu)-Total (mg/L)	<0.010 DLA	0.0025	0.0013	<0.010 DLA	<0.0010
Iron (Fe)-Total (mg/L)	0.45	1.01	0.323	0.92	0.861
Lead (Pb)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Lithium (Li)-Total (mg/L)	<0.50 DLA	<0.050	<0.050	<0.50 DLA	<0.050
Magnesium (Mg)-Total (mg/L)	3.04	5.67	3.65	2.99	2.24
Manganese (Mn)-Total (mg/L)	0.053	0.0395	0.0542	0.039	0.140
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Nickel (Ni)-Total (mg/L)	<0.020 DLA	<0.0020	<0.0020	<0.020 DLA	<0.0020
Potassium (K)-Total (mg/L)	<5.0 DLA	1.45	1.33	<5.0 DLA	0.52
Selenium (Se)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1243259-11	L1243259-12	L1243259-13	L1243259-14	
Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
Sampled Date	27-NOV-12	27-NOV-12	28-NOV-12	28-NOV-12	
Sampled Time	13:00	13:00	13:00	13:00	
Client ID	SW10	JCTA	SW9	SW11	
Grouping	**Analyte**				
WATER					
Physical Tests	Conductivity (EC) (uS/cm)	128	95.8	235	35.2
	Hardness (as CaCO3) (mg/L)	60.0	44.4	114	19.3
	pH (pH)	7.53	7.09	7.83	5.63
	Total Suspended Solids (mg/L)	<2.0	<2.0	3.4	<2.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	3.6	7.0	4.4	12.2
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	61.0	40.4	121	6.6
	Ammonia, Total (as N) (mg/L)	0.036	0.038	0.026	<0.020
	Chloride (Cl) (mg/L)	<2.0	<2.0	<2.0	<2.0
	Nitrate-N (NO3-N) (mg/L)	<0.10	<0.10	<0.10	0.12
	Nitrite-N (NO2-N) (mg/L)	<0.10	<0.10	<0.10	<0.10
	Phosphorus (P)-Total (mg/L)	0.0062	0.0266	0.0114	0.0204
	Sulphate (SO4) (mg/L)	<2.0	2.1	<2.0	<2.0
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050 USF	<0.0050 USF	<0.0050 USF	<0.0050 USF
Total Metals	Aluminum (Al)-Total (mg/L)	0.0563	0.178	0.0913	0.449
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	0.011	<0.010	0.021	<0.010
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	0.000030
	Calcium (Ca)-Total (mg/L)	20.7	13.7	38.6	5.73
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	1.28	1.72	0.476	1.48
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	2.83	3.48	6.45	1.28
	Manganese (Mn)-Total (mg/L)	0.171	0.175	0.220	0.0411
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	0.65	0.88	1.62	<0.50
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1243259-1 SURFACEWATE 27-NOV-12 13:00 TRAVEL BLANK	L1243259-2 SURFACEWATE 27-NOV-12 13:00 FIELD BLANK	L1243259-3 SURFACEWATE 27-NOV-12 13:00 DUPLICATE	L1243259-4 SURFACEWATE 27-NOV-12 13:00 TL1A	L1243259-5 SURFACEWATE 27-NOV-12 13:00 TL3
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.0010 DLA	<0.0010 DLA	<0.0010 DLA
	Sodium (Na)-Total (mg/L)	<0.10	<0.10	1.8	1.4	2.1
	Strontium (Sr)-Total (mg/L)	<0.0010	<0.0010	0.032	0.020	0.033
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.0030 DLA	<0.0030 DLA	<0.0030 DLA
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
	Titanium (Ti)-Total (mg/L)	<0.0020	<0.0020	<0.020 DLA	<0.020 DLA	0.027
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.10 DLA	<0.10 DLA	<0.10 DLA
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.050 DLA	<0.050 DLA	<0.050 DLA
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
	Zinc (Zn)-Total (mg/L)	0.0034 RRV	<0.0030	<0.030 DLA	<0.030 DLA	<0.030 DLA
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.010 DLA	<0.010 DLA	<0.010 DLA
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	<0.0050	0.0108	0.111	0.0678
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	<0.20	<0.20	18.3	9.72	15.0
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	0.153	1.19	0.796
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	<0.020	<0.020	2.79	2.39	3.88
	Manganese (Mn)-Dissolved (mg/L)	<0.0010	<0.0010	0.0486	0.0950	0.0526
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	0.98	<0.50	0.88
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	<0.10	<0.10	1.70	1.40	2.01
	Strontium (Sr)-Dissolved (mg/L)	<0.0010	<0.0010	0.0301	0.0213	0.0312

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1243259-6 SURFACEWATE 27-NOV-12 13:00 SW1	L1243259-7 SURFACEWATE 27-NOV-12 13:00 SW2	L1243259-8 SURFACEWATE 27-NOV-12 13:00 SW3	L1243259-9 SURFACEWATE 27-NOV-12 13:00 SW7	L1243259-10 SURFACEWATE 27-NOV-12 13:00 SW8
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.0010 DLA	<0.00010	<0.00010	<0.0010 DLA	<0.00010
	Sodium (Na)-Total (mg/L)	1.8	2.10	6.57	1.6	1.25
	Strontium (Sr)-Total (mg/L)	0.032	0.0377	0.0375	0.029	0.0358
	Tellurium (Te)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.0030 DLA	<0.00030	<0.00030	<0.0030 DLA	<0.00030
	Tin (Sn)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.020 DLA	0.0221	0.0028	<0.020 DLA	<0.0020
	Tungsten (W)-Total (mg/L)	<0.10 DLA	<0.010	<0.010	<0.10 DLA	<0.010
	Uranium (U)-Total (mg/L)	<0.050 DLA	<0.0050	<0.0050	<0.050 DLA	<0.0050
	Vanadium (V)-Total (mg/L)	<0.010 DLA	0.0012	<0.0010	<0.010 DLA	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.030 DLA	0.0070	<0.0030	<0.030 DLA	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.010 DLA	<0.0010	<0.0010	<0.010 DLA	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0120	0.0527	0.0149	0.0810	<0.0050
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	0.013	<0.010	<0.010	0.017
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	19.3	20.0	16.0	15.1	26.4
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0014	0.0014	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	0.155	0.199	0.134	0.606	0.320
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	3.07	5.82	3.68	2.90	2.31
	Manganese (Mn)-Dissolved (mg/L)	0.0513	0.0186	0.0461	0.0336	0.128
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	1.04	1.26	1.26	0.59	0.50
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.79	2.04	6.56	1.49	1.25
	Strontium (Sr)-Dissolved (mg/L)	0.0312	0.0351	0.0334	0.0283	0.0329

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1243259-11	L1243259-12	L1243259-13	L1243259-14	
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
	Sampled Date	27-NOV-12	27-NOV-12	28-NOV-12	28-NOV-12	
	Sampled Time	13:00	13:00	13:00	13:00	
	Client ID	SW10	JCTA	SW9	SW11	
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Total (mg/L)	1.75	1.94	3.25	1.17	
	Strontium (Sr)-Total (mg/L)	0.0329	0.0295	0.0615	0.0141	
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Total (mg/L)	0.0026	0.0058	0.0041	0.0121	
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Total (mg/L)	0.0039	0.0049	<0.0030	0.0064	
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0346	0.0781	0.0243	0.421	
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Barium (Ba)-Dissolved (mg/L)	0.011	<0.010	0.020	<0.010	
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	0.000028	
	Calcium (Ca)-Dissolved (mg/L)	19.2	12.2	35.0	5.52	
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Iron (Fe)-Dissolved (mg/L)	0.739	0.867	0.258	1.26	
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Magnesium (Mg)-Dissolved (mg/L)	2.90	3.40	6.49	1.34	
	Manganese (Mn)-Dissolved (mg/L)	0.153	0.147	0.166	0.0382	
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Potassium (K)-Dissolved (mg/L)	0.59	0.77	1.50	<0.50	
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	1.73	1.80	3.30	1.26	
	Strontium (Sr)-Dissolved (mg/L)	0.0306	0.0261	0.0556	0.0127	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1243259-1	L1243259-2	L1243259-3	L1243259-4	L1243259-5
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
	Sampled Date	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12
	Sampled Time	13:00	13:00	13:00	13:00	13:00
	Client ID	TRAVEL BLANK	FIELD BLANK	DUPLICATE	TL1A	TL3
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	0.0026	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0061	0.0051
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1243259-6	L1243259-7	L1243259-8	L1243259-9	L1243259-10
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE
	Sampled Date	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12	27-NOV-12
	Sampled Time	13:00	13:00	13:00	13:00	13:00
	Client ID	SW1	SW2	SW3	SW7	SW8
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0061	0.0050	0.0042
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1243259-11	L1243259-12	L1243259-13	L1243259-14	
	Description	SURFACEWATE	SURFACEWATE	SURFACEWATE	SURFACEWATE	
	Sampled Date	27-NOV-12	27-NOV-12	28-NOV-12	28-NOV-12	
	Sampled Time	13:00	13:00	13:00	13:00	
	Client ID	SW10	JCTA	SW9	SW11	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	0.0092	
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Zinc (Zn)-Dissolved (mg/L)	0.0045	0.0048	<0.0030	0.0041	
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Number	Client Sample ID	Qualifier	Description
L1243259-1	TRAVEL BLANK	SRPF	Sample received partially frozen - ROUTINE
L1243259-10	SW8	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE
L1243259-11	SW10	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE,NUT
L1243259-12	JCTA	SRPF	Sample received partially frozen - CN,MET,ROUTINE
L1243259-13	SW9	SFPL	Sample was Filtered and Preserved at the laboratory - HG-D, MET-D
L1243259-14	SW11	SFPL	Sample was Filtered and Preserved at the laboratory - HG-D, MET-D
		SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE,NUT,HG-D
L1243259-2	FIELD BLANK	SPL	Sample was Preserved at the laboratory - CN,MET,OGG,HG,NUT
L1243259-3	DUPLICATE	SRPF	Sample received partially frozen - CN,MET
L1243259-4	TL1A	SRPF	Sample received partially frozen - CN,MET,HG-T,NUT,OGG,ROUTINE
L1243259-5	TL3	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE
L1243259-6	SW1	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE
L1243259-7	SW2	SRPF	Sample received partially frozen - CN.MET,OGG,ROUTINE,NUT
		SPL	Sample was Preserved at the laboratory - NUT
L1243259-8	SW3	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE,HG-D
L1243259-9	SW7	SRPF	Sample received partially frozen - CN,MET,OGG,ROUTINE,HG

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Potassium (K)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Duplicate	Cyanide, Free	USF	L1243259-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLA	Detection Limit Adjusted For required dilution
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis
USF	Unreliable: Sample Frozen in Transit

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-WT	Water	Chloride	EPA 300.0 (IC)
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

Reference Information

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	EPA 245.7
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	EPA 245.7
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-WT	Water	Nitrite-N	EPA 300.0 (IC)

A filtered water sample (drinking waters-unfiltered) is analyzed by ion chromatography.

NO3-WT	Water	Nitrate-N	EPA 300.0 (IC)

A filtered water sample (drinking waters-unfiltered) is analyzed by ion chromatography.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-WT	Water	Sulphate	EPA 300.0 (IC)
SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
899 Tree Nursery Rd
Wabigoon ON P0V 2W0
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2492031								
WG1596255-3 DUP		**L1243259-4**						
Acidity (as CaCO3)		5.4	5.2		mg/L	3.8	20	04-DEC-12
WG1596255-2 LCS								
Acidity (as CaCO3)			98.0		%		85-115	04-DEC-12
WG1596255-5 LCS								
Acidity (as CaCO3)			103.2		%		85-115	04-DEC-12
WG1596255-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-DEC-12
WG1596255-4 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-DEC-12
ALK-TOT-CAP-TB	**Water**							
Batch R2490904								
WG1594668-6 DUP		**L1243259-14**						
Alkalinity, Total (as CaCO3)		6.6	6.4		mg/L CaCO3	2.4	20	29-NOV-12
WG1594668-2 LCS								
Alkalinity, Total (as CaCO3)			91.6		%		85-115	29-NOV-12
WG1594668-5 LCS								
Alkalinity, Total (as CaCO3)			91.3		%		85-115	29-NOV-12
WG1594668-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	29-NOV-12
WG1594668-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	29-NOV-12
CL-WT	**Water**							
Batch R2490507								
WG1594689-7 DUP		**L1243259-5**						
Chloride (Cl)		<2.0	<2.0	RPD-NA	mg/L	N/A	20	30-NOV-12
WG1594689-3 LCS								
Chloride (Cl)			97.1		%		85-115	30-NOV-12
WG1594689-4 LCSD		**WG1594689-3**						
Chloride (Cl)		97.1	97		%	0.3	25	30-NOV-12
WG1594689-1 MB								
Chloride (Cl)			<2.0		mg/L		2	30-NOV-12
CN-FREE-CFA-VA	**Water**							
Batch R2492206								
WG1596073-5 DUP		**L1243259-4**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	03-DEC-12
WG1596073-2 LCS								
Cyanide, Free			103.4		%		80-120	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2492206								
WG1596073-4 LCS								
Cyanide, Free			104.0		%		80-120	03-DEC-12
WG1596073-8 LCS								
Cyanide, Free			102.8		%		80-120	03-DEC-12
WG1596073-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	03-DEC-12
WG1596073-3 MB								
Cyanide, Free			<0.0050		mg/L		0.005	03-DEC-12
WG1596073-7 MB								
Cyanide, Free			<0.0050		mg/L		0.005	03-DEC-12
WG1596073-6 MS		**L1243259-4**						
Cyanide, Free			100.7		%		70-130	03-DEC-12
CN-TOT-WT	**Water**							
Batch R2492489								
WG1597070-4 CVS								
Cyanide, Total			101.0		%		85-115	05-DEC-12
WG1597070-3 LCS								
Cyanide, Total			100.9		%		80-120	05-DEC-12
WG1597070-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	05-DEC-12
Batch R2493320								
WG1597670-4 CVS								
Cyanide, Total			94.5		%		85-115	06-DEC-12
WG1597670-5 DUP		**L1243259-2**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	06-DEC-12
WG1597670-3 LCS								
Cyanide, Total			100.0		%		80-120	06-DEC-12
WG1597670-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	06-DEC-12
CN-WAD-WT	**Water**							
Batch R2492606								
WG1597172-4 CVS								
Cyanide, Weak Acid Diss			100.0		%		85-115	05-DEC-12
WG1597172-2 DUP		**L1243259-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	05-DEC-12
WG1597172-3 LCS								
Cyanide, Weak Acid Diss			111.6		%		80-120	05-DEC-12
WG1597172-1 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-WT	**Water**							
Batch R2492606								
WG1597172-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	05-DEC-12
Batch R2493761								
WG1597994-4 CVS								
Cyanide, Weak Acid Diss			113.0		%		85-115	06-DEC-12
WG1597994-2 DUP		**L1243259-2**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	06-DEC-12
WG1597994-3 LCS								
Cyanide, Weak Acid Diss			110.9		%		80-120	06-DEC-12
WG1597994-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	06-DEC-12
EC-CAP-TB	**Water**							
Batch R2490904								
WG1594668-3 DUP		**L1243259-2**						
Conductivity (EC)		<3.0	<3.0	RPD-NA	uS/cm	N/A	10	29-NOV-12
WG1594668-6 DUP		**L1243259-14**						
Conductivity (EC)		35.2	35.2		uS/cm	0.0	10	29-NOV-12
WG1594668-2 LCS								
Conductivity (EC)			96.0		%		90-110	29-NOV-12
WG1594668-5 LCS								
Conductivity (EC)			99.1		%		90-110	29-NOV-12
WG1594668-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	29-NOV-12
WG1594668-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	29-NOV-12
HG-D-CVAF-TB	**Water**							
Batch R2490142								
WG1594822-3 DUP		**L1243259-13**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-NOV-12
WG1594822-2 LCS								
Mercury (Hg)-Dissolved			104.5		%		80-120	30-NOV-12
WG1594822-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	30-NOV-12
WG1594822-4 MS		**L1243259-13**						
Mercury (Hg)-Dissolved			105.2		%		70-130	30-NOV-12
HG-T-CVAF-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2490133								
WG1594818-5 DUP		**L1243259-9**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-NOV-12
WG1594818-9 DUP		**L1243259-13**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	30-NOV-12
WG1594818-2 LCS								
Mercury (Hg)-Total			101.6		%		80-120	30-NOV-12
WG1594818-8 LCS								
Mercury (Hg)-Total			104.5		%		80-120	30-NOV-12
WG1594818-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	30-NOV-12
WG1594818-7 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	30-NOV-12
WG1594818-10 MS		**L1243259-13**						
Mercury (Hg)-Total			105.7		%		70-130	30-NOV-12
WG1594818-6 MS		**L1243259-9**						
Mercury (Hg)-Total			103.2		%		70-130	30-NOV-12
MET-D-MS-TB	**Water**							
Batch R2492100								
WG1595977-2 LCS								
Aluminum (Al)-Dissolved			88.3		%		80-120	03-DEC-12
Antimony (Sb)-Dissolved			98.1		%		80-120	03-DEC-12
Arsenic (As)-Dissolved			98.4		%		80-120	03-DEC-12
Barium (Ba)-Dissolved			98.5		%		80-120	03-DEC-12
Beryllium (Be)-Dissolved			94.0		%		80-120	03-DEC-12
Bismuth (Bi)-Dissolved			96.9		%		80-120	03-DEC-12
Boron (B)-Dissolved			95.0		%		80-120	03-DEC-12
Cadmium (Cd)-Dissolved			97.5		%		80-120	03-DEC-12
Calcium (Ca)-Dissolved			95.7		%		80-120	03-DEC-12
Chromium (Cr)-Dissolved			94.2		%		80-120	03-DEC-12
Cobalt (Co)-Dissolved			94.4		%		80-120	03-DEC-12
Copper (Cu)-Dissolved			95.6		%		80-120	03-DEC-12
Iron (Fe)-Dissolved			89.7		%		80-120	03-DEC-12
Lead (Pb)-Dissolved			92.0		%		80-120	03-DEC-12
Lithium (Li)-Dissolved			90.2		%		80-120	03-DEC-12
Magnesium (Mg)-Dissolved			96.3		%		80-120	03-DEC-12
Manganese (Mn)-Dissolved			93.2		%		80-120	03-DEC-12
Molybdenum (Mo)-Dissolved			97.7		%		80-120	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2492100								
WG1595977-2 LCS								
Nickel (Ni)-Dissolved			95.8		%		80-120	03-DEC-12
Potassium (K)-Dissolved			96.3		%		80-120	03-DEC-12
Selenium (Se)-Dissolved			94.9		%		80-120	03-DEC-12
Silver (Ag)-Dissolved			99.6		%		80-120	03-DEC-12
Sodium (Na)-Dissolved			97.6		%		80-120	03-DEC-12
Strontium (Sr)-Dissolved			92.5		%		80-120	03-DEC-12
Tellurium (Te)-Dissolved			100.6		%		80-120	03-DEC-12
Thallium (Tl)-Dissolved			96.9		%		80-120	03-DEC-12
Tin (Sn)-Dissolved			93.7		%		80-120	03-DEC-12
Titanium (Ti)-Dissolved			94.5		%		80-120	03-DEC-12
Tungsten (W)-Dissolved			95.5		%		80-120	03-DEC-12
Uranium (U)-Dissolved			91.4		%		80-120	03-DEC-12
Vanadium (V)-Dissolved			95.1		%		80-120	03-DEC-12
Zinc (Zn)-Dissolved			97.7		%		80-120	03-DEC-12
Zirconium (Zr)-Dissolved			96.0		%		80-120	03-DEC-12
WG1595977-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	03-DEC-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	03-DEC-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	03-DEC-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	03-DEC-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	03-DEC-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	03-DEC-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	03-DEC-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	03-DEC-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	03-DEC-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	03-DEC-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2492100								
WG1595977-1 MB								
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	03-DEC-12
Potassium (K)-Dissolved			<0.50		mg/L		0.5	03-DEC-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	03-DEC-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	03-DEC-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	03-DEC-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	03-DEC-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	03-DEC-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	03-DEC-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	03-DEC-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	03-DEC-12
WG1595977-4 MS		**L1244327-1**						
Aluminum (Al)-Dissolved			114.1		%		70-130	03-DEC-12
Antimony (Sb)-Dissolved			100.8		%		70-130	03-DEC-12
Arsenic (As)-Dissolved			112.8		%		70-130	03-DEC-12
Barium (Ba)-Dissolved			104.7		%		70-130	03-DEC-12
Beryllium (Be)-Dissolved			107.9		%		70-130	03-DEC-12
Bismuth (Bi)-Dissolved			84.0		%		70-130	03-DEC-12
Boron (B)-Dissolved			129.2		%		70-130	03-DEC-12
Cadmium (Cd)-Dissolved			119.5		%		70-130	03-DEC-12
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Chromium (Cr)-Dissolved			109.3		%		70-130	03-DEC-12
Cobalt (Co)-Dissolved			111.3		%		70-130	03-DEC-12
Copper (Cu)-Dissolved			94.1		%		70-130	03-DEC-12
Iron (Fe)-Dissolved			106.2		%		70-130	03-DEC-12
Lead (Pb)-Dissolved			91.9		%		70-130	03-DEC-12
Lithium (Li)-Dissolved			118.0		%		70-130	03-DEC-12
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Molybdenum (Mo)-Dissolved			106.4		%		70-130	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2492100								
WG1595977-4 MS		**L1244327-1**						
Nickel (Ni)-Dissolved			96.9		%		70-130	03-DEC-12
Potassium (K)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Selenium (Se)-Dissolved			116.6		%		70-130	03-DEC-12
Silver (Ag)-Dissolved			73.9		%		70-130	03-DEC-12
Sodium (Na)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	03-DEC-12
Tellurium (Te)-Dissolved			113.8		%		70-130	03-DEC-12
Thallium (Tl)-Dissolved			91.8		%		70-130	03-DEC-12
Tin (Sn)-Dissolved			96.7		%		70-130	03-DEC-12
Titanium (Ti)-Dissolved			107.5		%		70-130	03-DEC-12
Tungsten (W)-Dissolved			98.7		%		70-130	03-DEC-12
Uranium (U)-Dissolved			95.5		%		70-130	03-DEC-12
Vanadium (V)-Dissolved			118.9		%		70-130	03-DEC-12
Zinc (Zn)-Dissolved			98.8		%		70-130	03-DEC-12
Zirconium (Zr)-Dissolved			96.4		%		70-130	03-DEC-12
MET-T-MS-TB	**Water**							
Batch R2492048								
WG1594839-2 LCS								
Aluminum (Al)-Total			90.8		%		80-120	03-DEC-12
Antimony (Sb)-Total			99.4		%		80-120	03-DEC-12
Arsenic (As)-Total			98.2		%		80-120	03-DEC-12
Barium (Ba)-Total			96.6		%		80-120	03-DEC-12
Beryllium (Be)-Total			99.2		%		80-120	03-DEC-12
Bismuth (Bi)-Total			97.9		%		80-120	03-DEC-12
Boron (B)-Total			103.3		%		80-120	03-DEC-12
Cadmium (Cd)-Total			99.1		%		80-120	03-DEC-12
Calcium (Ca)-Total			98.8		%		80-120	03-DEC-12
Chromium (Cr)-Total			97.0		%		80-120	03-DEC-12
Cobalt (Co)-Total			96.7		%		80-120	03-DEC-12
Copper (Cu)-Total			95.8		%		80-120	03-DEC-12
Iron (Fe)-Total			97.5		%		80-120	03-DEC-12
Lead (Pb)-Total			95.6		%		80-120	03-DEC-12
Lithium (Li)-Total			95.5		%		80-120	03-DEC-12
Magnesium (Mg)-Total			98.9		%		80-120	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2492048								
WG1594839-2 LCS								
Manganese (Mn)-Total			98.0		%		80-120	03-DEC-12
Molybdenum (Mo)-Total			98.4		%		80-120	03-DEC-12
Nickel (Ni)-Total			100.0		%		80-120	03-DEC-12
Potassium (K)-Total			100.3		%		80-120	03-DEC-12
Selenium (Se)-Total			94.1		%		80-120	03-DEC-12
Silver (Ag)-Total			99.2		%		80-120	03-DEC-12
Sodium (Na)-Total			100.3		%		80-120	03-DEC-12
Strontium (Sr)-Total			94.8		%		80-120	03-DEC-12
Tellurium (Te)-Total			101.6		%		80-120	03-DEC-12
Thallium (Tl)-Total			99.5		%		80-120	03-DEC-12
Tin (Sn)-Total			95.2		%		80-120	03-DEC-12
Titanium (Ti)-Total			93.9		%		80-120	03-DEC-12
Tungsten (W)-Total			98.7		%		80-120	03-DEC-12
Uranium (U)-Total			93.0		%		80-120	03-DEC-12
Vanadium (V)-Total			95.6		%		80-120	03-DEC-12
Zinc (Zn)-Total			97.6		%		80-120	03-DEC-12
Zirconium (Zr)-Total			97.1		%		80-120	03-DEC-12
WG1594839-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	03-DEC-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	03-DEC-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	03-DEC-12
Barium (Ba)-Total			<0.010		mg/L		0.01	03-DEC-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	03-DEC-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	03-DEC-12
Boron (B)-Total			<0.050		mg/L		0.05	03-DEC-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	03-DEC-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	03-DEC-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	03-DEC-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	03-DEC-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	03-DEC-12
Iron (Fe)-Total			<0.020		mg/L		0.02	03-DEC-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	03-DEC-12
Lithium (Li)-Total			<0.050		mg/L		0.05	03-DEC-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	03-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2492048								
WG1594839-1 MB								
Manganese (Mn)-Total			<0.0010		mg/L		0.001	03-DEC-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	03-DEC-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	03-DEC-12
Potassium (K)-Total			<0.50		mg/L		0.5	03-DEC-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	03-DEC-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	03-DEC-12
Sodium (Na)-Total			<0.10		mg/L		0.1	03-DEC-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	03-DEC-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	03-DEC-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	03-DEC-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	03-DEC-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	03-DEC-12
Tungsten (W)-Total			<0.010		mg/L		0.01	03-DEC-12
Uranium (U)-Total			<0.0050		mg/L		0.005	03-DEC-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	03-DEC-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	03-DEC-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	03-DEC-12
Batch R2492424								
WG1594839-6 LCS								
Aluminum (Al)-Total			94.5		%		80-120	04-DEC-12
Antimony (Sb)-Total			101.5		%		80-120	04-DEC-12
Arsenic (As)-Total			96.8		%		80-120	04-DEC-12
Barium (Ba)-Total			99.1		%		80-120	04-DEC-12
Beryllium (Be)-Total			95.9		%		80-120	04-DEC-12
Bismuth (Bi)-Total			103.6		%		80-120	04-DEC-12
Boron (B)-Total			99.3		%		80-120	04-DEC-12
Cadmium (Cd)-Total			102.1		%		80-120	04-DEC-12
Calcium (Ca)-Total			102.5		%		80-120	04-DEC-12
Chromium (Cr)-Total			101.6		%		80-120	04-DEC-12
Cobalt (Co)-Total			101.5		%		80-120	04-DEC-12
Copper (Cu)-Total			96.4		%		80-120	04-DEC-12
Iron (Fe)-Total			100.0		%		80-120	04-DEC-12
Lead (Pb)-Total			101.5		%		80-120	04-DEC-12
Lithium (Li)-Total			101.2		%		80-120	04-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2492424								
WG1594839-6 LCS								
Magnesium (Mg)-Total			102.6		%		80-120	04-DEC-12
Manganese (Mn)-Total			104.8		%		80-120	04-DEC-12
Molybdenum (Mo)-Total			100.9		%		80-120	04-DEC-12
Nickel (Ni)-Total			98.9		%		80-120	04-DEC-12
Potassium (K)-Total			103.2		%		80-120	04-DEC-12
Selenium (Se)-Total			90.9		%		80-120	04-DEC-12
Silver (Ag)-Total			101.0		%		80-120	04-DEC-12
Sodium (Na)-Total			100.5		%		80-120	04-DEC-12
Strontium (Sr)-Total			96.3		%		80-120	04-DEC-12
Tellurium (Te)-Total			101.8		%		80-120	04-DEC-12
Thallium (Tl)-Total			101.7		%		80-120	04-DEC-12
Tin (Sn)-Total			103.2		%		80-120	04-DEC-12
Titanium (Ti)-Total			102.9		%		80-120	04-DEC-12
Tungsten (W)-Total			103.1		%		80-120	04-DEC-12
Uranium (U)-Total			99.0		%		80-120	04-DEC-12
Vanadium (V)-Total			103.3		%		80-120	04-DEC-12
Zinc (Zn)-Total			97.4		%		80-120	04-DEC-12
Zirconium (Zr)-Total			96.6		%		80-120	04-DEC-12
WG1594839-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	04-DEC-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	04-DEC-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	04-DEC-12
Barium (Ba)-Total			<0.010		mg/L		0.01	04-DEC-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	04-DEC-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	04-DEC-12
Boron (B)-Total			<0.050		mg/L		0.05	04-DEC-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	04-DEC-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	04-DEC-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	04-DEC-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	04-DEC-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-DEC-12
Iron (Fe)-Total			<0.020		mg/L		0.02	04-DEC-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	04-DEC-12
Lithium (Li)-Total			<0.050		mg/L		0.05	04-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2492424								
WG1594839-5 MB								
Magnesium (Mg)-Total			<0.020		mg/L		0.02	04-DEC-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	04-DEC-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	04-DEC-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	04-DEC-12
Potassium (K)-Total			<0.50		mg/L		0.5	04-DEC-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	04-DEC-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	04-DEC-12
Sodium (Na)-Total			<0.10		mg/L		0.1	04-DEC-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	04-DEC-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	04-DEC-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	04-DEC-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	04-DEC-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	04-DEC-12
Tungsten (W)-Total			<0.010		mg/L		0.01	04-DEC-12
Uranium (U)-Total			<0.0050		mg/L		0.005	04-DEC-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	04-DEC-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	04-DEC-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	04-DEC-12
NH3-COL-TB	**Water**							
Batch R2489068								
WG1593921-7 DUP		**L1243259-8**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	29-NOV-12
WG1593921-2 LCS								
Ammonia, Total (as N)			93.9		%		85-115	29-NOV-12
WG1593921-6 LCS								
Ammonia, Total (as N)			94.8		%		85-115	29-NOV-12
WG1593921-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	29-NOV-12
WG1593921-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	29-NOV-12
WG1593921-4 MS		**L1242115-2**						
Ammonia, Total (as N)			87.1		%		75-125	29-NOV-12
WG1593921-8 MS		**L1243259-8**						
Ammonia, Total (as N)			89.8		%		75-125	29-NOV-12
NO2-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-WT	**Water**							
Batch R2490507								
WG1594689-7 DUP		**L1243259-5**						
Nitrite-N (NO2-N)		<0.10	<0.10	RPD-NA	mg/L	N/A	25	30-NOV-12
WG1594689-3 LCS								
Nitrite-N (NO2-N)			97.4		%		70-130	30-NOV-12
WG1594689-4 LCSD		**WG1594689-3**						
Nitrite-N (NO2-N)		97.4	95		%	2.7	25	30-NOV-12
WG1594689-1 MB								
Nitrite-N (NO2-N)			<0.10		mg/L		0.1	30-NOV-12
NO3-WT	**Water**							
Batch R2490507								
WG1594689-7 DUP		**L1243259-5**						
Nitrate-N (NO3-N)		<0.10	<0.10	RPD-NA	mg/L	N/A	25	30-NOV-12
WG1594689-3 LCS								
Nitrate-N (NO3-N)			94.0		%		70-130	30-NOV-12
WG1594689-4 LCSD		**WG1594689-3**						
Nitrate-N (NO3-N)		94.0	94		%	0.5	25	30-NOV-12
WG1594689-1 MB								
Nitrate-N (NO3-N)			<0.10		mg/L		0.1	30-NOV-12
OGG-TOT-WT	**Water**							
Batch R2492093								
WG1596201-2 LCS								
Oil and Grease, Total			84.1		%		70-130	04-DEC-12
WG1596201-3 LCSD		**WG1596201-2**						
Oil and Grease, Total		84.1	83		%	1.0	40	04-DEC-12
WG1596201-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	04-DEC-12
Batch R2492995								
WG1595995-2 LCS								
Oil and Grease, Total			94.3		%		70-130	03-DEC-12
WG1595995-3 LCSD		**WG1595995-2**						
Oil and Grease, Total		94.3	97		%	2.7	40	03-DEC-12
WG1595995-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	03-DEC-12
P-T-COL-TB	**Water**							
Batch R2490173								
WG1594322-7 DUP		**L1243259-6**						
Phosphorus (P)-Total		0.0061	<0.0050	RPD-NA	mg/L	N/A	20	30-NOV-12
WG1594322-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2490173								
WG1594322-2 LCS								
Phosphorus (P)-Total			97.4		%		80-120	30-NOV-12
WG1594322-6 LCS								
Phosphorus (P)-Total			98.1		%		80-120	30-NOV-12
WG1594322-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	30-NOV-12
WG1594322-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	30-NOV-12
WG1594322-4 MS		**L1242081-1**						
Phosphorus (P)-Total			85.2		%		70-130	30-NOV-12
WG1594322-8 MS		**L1243259-6**						
Phosphorus (P)-Total			88.4		%		70-130	30-NOV-12
PH-CAP-TB	**Water**							
Batch R2490844								
WG1595674-2 LCS								
pH			6.01		pH		5.9-6.1	30-NOV-12
Batch R2490904								
WG1594668-6 DUP		**L1243259-14**						
pH		5.63	5.63	J	pH	0.00	0.2	29-NOV-12
WG1594668-2 LCS								
pH			6.01		pH		5.9-6.1	29-NOV-12
WG1594668-5 LCS								
pH			6.03		pH		5.9-6.1	29-NOV-12
SO4-WT	**Water**							
Batch R2490507								
WG1594689-7 DUP		**L1243259-5**						
Sulphate (SO4)		2.2	2.2		mg/L	0.3	25	30-NOV-12
WG1594689-3 LCS								
Sulphate (SO4)			98.7		%		70-130	30-NOV-12
WG1594689-4 LCSD		**WG1594689-3**						
Sulphate (SO4)		98.7	98		%	0.5	25	30-NOV-12
WG1594689-1 MB								
Sulphate (SO4)			<2.0		mg/L		2	30-NOV-12
SOLIDS-TOTSUS-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-TB	**Water**							
Batch R2490467								
WG1594966-2 LCS								
Total Suspended Solids			93.2		%		85-115	30-NOV-12
WG1594966-1 MB								
Total Suspended Solids			<2.0		mg/L		2	30-NOV-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

ALS Environmental

L1243259-COFC

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P0115
Quote #:	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler: Mac Potter	

☐ O. Reg 153 (O. Reg 511 Amend) Table: ___
Record of Site Condition ☐ Yes ☐ No
PWQO ☑ MISA ☐ MMER ☐ CCME ☐
Guideline Required:
TCLP Regulation 558 ☐ Other:

Service Requested
☒ Regular TAT (7 Days)
☐ Priority TAT 50% Surcharge (3-5 Days)
☐ Emergency TAT 100% Surcharge (1-2 Days)
Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples
Are any samples taken from a regulated DW System? ☐ Yes ☒ No
If yes, an authorized DW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☒ No

Analysis Request
Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (F/P)	Hardness		Number of Containers
1	Travel Blank	—	—	Water	x	x	x	x	x	x	x	x	x	x	x		9
2	Field Blank	27/11/12	1:00		x	x	x	x	x	x	x	x	x	x	x		
3	Duplicate				x	x	x	x	x	x	x	x	x	x	x		
4	TL1a				x	x	x	x	x	x	x	x	x	x	x		
5	TL3				x	x	x	x	x	x	x	x	x	x	x		
6	SW1				x	x	x	x	x	x	x	x	x	x	x		
7	SW2 * See note				x	x	x	x	x	x	x	x	x	x	x		8
8	SW3				x	x	x	x	x	x	x	x	x	x	x		9
9	SW7				x	x	x	x	x	x	x	x	x	x	x		
10	SW8				x	x	x	x	x	x	x	x	x	x	x		
11	SW10				x	x	x	x	x	x	x	x	x	x	x		

Special Instructions / Comments

* No nutrient bottle, lost under ice

SEE SIF

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)	
Released by:	Date & Time	Date & Time	Temp	Cooling Initiated	Date & Time	Observations: Yes / No ? If Yes add SIF
<Original signed by>	Nov 28, 2012 12:00pm	29-NOV-12 9:00	1.6	☑ Yes ☐ No	29-NOV-12 9:45	

<Original signed by>

<Original signed by>

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TEMPS #1 - 1.3 #2 - 1.6 #3 - 1.7 #4 - 2.0 #5 - 2.1

ALS Environmental

PHONE +1 807 623 6463 FAX +1 807 623 7598
Company www.alsglobal.com

L1243259-COFC

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	895 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P0115
Quote #	Q32690	LSD Gollath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler:	

Regulation

- ☐ O.Reg 153 (O. Reg 511 Amend) Table: ____
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☒ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☒ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☒ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☒ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG	Total Metals +Hg (P)	Dissolved Metals + Hg (F/P)	Hardness		Number of Containers
12	JCTa	27/11/12	1000	Water	x	x	x	x	x	x	x	x	x	x	x		9
13	SW9 * see note	28/11/12	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
14	SW11 * see note	↓	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		

Special Instructions / Comments

* No field filter on dissolved metals + Hg

SEE SIF

SHIPMENT RELEASE (client use)

Released by:	Date & Time
<Original signed by>	Nov 28, 2012 12:00

<Original signed by>

SHIPMENT RECEPTION (lab use only)

Date & Time	Temp	Cooling Initiated
29-NOV-12 0900	F	☐ Yes ☐ No

<Original signed by>

SHIPMENT VERIFICATION (lab use only)

Date & Time	Observations: Yes / No ? If Yes add SIF
29-NOV-12 0900	

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 20-DEC-12
Report Date: 02-JAN-13 14:57 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1251708

Project P.O. #: NOT SUBMITTED
Job Reference: JOB M0906A01
C of C Numbers:
Legal Site Desc:

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1251708-1 WATER 18-DEC-12 13:00 FIELD BLANK	L1251708-2 WATER 18-DEC-12 13:00 TRAVEL BLANK	L1251708-3 WATER 18-DEC-12 13:00 DUPLICATE	L1251708-4 WATER 18-DEC-12 13:00 SW1	L1251708-5 WATER 18-DEC-12 13:00 SW3
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	<3.0	<3.0	170	170	163
	Hardness (as CaCO3) (mg/L)	<0.51	<0.51	69.4	68.2	55.8
	pH (pH)	5.54	5.48	7.24	7.29	7.03
	Total Suspended Solids (mg/L)	<2.0	<2.0	<2.0	6.0	2.3
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	<2.0	<2.0	7.0	7.8	9.8
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	<5.0	<5.0	79.9	81.0	57.9
	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Chloride (Cl) (mg/L)	<0.10	<0.10	0.79	0.77	10.9
	Nitrate (as N) (mg/L)	<0.030	<0.030	0.180	<0.030	<0.030
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	<0.0050	<0.0050	0.0068	0.0063	0.0182
	Sulfate (SO4) (mg/L)	<0.30	<0.30	2.53	2.49	2.84
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	<0.0050	<0.0050	0.0605	0.0584	0.0718
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	<0.010	<0.010	0.012	0.012	0.011
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Total (mg/L)	<0.20	<0.20	26.0	26.0	18.6
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0012
	Iron (Fe)-Total (mg/L)	<0.020	<0.020	0.610	0.622	0.711
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	<0.020	<0.020	3.56	3.67	3.96
	Manganese (Mn)-Total (mg/L)	<0.0010	<0.0010	0.353	0.350	0.243
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	<0.50	<0.50	1.35	1.35	1.35
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1251708-6 WATER 18-DEC-12 13:00 SW7	L1251708-7 WATER 18-DEC-12 13:00 SW8	L1251708-8 WATER 19-DEC-12 13:00 SW9	L1251708-9 WATER 18-DEC-12 13:00 SW10	L1251708-10 WATER 19-DEC-12 13:00 SW11
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	151	193	285	144	60.8
	Hardness (as CaCO3) (mg/L)	62.7	81.6	120	58.3	27.1
	pH (pH)	7.52	7.80	7.89	7.61	6.46
	Total Suspended Solids (mg/L)	<2.0	2.5	3.2	<2.0	88.4
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	6.4	5.6	5.0	6.4	20.0
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	63.2	95.4	148	69.8	20.3
	Ammonia, Total (as N) (mg/L)	0.093	0.154	0.038	0.044	0.108
	Chloride (Cl) (mg/L)	0.57	0.31	0.46	0.24	1.44
	Nitrate (as N) (mg/L)	0.457	0.156	0.104	0.053	0.100
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0139	0.0059	0.0108	0.0057	0.0454
	Sulfate (SO4) (mg/L)	7.28	1.50	0.39	2.17	2.29
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.103	0.0249	0.0563	0.0221	0.740
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Total (mg/L)	0.012	0.021	0.025	0.011	0.011
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	0.000038
	Calcium (Ca)-Total (mg/L)	22.2	33.7	45.0	22.4	8.86
	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0014
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00074
	Copper (Cu)-Total (mg/L)	0.0015	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Total (mg/L)	0.901	0.760	0.296	0.854	2.02
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Total (mg/L)	3.93	2.71	7.06	3.04	2.13
	Manganese (Mn)-Total (mg/L)	0.0519	0.249	0.192	0.145	0.0693
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Total (mg/L)	0.98	0.62	1.69	0.66	<0.50
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1251708-11	L1251708-12	L1251708-13		
	Description	WATER	WATER	WATER		
	Sampled Date	18-DEC-12	18-DEC-12	19-DEC-12		
	Sampled Time	13:00	13:00	13:00		
	Client ID	TL1A	TL3	JCTA		
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	102	165	146		
	Hardness (as CaCO3) (mg/L)	40.2	67.6	60.8		
	pH (pH)	6.76	7.49	7.30		
	Total Suspended Solids (mg/L)	5.2	16.4	2.2		
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	10.4	6.0	8.0		
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	42.8	73.6	64.9		
	Ammonia, Total (as N) (mg/L)	0.230	0.147	0.163		
	Chloride (Cl) (mg/L)	1.56	2.55	1.83		
	Nitrate (as N) (mg/L)	0.053	0.135	0.054		
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020		
	Phosphorus (P)-Total (mg/L)	0.0306	0.0420	0.0365		
	Sulfate (SO4) (mg/L)	1.77	3.01	2.55		
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020		
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020		
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050		
Total Metals	Aluminum (Al)-Total (mg/L)	0.249	0.709	0.225		
	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060		
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Total (mg/L)	0.013	0.015	0.012		
	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Total (mg/L)	0.000022	0.000020	<0.000017		
	Calcium (Ca)-Total (mg/L)	13.4	21.6	19.6		
	Chromium (Cr)-Total (mg/L)	<0.0010	0.0015	<0.0010		
	Cobalt (Co)-Total (mg/L)	0.00303	0.00058	0.00097		
	Copper (Cu)-Total (mg/L)	<0.0010	0.0020	<0.0010		
	Iron (Fe)-Total (mg/L)	3.91	2.80	2.85		
	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050		
	Magnesium (Mg)-Total (mg/L)	3.29	5.64	4.93		
	Manganese (Mn)-Total (mg/L)	0.930	0.135	0.597		
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020		
	Potassium (K)-Total (mg/L)	0.63	1.46	1.10		
	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1251708-1	L1251708-2	L1251708-3	L1251708-4	L1251708-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	18-DEC-12	18-DEC-12	18-DEC-12	18-DEC-12	18-DEC-12
	Sampled Time	13:00	13:00	13:00	13:00	13:00
	Client ID	FIELD BLANK	TRAVEL BLANK	DUPLICATE	SW1	SW3
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	<0.10	<0.10	2.05	2.14	6.76
	Strontium (Sr)-Total (mg/L)	<0.0010	<0.0010	0.0440	0.0436	0.0396
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	<0.0020	<0.0020	0.0032	0.0030	0.0027
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	<0.0050	0.0096	0.0073	0.0202
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	0.012	0.011	0.010
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
	Calcium (Ca)-Dissolved (mg/L)	<0.20	<0.20	22.2	21.9	16.2
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Iron (Fe)-Dissolved (mg/L)	<0.020	<0.020	0.233	0.233	0.420
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Magnesium (Mg)-Dissolved (mg/L)	<0.020	<0.020	3.38	3.31	3.71
	Manganese (Mn)-Dissolved (mg/L)	<0.0010	<0.0010	0.330	0.315	0.214
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Potassium (K)-Dissolved (mg/L)	<0.50	<0.50	1.31	1.28	1.33
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	<0.10	<0.10	1.96	1.90	6.26
	Strontium (Sr)-Dissolved (mg/L)	<0.0010	<0.0010	0.0408	0.0411	0.0372

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1251708-6	L1251708-7	L1251708-8	L1251708-9	L1251708-10
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	18-DEC-12	18-DEC-12	19-DEC-12	18-DEC-12	19-DEC-12
Sampled Time	13:00	13:00	13:00	13:00	13:00
Client ID	SW7	SW8	SW9	SW10	SW11
Grouping / **Analyte**					
WATER					
Total Metals Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	1.99	1.44	3.38	1.77	1.70
Strontium (Sr)-Total (mg/L)	0.0417	0.0422	0.0687	0.0346	0.0192
Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0042	<0.0020	0.0026	<0.0020	0.0266
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0016
Zinc (Zn)-Total (mg/L)	0.0079	<0.0030	<0.0030	<0.0030	0.0083
Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals Aluminum (Al)-Dissolved (mg/L)	0.0450	<0.0050	0.0069	0.0128	0.354
Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	0.011	0.019	0.022	0.011	<0.010
Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	0.000030
Calcium (Ca)-Dissolved (mg/L)	19.1	28.5	37.6	18.7	7.62
Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	0.00059
Copper (Cu)-Dissolved (mg/L)	0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Iron (Fe)-Dissolved (mg/L)	0.614	0.046	0.073	0.451	1.54
Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Magnesium (Mg)-Dissolved (mg/L)	3.66	2.52	6.43	2.82	1.95
Manganese (Mn)-Dissolved (mg/L)	0.0469	0.218	0.150	0.128	0.0627
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Potassium (K)-Dissolved (mg/L)	0.94	0.60	1.61	0.64	<0.50
Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Dissolved (mg/L)	1.87	1.32	3.00	1.56	1.57
Strontium (Sr)-Dissolved (mg/L)	0.0407	0.0395	0.0629	0.0319	0.0173

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1251708-11	L1251708-12	L1251708-13		
	Description	WATER	WATER	WATER		
	Sampled Date	18-DEC-12	18-DEC-12	19-DEC-12		
	Sampled Time	13:00	13:00	13:00		
	Client ID	TL1A	TL3	JCTA		
Grouping	**Analyte**					
WATER						
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Total (mg/L)	1.79	2.97	2.44		
	Strontium (Sr)-Total (mg/L)	0.0301	0.0487	0.0413		
	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Total (mg/L)	0.0088	0.0306	0.0086		
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Total (mg/L)	0.0015	0.0019	0.0012		
	Zinc (Zn)-Total (mg/L)	0.0062	0.0079	0.0043		
	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010		
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0950	0.0461	0.0706		
	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060		
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Barium (Ba)-Dissolved (mg/L)	0.011	0.011	0.010		
	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017		
	Calcium (Ca)-Dissolved (mg/L)	11.1	18.4	16.6		
	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Cobalt (Co)-Dissolved (mg/L)	0.00296	<0.00050	0.00087		
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Iron (Fe)-Dissolved (mg/L)	2.51	1.33	1.81		
	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050		
	Magnesium (Mg)-Dissolved (mg/L)	3.05	5.25	4.68		
	Manganese (Mn)-Dissolved (mg/L)	0.848	0.108	0.546		
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010		
	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020		
	Potassium (K)-Dissolved (mg/L)	0.66	1.32	1.08		
	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010		
	Sodium (Na)-Dissolved (mg/L)	1.75	2.75	2.39		
	Strontium (Sr)-Dissolved (mg/L)	0.0275	0.0486	0.0395		

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1251708-1 WATER 18-DEC-12 13:00 FIELD BLANK	L1251708-2 WATER 18-DEC-12 13:00 TRAVEL BLANK	L1251708-3 WATER 18-DEC-12 13:00 DUPLICATE	L1251708-4 WATER 18-DEC-12 13:00 SW1	L1251708-5 WATER 18-DEC-12 13:00 SW3
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0032	<0.0030	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1251708-6 WATER 18-DEC-12 13:00 SW7	L1251708-7 WATER 18-DEC-12 13:00 SW8	L1251708-8 WATER 19-DEC-12 13:00 SW9	L1251708-9 WATER 18-DEC-12 13:00 SW10	L1251708-10 WATER 19-DEC-12 13:00 SW11
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	0.0102
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Zinc (Zn)-Dissolved (mg/L)	0.0053	<0.0030	<0.0030	<0.0030	0.0048
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1251708-11	L1251708-12	L1251708-13		
	Description	WATER	WATER	WATER		
	Sampled Date	18-DEC-12	18-DEC-12	19-DEC-12		
	Sampled Time	13:00	13:00	13:00		
	Client ID	TL1A	TL3	JCTA		
Grouping	**Analyte**					
WATER						
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030		
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Titanium (Ti)-Dissolved (mg/L)	0.0032	0.0021	0.0026		
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010		
	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050		
	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
	Zinc (Zn)-Dissolved (mg/L)	0.0054	0.0031	<0.0030		
	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010		
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0		

* 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)
Matrix Spike	Ammonia, Total (as N)	MS-B	L1251708-1, -10, -11, -12, -13, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM
Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex. When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference			
CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet
Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.			
EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	Modified from EPA1631 E
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	Modified from EPA1631 E
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A
This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)
Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.			
NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B
Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.			
P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)
Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.			
PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Reference Information

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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: L1251708 Report Date: 02-JAN-13

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2502117								
WG1605954-2 LCS								
Acidity (as CaCO3)			100.0		%		85-115	21-DEC-12
WG1605954-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	21-DEC-12
Batch R2502251								
WG1606497-2 LCS								
Acidity (as CaCO3)			100.4		%		85-115	22-DEC-12
WG1606497-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	22-DEC-12
ALK-TOT-CAP-TB	**Water**							
Batch R2502476								
WG1606641-3 DUP		**L1251708-13**						
Alkalinity, Total (as CaCO3)		64.9	65.3		mg/L CaCO3	0.7	20	21-DEC-12
WG1606641-2 LCS								
Alkalinity, Total (as CaCO3)			90.2		%		85-115	21-DEC-12
WG1606641-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	21-DEC-12
CL-IC-TB	**Water**							
Batch R2502427								
WG1606667-3 DUP		**L1251708-13**						
Chloride (Cl)		1.83	1.83		mg/L	0.1	20	21-DEC-12
WG1606667-2 LCS								
Chloride (Cl)			100.6		%		90-110	21-DEC-12
WG1606667-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	21-DEC-12
WG1606667-4 MS		**L1251708-13**						
Chloride (Cl)			97.4		%		75-125	21-DEC-12
CN-FREE-CFA-VA	**Water**							
Batch R2503452								
WG1607329-14 DUP		**L1251708-13**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	27-DEC-12
WG1607329-10 LCS								
Cyanide, Free			101.1		%		80-120	27-DEC-12
WG1607329-12 LCS								
Cyanide, Free			103.7		%		80-120	27-DEC-12
WG1607329-2 LCS								
Cyanide, Free			100.7		%		80-120	27-DEC-12
WG1607329-4 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2503452								
WG1607329-4 LCS								
Cyanide, Free			100.7		%		80-120	27-DEC-12
WG1607329-6 LCS								
Cyanide, Free			101.0		%		80-120	27-DEC-12
WG1607329-8 LCS								
Cyanide, Free			100.4		%		80-120	27-DEC-12
WG1607329-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
WG1607329-11 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
WG1607329-3 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
WG1607329-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
WG1607329-7 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
WG1607329-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	27-DEC-12
Batch R2504080								
WG1607705-5 DUP		**L1251708-4**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-DEC-12
WG1607705-10 LCS								
Cyanide, Free			101.8		%		80-120	28-DEC-12
WG1607705-2 LCS								
Cyanide, Free			101.0		%		80-120	28-DEC-12
WG1607705-4 LCS								
Cyanide, Free			101.0		%		80-120	28-DEC-12
WG1607705-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-DEC-12
WG1607705-3 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-DEC-12
WG1607705-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	28-DEC-12
WG1607705-6 MS		**L1251708-4**						
Cyanide, Free			97.9		%		70-130	28-DEC-12
CN-TOT-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-TOT-WT	**Water**							
Batch R2504049								
WG1608218-4 CVS								
Cyanide, Total			98.5		%		85-115	31-DEC-12
WG1608218-2 DUP		**L1251708-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	31-DEC-12
WG1608218-3 LCS								
Cyanide, Total			111.5		%		80-120	31-DEC-12
WG1608218-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	31-DEC-12
CN-WAD-WT	**Water**							
Batch R2503276								
WG1607483-4 CVS								
Cyanide, Weak Acid Diss			114.5		%		85-115	28-DEC-12
WG1607483-2 DUP		**L1251708-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	28-DEC-12
WG1607483-3 LCS								
Cyanide, Weak Acid Diss			108.2		%		80-120	28-DEC-12
WG1607483-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	28-DEC-12
WG1607483-5 MS		**L1251708-1**						
Cyanide, Weak Acid Diss			90.0		%		70-130	28-DEC-12
EC-CAP-TB	**Water**							
Batch R2502476								
WG1606641-3 DUP		**L1251708-13**						
Conductivity (EC)		146	146		uS/cm	0.2	10	21-DEC-12
WG1606641-2 LCS								
Conductivity (EC)			106.9		%		90-110	21-DEC-12
WG1606641-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	21-DEC-12
HG-D-CVAF-TB	**Water**							
Batch R2501604								
WG1605932-3 DUP		**L1251708-13**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	21-DEC-12
WG1605932-2 LCS								
Mercury (Hg)-Dissolved			104.8		%		80-120	21-DEC-12
WG1605932-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	21-DEC-12
WG1605932-4 MS		**L1251708-13**						
Mercury (Hg)-Dissolved			100.3		%		70-130	21-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2501592								
WG1605928-5 DUP		**L1251708-9**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	21-DEC-12
WG1605928-2 LCS								
Mercury (Hg)-Total			102.4		%		80-120	21-DEC-12
WG1605928-8 LCS								
Mercury (Hg)-Total			104.8		%		80-120	21-DEC-12
WG1605928-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	21-DEC-12
WG1605928-7 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	21-DEC-12
WG1605928-10 MS		**L1251351-5**						
Mercury (Hg)-Total			97.8		%		70-130	21-DEC-12
WG1605928-6 MS		**L1251708-9**						
Mercury (Hg)-Total			84.1		%		70-130	21-DEC-12
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-7 DUP		**L1251708-7**						
Aluminum (Al)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	24-DEC-12
Antimony (Sb)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	24-DEC-12
Arsenic (As)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Barium (Ba)-Dissolved		0.019	0.021		mg/L	6.2	20	24-DEC-12
Beryllium (Be)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Bismuth (Bi)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Boron (B)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-DEC-12
Cadmium (Cd)-Dissolved		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	24-DEC-12
Calcium (Ca)-Dissolved		28.5	29.1		mg/L	2.0	20	24-DEC-12
Chromium (Cr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Cobalt (Co)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	24-DEC-12
Copper (Cu)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Iron (Fe)-Dissolved		0.046	0.048		mg/L	2.4	20	24-DEC-12
Lead (Pb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Lithium (Li)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	20	24-DEC-12
Magnesium (Mg)-Dissolved		2.52	2.57		mg/L	2.0	20	24-DEC-12
Manganese (Mn)-Dissolved		0.218	0.221		mg/L	1.6	20	24-DEC-12
Molybdenum (Mo)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Nickel (Ni)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-7 DUP		**L1251708-7**						
Potassium (K)-Dissolved		0.60	0.62		mg/L	2.3	20	24-DEC-12
Selenium (Se)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Silver (Ag)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	24-DEC-12
Sodium (Na)-Dissolved		1.32	1.33		mg/L	0.9	20	24-DEC-12
Strontium (Sr)-Dissolved		0.0395	0.0401		mg/L	1.3	20	24-DEC-12
Tellurium (Te)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Thallium (Tl)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	24-DEC-12
Tin (Sn)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Titanium (Ti)-Dissolved		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	24-DEC-12
Tungsten (W)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	20	24-DEC-12
Uranium (U)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	24-DEC-12
Vanadium (V)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
Zinc (Zn)-Dissolved		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	24-DEC-12
Zirconium (Zr)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	24-DEC-12
WG1606673-2 LCS								
Aluminum (Al)-Dissolved			82.2		%		80-120	24-DEC-12
Antimony (Sb)-Dissolved			100.3		%		80-120	24-DEC-12
Arsenic (As)-Dissolved			93.2		%		80-120	24-DEC-12
Barium (Ba)-Dissolved			95.5		%		80-120	24-DEC-12
Beryllium (Be)-Dissolved			88.9		%		80-120	24-DEC-12
Bismuth (Bi)-Dissolved			90.9		%		80-120	24-DEC-12
Boron (B)-Dissolved			84.5		%		80-120	24-DEC-12
Cadmium (Cd)-Dissolved			101.9		%		80-120	24-DEC-12
Calcium (Ca)-Dissolved			80.0		%		80-120	24-DEC-12
Chromium (Cr)-Dissolved			93.5		%		80-120	24-DEC-12
Cobalt (Co)-Dissolved			92.1		%		80-120	24-DEC-12
Copper (Cu)-Dissolved			92.2		%		80-120	24-DEC-12
Iron (Fe)-Dissolved			91.4		%		80-120	24-DEC-12
Lead (Pb)-Dissolved			94.4		%		80-120	24-DEC-12
Lithium (Li)-Dissolved			84.7		%		80-120	24-DEC-12
Magnesium (Mg)-Dissolved			84.1		%		80-120	24-DEC-12
Manganese (Mn)-Dissolved			87.3		%		80-120	24-DEC-12
Molybdenum (Mo)-Dissolved			93.1		%		80-120	24-DEC-12
Nickel (Ni)-Dissolved			92.7		%		80-120	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-2 LCS								
Potassium (K)-Dissolved			92.1		%		80-120	24-DEC-12
Selenium (Se)-Dissolved			105.7		%		80-120	24-DEC-12
Silver (Ag)-Dissolved			100.6		%		80-120	24-DEC-12
Sodium (Na)-Dissolved			83.4		%		80-120	24-DEC-12
Strontium (Sr)-Dissolved			87.0		%		80-120	24-DEC-12
Tellurium (Te)-Dissolved			103.7		%		80-120	24-DEC-12
Thallium (Tl)-Dissolved			91.1		%		80-120	24-DEC-12
Tin (Sn)-Dissolved			96.8		%		80-120	24-DEC-12
Titanium (Ti)-Dissolved			96.4		%		80-120	24-DEC-12
Tungsten (W)-Dissolved			98.9		%		80-120	24-DEC-12
Uranium (U)-Dissolved			91.5		%		80-120	24-DEC-12
Vanadium (V)-Dissolved			94.4		%		80-120	24-DEC-12
Zinc (Zn)-Dissolved			93.9		%		80-120	24-DEC-12
Zirconium (Zr)-Dissolved			91.2		%		80-120	24-DEC-12
WG1606673-6 LCS								
Aluminum (Al)-Dissolved			86.3		%		80-120	24-DEC-12
Antimony (Sb)-Dissolved			102.7		%		80-120	24-DEC-12
Arsenic (As)-Dissolved			96.8		%		80-120	24-DEC-12
Barium (Ba)-Dissolved			99.3		%		80-120	24-DEC-12
Beryllium (Be)-Dissolved			93.5		%		80-120	24-DEC-12
Bismuth (Bi)-Dissolved			95.3		%		80-120	24-DEC-12
Boron (B)-Dissolved			94.3		%		80-120	24-DEC-12
Cadmium (Cd)-Dissolved			105.1		%		80-120	24-DEC-12
Calcium (Ca)-Dissolved			84.4		%		80-120	24-DEC-12
Chromium (Cr)-Dissolved			99.2		%		80-120	24-DEC-12
Cobalt (Co)-Dissolved			96.4		%		80-120	24-DEC-12
Copper (Cu)-Dissolved			93.7		%		80-120	24-DEC-12
Iron (Fe)-Dissolved			96.0		%		80-120	24-DEC-12
Lead (Pb)-Dissolved			97.2		%		80-120	24-DEC-12
Lithium (Li)-Dissolved			89.3		%		80-120	24-DEC-12
Magnesium (Mg)-Dissolved			91.0		%		80-120	24-DEC-12
Manganese (Mn)-Dissolved			91.0		%		80-120	24-DEC-12
Molybdenum (Mo)-Dissolved			96.6		%		80-120	24-DEC-12
Nickel (Ni)-Dissolved			95.3		%		80-120	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-6 LCS								
Potassium (K)-Dissolved			98.3		%		80-120	24-DEC-12
Selenium (Se)-Dissolved			100.4		%		80-120	24-DEC-12
Silver (Ag)-Dissolved			102.5		%		80-120	24-DEC-12
Sodium (Na)-Dissolved			90.9		%		80-120	24-DEC-12
Strontium (Sr)-Dissolved			88.2		%		80-120	24-DEC-12
Tellurium (Te)-Dissolved			103.2		%		80-120	24-DEC-12
Thallium (Tl)-Dissolved			96.0		%		80-120	24-DEC-12
Tin (Sn)-Dissolved			100.8		%		80-120	24-DEC-12
Titanium (Ti)-Dissolved			97.4		%		80-120	24-DEC-12
Tungsten (W)-Dissolved			98.3		%		80-120	24-DEC-12
Uranium (U)-Dissolved			94.7		%		80-120	24-DEC-12
Vanadium (V)-Dissolved			101.6		%		80-120	24-DEC-12
Zinc (Zn)-Dissolved			97.2		%		80-120	24-DEC-12
Zirconium (Zr)-Dissolved			92.4		%		80-120	24-DEC-12
WG1606673-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	24-DEC-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	24-DEC-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	24-DEC-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	24-DEC-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	24-DEC-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	24-DEC-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	24-DEC-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	24-DEC-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	24-DEC-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	24-DEC-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-1 MB								
Potassium (K)-Dissolved			<0.50		mg/L		0.5	24-DEC-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	24-DEC-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	24-DEC-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	24-DEC-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	24-DEC-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	24-DEC-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	24-DEC-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	24-DEC-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
WG1606673-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	24-DEC-12
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	24-DEC-12
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	24-DEC-12
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Boron (B)-Dissolved			<0.050		mg/L		0.05	24-DEC-12
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	24-DEC-12
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	24-DEC-12
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	24-DEC-12
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	24-DEC-12
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	24-DEC-12
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	24-DEC-12
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2503024								
WG1606673-5 MB								
Potassium (K)-Dissolved			<0.50		mg/L		0.5	24-DEC-12
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	24-DEC-12
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	24-DEC-12
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	24-DEC-12
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	24-DEC-12
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	24-DEC-12
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	24-DEC-12
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	24-DEC-12
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	24-DEC-12
MET-T-MS-TB	**Water**							
Batch R2503017								
WG1605745-2 LCS								
Aluminum (Al)-Total			94.0		%		80-120	24-DEC-12
Antimony (Sb)-Total			113.0		%		80-120	24-DEC-12
Arsenic (As)-Total			105.4		%		80-120	24-DEC-12
Barium (Ba)-Total			107.2		%		80-120	24-DEC-12
Beryllium (Be)-Total			98.8		%		80-120	24-DEC-12
Bismuth (Bi)-Total			104.5		%		80-120	24-DEC-12
Boron (B)-Total			102.6		%		80-120	24-DEC-12
Cadmium (Cd)-Total			115.2		%		80-120	24-DEC-12
Calcium (Ca)-Total			105.5		%		80-120	24-DEC-12
Chromium (Cr)-Total			105.2		%		80-120	24-DEC-12
Cobalt (Co)-Total			104.9		%		80-120	24-DEC-12
Copper (Cu)-Total			105.3		%		80-120	24-DEC-12
Iron (Fe)-Total			99.3		%		80-120	24-DEC-12
Lead (Pb)-Total			106.6		%		80-120	24-DEC-12
Lithium (Li)-Total			101.5		%		80-120	24-DEC-12
Magnesium (Mg)-Total			105.0		%		80-120	24-DEC-12
Manganese (Mn)-Total			104.7		%		80-120	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2503017								
WG1605745-2 LCS								
Molybdenum (Mo)-Total			106.3		%		80-120	24-DEC-12
Nickel (Ni)-Total			104.5		%		80-120	24-DEC-12
Potassium (K)-Total			105.4		%		80-120	24-DEC-12
Selenium (Se)-Total			108.4		%		80-120	24-DEC-12
Silver (Ag)-Total			111.3		%		80-120	24-DEC-12
Sodium (Na)-Total			104.8		%		80-120	24-DEC-12
Strontium (Sr)-Total			97.9		%		80-120	24-DEC-12
Tellurium (Te)-Total			113.0		%		80-120	24-DEC-12
Thallium (Tl)-Total			104.5		%		80-120	24-DEC-12
Tin (Sn)-Total			110.0		%		80-120	24-DEC-12
Titanium (Ti)-Total			105.5		%		80-120	24-DEC-12
Tungsten (W)-Total			109.9		%		80-120	24-DEC-12
Uranium (U)-Total			100.8		%		80-120	24-DEC-12
Vanadium (V)-Total			107.0		%		80-120	24-DEC-12
Zinc (Zn)-Total			105.8		%		80-120	24-DEC-12
Zirconium (Zr)-Total			103.7		%		80-120	24-DEC-12
WG1605745-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	24-DEC-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	24-DEC-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	24-DEC-12
Barium (Ba)-Total			<0.010		mg/L		0.01	24-DEC-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-DEC-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	24-DEC-12
Boron (B)-Total			<0.050		mg/L		0.05	24-DEC-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	24-DEC-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	24-DEC-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	24-DEC-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	24-DEC-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-DEC-12
Iron (Fe)-Total			<0.020		mg/L		0.02	24-DEC-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	24-DEC-12
Lithium (Li)-Total			<0.050		mg/L		0.05	24-DEC-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	24-DEC-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2503017								
WG1605745-1 MB								
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	24-DEC-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	24-DEC-12
Potassium (K)-Total			<0.50		mg/L		0.5	24-DEC-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	24-DEC-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-DEC-12
Sodium (Na)-Total			<0.10		mg/L		0.1	24-DEC-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	24-DEC-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	24-DEC-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	24-DEC-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	24-DEC-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	24-DEC-12
Tungsten (W)-Total			<0.010		mg/L		0.01	24-DEC-12
Uranium (U)-Total			<0.0050		mg/L		0.005	24-DEC-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	24-DEC-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-DEC-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	24-DEC-12
WG1605745-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	24-DEC-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	24-DEC-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	24-DEC-12
Barium (Ba)-Total			<0.010		mg/L		0.01	24-DEC-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	24-DEC-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	24-DEC-12
Boron (B)-Total			<0.050		mg/L		0.05	24-DEC-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	24-DEC-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	24-DEC-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	24-DEC-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	24-DEC-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	24-DEC-12
Iron (Fe)-Total			<0.020		mg/L		0.02	24-DEC-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	24-DEC-12
Lithium (Li)-Total			<0.050		mg/L		0.05	24-DEC-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	24-DEC-12
Manganese (Mn)-Total			<0.0010		mg/L		0.001	24-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2503017								
WG1605745-5 MB								
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	24-DEC-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	24-DEC-12
Potassium (K)-Total			<0.50		mg/L		0.5	24-DEC-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	24-DEC-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	24-DEC-12
Sodium (Na)-Total			<0.10		mg/L		0.1	24-DEC-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	24-DEC-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	24-DEC-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	24-DEC-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	24-DEC-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	24-DEC-12
Tungsten (W)-Total			<0.010		mg/L		0.01	24-DEC-12
Uranium (U)-Total			<0.0050		mg/L		0.005	24-DEC-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	24-DEC-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	24-DEC-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	24-DEC-12
Batch R2504459								
WG1605745-10 LCS								
Aluminum (Al)-Total			95.8		%		80-120	31-DEC-12
Antimony (Sb)-Total			96.2		%		80-120	31-DEC-12
Arsenic (As)-Total			96.6		%		80-120	31-DEC-12
Barium (Ba)-Total			91.5		%		80-120	31-DEC-12
Beryllium (Be)-Total			106.7		%		80-120	31-DEC-12
Bismuth (Bi)-Total			99.3		%		80-120	31-DEC-12
Boron (B)-Total			98.8		%		80-120	31-DEC-12
Cadmium (Cd)-Total			95.2		%		80-120	31-DEC-12
Calcium (Ca)-Total			99.0		%		80-120	31-DEC-12
Chromium (Cr)-Total			102.3		%		80-120	31-DEC-12
Cobalt (Co)-Total			103.4		%		80-120	31-DEC-12
Copper (Cu)-Total			93.5		%		80-120	31-DEC-12
Iron (Fe)-Total			105.5		%		80-120	31-DEC-12
Lead (Pb)-Total			98.6		%		80-120	31-DEC-12
Lithium (Li)-Total			109.8		%		80-120	31-DEC-12
Magnesium (Mg)-Total			100.6		%		80-120	31-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2504459								
WG1605745-10 LCS								
Manganese (Mn)-Total			102.8		%		80-120	31-DEC-12
Molybdenum (Mo)-Total			99.1		%		80-120	31-DEC-12
Nickel (Ni)-Total			98.2		%		80-120	31-DEC-12
Potassium (K)-Total			104.3		%		80-120	31-DEC-12
Selenium (Se)-Total			102.7		%		80-120	31-DEC-12
Silver (Ag)-Total			97.1		%		80-120	31-DEC-12
Sodium (Na)-Total			108.0		%		80-120	31-DEC-12
Strontium (Sr)-Total			94.7		%		80-120	31-DEC-12
Tellurium (Te)-Total			96.6		%		80-120	31-DEC-12
Thallium (Tl)-Total			99.8		%		80-120	31-DEC-12
Tin (Sn)-Total			96.8		%		80-120	31-DEC-12
Titanium (Ti)-Total			100.9		%		80-120	31-DEC-12
Tungsten (W)-Total			98.0		%		80-120	31-DEC-12
Uranium (U)-Total			97.7		%		80-120	31-DEC-12
Vanadium (V)-Total			103.3		%		80-120	31-DEC-12
Zinc (Zn)-Total			94.8		%		80-120	31-DEC-12
Zirconium (Zr)-Total			92.2		%		80-120	31-DEC-12
WG1605745-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	31-DEC-12
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	31-DEC-12
Arsenic (As)-Total			<0.0010		mg/L		0.001	31-DEC-12
Barium (Ba)-Total			<0.010		mg/L		0.01	31-DEC-12
Beryllium (Be)-Total			<0.0010		mg/L		0.001	31-DEC-12
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	31-DEC-12
Boron (B)-Total			<0.050		mg/L		0.05	31-DEC-12
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	31-DEC-12
Calcium (Ca)-Total			<0.20		mg/L		0.2	31-DEC-12
Chromium (Cr)-Total			<0.0010		mg/L		0.001	31-DEC-12
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	31-DEC-12
Copper (Cu)-Total			<0.0010		mg/L		0.001	31-DEC-12
Iron (Fe)-Total			<0.020		mg/L		0.02	31-DEC-12
Lead (Pb)-Total			<0.0010		mg/L		0.001	31-DEC-12
Lithium (Li)-Total			<0.050		mg/L		0.05	31-DEC-12
Magnesium (Mg)-Total			<0.020		mg/L		0.02	31-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2504459								
WG1605745-9 MB								
Manganese (Mn)-Total			<0.0010		mg/L		0.001	31-DEC-12
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	31-DEC-12
Nickel (Ni)-Total			<0.0020		mg/L		0.002	31-DEC-12
Potassium (K)-Total			<0.50		mg/L		0.5	31-DEC-12
Selenium (Se)-Total			<0.0010		mg/L		0.001	31-DEC-12
Silver (Ag)-Total			<0.00010		mg/L		0.0001	31-DEC-12
Sodium (Na)-Total			<0.10		mg/L		0.1	31-DEC-12
Strontium (Sr)-Total			<0.0010		mg/L		0.001	31-DEC-12
Tellurium (Te)-Total			<0.0010		mg/L		0.001	31-DEC-12
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	31-DEC-12
Tin (Sn)-Total			<0.0010		mg/L		0.001	31-DEC-12
Titanium (Ti)-Total			<0.0020		mg/L		0.002	31-DEC-12
Tungsten (W)-Total			<0.010		mg/L		0.01	31-DEC-12
Uranium (U)-Total			<0.0050		mg/L		0.005	31-DEC-12
Vanadium (V)-Total			<0.0010		mg/L		0.001	31-DEC-12
Zinc (Zn)-Total			<0.0030		mg/L		0.003	31-DEC-12
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	31-DEC-12
NH3-COL-TB	**Water**							
Batch R2501414								
WG1605059-2 LCS								
Ammonia, Total (as N)			93.6		%		85-115	20-DEC-12
WG1605059-6 LCS								
Ammonia, Total (as N)			95.5		%		85-115	20-DEC-12
WG1605059-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-DEC-12
WG1605059-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	20-DEC-12
WG1605059-4 MS		**L1251041-2**						
Ammonia, Total (as N)			N/A	MS-B	%		-	20-DEC-12
WG1605059-8 MS		**L1251804-2**						
Ammonia, Total (as N)			90.2		%		75-125	20-DEC-12
NO2-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-TB	**Water**							
Batch R2502427								
WG1606667-3 DUP		**L1251708-13**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	21-DEC-12
WG1606667-2 LCS								
Nitrite (as N)			102.3		%		90-110	21-DEC-12
WG1606667-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	21-DEC-12
WG1606667-4 MS		**L1251708-13**						
Nitrite (as N)			100.6		%		75-115	21-DEC-12
NO3-IC-TB	**Water**							
Batch R2502427								
WG1606667-3 DUP		**L1251708-13**						
Nitrate (as N)		0.054	0.054		mg/L	0.6	20	21-DEC-12
WG1606667-2 LCS								
Nitrate (as N)			101.6		%		90-110	21-DEC-12
WG1606667-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	21-DEC-12
WG1606667-4 MS		**L1251708-13**						
Nitrate (as N)			96.9		%		75-125	21-DEC-12
OGG-TOT-WT	**Water**							
Batch R2503902								
WG1607442-2 LCS								
Oil and Grease, Total			90.1		%		70-130	28-DEC-12
WG1607442-3 LCSD		**WG1607442-2**						
Oil and Grease, Total		90.1	91		%	1.2	40	28-DEC-12
WG1607442-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	28-DEC-12
Batch R2504066								
WG1607674-2 LCS								
Oil and Grease, Total			95.8		%		70-130	28-DEC-12
WG1607674-3 LCSD		**WG1607674-2**						
Oil and Grease, Total		95.8	94		%	1.5	40	28-DEC-12
WG1607674-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	28-DEC-12
Batch R2504206								
WG1608103-2 LCS								
Oil and Grease, Total			86.2		%		70-130	31-DEC-12
WG1608103-3 LCSD		**WG1608103-2**						
Oil and Grease, Total		86.2	88		%	2.1	40	31-DEC-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
OGG-TOT-WT	**Water**							
Batch R2504206								
WG1608103-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	31-DEC-12
P-T-COL-TB	**Water**							
Batch R2502406								
WG1605824-2 LCS								
Phosphorus (P)-Total			101.5		%		80-120	21-DEC-12
WG1605824-6 LCS								
Phosphorus (P)-Total			103.5		%		80-120	21-DEC-12
WG1605824-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	21-DEC-12
WG1605824-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	21-DEC-12
WG1605824-4 MS		**L1250921-7**						
Phosphorus (P)-Total			102.6		%		70-130	21-DEC-12
Batch R2503007								
WG1607157-2 LCS								
Phosphorus (P)-Total			101.5		%		80-120	27-DEC-12
WG1607157-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	27-DEC-12
PH-CAP-TB	**Water**							
Batch R2502476								
WG1606641-3 DUP		**L1251708-13**						
pH		7.30	7.32	J	pH	0.02	0.2	21-DEC-12
WG1606641-2 LCS								
pH			6.01		pH		5.9-6.1	21-DEC-12
SO4-IC-TB	**Water**							
Batch R2502427								
WG1606667-3 DUP		**L1251708-13**						
Sulfate (SO4)		2.55	2.54		mg/L	0.4	20	21-DEC-12
WG1606667-2 LCS								
Sulfate (SO4)			103.4		%		90-110	21-DEC-12
WG1606667-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	21-DEC-12
WG1606667-4 MS		**L1251708-13**						
Sulfate (SO4)			99.6		%		75-125	21-DEC-12
SOLIDS-TOTSUS-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-TB	**Water**							
Batch R2502842								
WG1606621-2 LCS								
Total Suspended Solids			98.8		%		85-115	24-DEC-12
WG1606621-1 MB								
Total Suspended Solids			<2.0		mg/L		2	24-DEC-12
Batch R2502937								
WG1605744-2 LCS								
Total Suspended Solids			99.0		%		85-115	21-DEC-12
WG1605744-1 MB								
Total Suspended Solids			<2.0		mg/L		2	21-DEC-12
Batch R2502942								
WG1606072-2 LCS								
Total Suspended Solids			94.2		%		85-115	21-DEC-12
WG1606072-1 MB								
Total Suspended Solids			<2.0		mg/L		2	21-DEC-12

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

ALS Environment
L1251708-COFC
Ontario P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
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Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P0115
Quote #	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler:	

Regulatory Information

- ☑ O. Reg 153 (O. Reg 511 Amend) Table: ___
- Record of Site Condition ☑ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No
If yes, an authorized DW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (P)	Hardness		Number of Containers
1	Field Blank	18/12/12	1⁰⁰	WATER	x	x	x	x	x	x	x	x	x	x	x		9
2	Travel Blank				x	x	x	x	x	x	x	x	x	x	x		
3	Duplicate				x	x	x	x	x	x	x	x	x	x	x		
4	SW1				x	x	x	x	x	x	x	x	x	x	x		
5	SW2				x	x	x	x	x	x	x	x	x	x	x		
1	SW3				x	x	x	x	x	x	x	x	x	x	x		
7	SW7				x	x	x	x	x	x	x	x	x	x	x		
8	SW8				x	x	x	x	x	x	x	x	x	x	x		
9	SW9	19/12/12			x	x	x	x	x	x	x	x	x	x	x		
10	SW10	18/12/12			x	x	x	x	x	x	x	x	x	x	x		
11	SW11	19/12/12			x	x	x	x	x	x	x	x	x	x	x		

CUSTODY SEALS INTACT When Received At ALS THUNDER BAY

Special Instructions / Comments

No field filter on dissolved metals + Hg

Custody seals intact for Travel Blank KW

SHIPMENT RELEASE (client use)

Released by:	Date & Time
Mac Potter <Original signed by>	18/12/12 19/12/12

SHIPMENT RECEPTION (lab use only)

Received by:	Date & Time	Temp	Cooling Initiated
<Original signed by>	Dec. 20/12 11:15	12.4	☐ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
<Original signed by>	Dec. 20/12 11:30	Yes / No ?

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

Cooler #1: 1,2.4 #2: 12.4,6.5 #3: 1.3,2.6 #4: 6.6,8.7 #5: 2.1,4.0 See SIF

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ell Brothers Limited Company www.alsglobal.com

L1251708-COFC

Company:	Treasury Metals			Regulatory Information	Both questions below must answered for water samples
Contact:	Mac Potter			(O. Reg 511 Amend) Table:	Are any samples taken from a regulated DW System? ☐ Yes ☑ No
Address:	899 Tree Nursery Rd			Record of Site Condition ☑ Yes ☐ No	If yes, an authorized DW COC must be used.
	Wabigoon ON P0V 2W0			PWQO ☑ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption? ☐ Yes ☑ No
Phone:	807-938-6961	Fax:		Guideline Required:	
Email:	mac@treasurymetals.com			TCLP Regulation 558 ☐ Other:	
Project:	Job M0906A01	PO:	M0210-P0115	Service Requested	Analysis Request
Quote #	Q32690	LSD Goliath Project		☑ Regular TAT (7 Days)	Please indicate below Filtered, Preserved or both (F, P, F/P)
Invoice To:		Same as Report: ☑ Yes ☐ No		☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:				☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:				Specify Date Required:	
Address:				All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:					
Account Manager	Karen R.	Sampler:			

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
					P	P	P	P	P	P	P	P	P	P			
12	TL1a	18/12/12	1:00	WATER	x	x	x	x	x	x	x	x	x	x	x		9
13	TL3	↓	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
14	TCTa	19/12/12	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		

CUSTODY SEALS INTACT
When Received At
ALS THUNDER BAY

Special Instructions / Comments

No field filter on dissolved metals + Hg

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: <Original signed by>	Date & Time: 9:30 AM 19/12/12	Received by: <Original signed by>	Date & Time: 11:15 Dec. 20/12	Temp: 12.4	Cooling Initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: 11:30 Dec. 20/12	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

SeSF

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TREASURY METALS INC
130 KING ST. W SUITE 3680, BOX 99
TORONTO, ON M5A1B1
(416) 214-4654

ATTENTION TO: MAC POTTER

PROJECT NO: Goliath

AGAT WORK ORDER: 13B708167

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Analyst

WATER ANALYSIS REVIEWED BY: Inesa Alizarchyk, Inorganic Lab Supervisor

DATE REPORTED: Apr 30, 2013

PAGES (INCLUDING COVER): 19

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Total Oil and Grease [water]

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
Total Oil and Grease in water	mg/L		0.5	<0.5	0.73	<0.5	0.65	<0.5	<0.5	<0.5	0.94

		SAMPLE DESCRIPTION:		SW7	SW8	Duplicate	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL	4285676	4285692	4285706	4285723	4285745
Total Oil and Grease in water	mg/L		0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

<Original signed by>

Certified By:

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AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Dissolved Metals & Cations (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
Aluminum	mg/L		0.004	0.014	0.083	0.054	0.019	0.042	0.034	0.349	0.021
Antimony	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium	mg/L		0.002	0.022	0.015	0.009	0.014	0.013	0.013	0.012	0.011
Beryllium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Bismuth	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L		0.05	39.5	26.3	28.1	28.7	16.6	24.5	11.4	25.6
Chromium	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt	mg/L		0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.0026	0.0007	0.0008	<0.0005
Copper	mg/L		0.002	<0.002	0.002	<0.002	<0.002	<0.002	0.006	0.003	<0.002
Iron	mg/L		0.01	0.09	0.69	0.21	0.78	2.69	1.18	1.58	0.54
Lead	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	mg/L		0.05	7.14	7.34	4.03	7.77	4.49	7.07	2.51	3.73
Manganese	mg/L		0.002	0.119	0.058	0.126	0.091	0.860	0.363	0.083	0.089
Mercury	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Nickel	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Potassium	mg/L		0.05	1.88	2.20	1.67	2.13	1.23	1.73	1.67	0.80
Selenium	mg/L		0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Silicon	mg/L		0.05	6.35	4.76	6.72	5.27	6.35	6.02	10.2	6.68
Silver	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	mg/L		0.05	3.51	3.94	2.26	5.49	2.35	4.03	3.32	1.98
Strontium	mg/L		0.005	0.057	0.048	0.055	0.065	0.039	0.052	0.030	0.035
Tellurium	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium	mg/L		0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Tin	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Titanium	mg/L		0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	0.013	<0.002
Tungsten	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Dissolved Metals & Cations (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
Uranium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Vanadium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	mg/L		0.005	<0.005	0.011	<0.005	0.008	<0.005	0.005	0.009	0.011

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AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Dissolved Metals & Cations (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW7	SW8	Duplicate	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL	4285676	4285692	4285706	4285723	4285745
Aluminum	mg/L		0.004	0.019	0.005	0.027	<0.004	0.008
Antimony	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Arsenic	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium	mg/L		0.002	0.008	0.032	0.011	<0.002	<0.002
Beryllium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Bismuth	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L		0.05	17.3	43.0	28.0	<0.05	0.08
Chromium	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt	mg/L		0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Iron	mg/L		0.01	0.36	0.11	0.85	<0.01	<0.01
Lead	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Magnesium	mg/L		0.05	3.58	3.83	7.62	<0.05	<0.05
Manganese	mg/L		0.002	0.029	0.790	0.091	<0.002	<0.002
Mercury	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Nickel	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Potassium	mg/L		0.05	2.10	0.98	2.11	<0.05	<0.05
Selenium	mg/L		0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Silicon	mg/L		0.05	4.83	5.22	5.09	<0.05	0.08
Silver	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium	mg/L		0.05	1.52	1.86	5.83	<0.05	<0.05
Strontium	mg/L		0.005	0.031	<0.005	0.070	<0.005	<0.005
Tellurium	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Thallium	mg/L		0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Tin	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Titanium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Tungsten	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Dissolved Metals & Cations (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

				SAMPLE DESCRIPTION:	SW7	SW8	Duplicate	Trip Blank	Field Blank
				SAMPLE TYPE:	Water	Water	Water	Water	Water
				DATE SAMPLED:	4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL		4285676	4285692	4285706	4285723	4285745
Uranium	mg/L		0.002		<0.002	<0.002	<0.002	<0.002	<0.002
Vanadium	mg/L		0.002		<0.002	<0.002	<0.002	<0.002	<0.002
Zinc	mg/L		0.005		0.007	<0.005	0.009	<0.005	<0.005

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Inorganic Chemistry (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
pH	pH Units		NA	7.94	7.69	7.55	7.81	7.16	7.61	6.61	7.72
Alkalinity (as CaCO3)	mg/L		5	127	83	83	87	56	81	<5	74
Electrical Conductivity	uS/cm		2	243	186	172	212	121	180	100	150
Total Hardness (as CaCO3)	mg/L		0.5	128	95.9	86.8	104	59.9	90.3	38.8	79.3
Total Suspended Solids	mg/L		10	21	<10	<10	23	<10	12	<10	<10
Acidity (as CaCO3)	mg/L		5	<5	<5	<5	<5	<5	<5	<5	<5
Chloride	mg/L		0.10	0.82	5.60	1.04	10.4	1.87	3.68	7.26	0.50
Nitrate as N	mg/L		0.05	0.19	0.08	0.11	0.27	0.08	0.19	0.49	0.12
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L		0.10	0.79	2.01	3.34	5.57	2.28	5.07	8.32	2.87
Ammonia as N	mg/L		0.02	0.09	<0.02	<0.02	0.23	0.36	0.36	0.26	<0.02
Total Phosphorus	mg/L		0.02	0.02	0.07	0.02	0.06	0.06	0.03	0.10	0.03
Cyanide, Free	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Cyanide	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Inorganic Chemistry (Water)

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW7	SW8	Duplicate	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL	4285676	4285692	4285706	4285723	4285745
pH	pH Units		NA	7.59	7.98	7.73	5.27	5.43
Alkalinity (as CaCO3)	mg/L		5	50	124	87	<5	<5
Electrical Conductivity	uS/cm		2	117	236	216	<2	<2
Total Hardness (as CaCO3)	mg/L		0.5	57.9	123	101	<0.5	<0.5
Total Suspended Solids	mg/L		10	<10	<10	24	<10	<10
Acidity (as CaCO3)	mg/L		5	<5	<5	<5	<5	<5
Chloride	mg/L		0.10	0.57	0.69	10.7	<0.10	<0.10
Nitrate as N	mg/L		0.05	0.44	0.16	0.28	<0.05	<0.05
Nitrite as N	mg/L		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L		0.10	5.62	1.75	6.12	<0.10	<0.10
Ammonia as N	mg/L		0.02	<0.02	0.38	0.27	<0.02	<0.02
Total Phosphorus	mg/L		0.02	0.07	0.02	0.07	0.02	0.02
Cyanide, Free	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Cyanide	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

<Original signed by>

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Total Metals & Cations in water

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
Total Aluminum	mg/L		0.004	0.418	0.440	0.061	0.906	0.167	0.414	0.384	0.032
Total Antimony	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Arsenic	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Barium	mg/L		0.002	0.031	0.025	0.009	0.017	0.012	0.013	0.011	0.010
Total Beryllium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Bismuth	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L		0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L		0.05	40.4	26.9	28.4	29.5	18.0	25.9	16.3	25.7
Total Chromium	mg/L		0.003	<0.003	<0.003	<0.003	0.006	<0.003	<0.003	<0.003	<0.003
Total Cobalt	mg/L		0.0005	<0.0005	<0.0005	<0.0005	0.0008	0.0027	0.0010	0.0011	<0.0005
Total Copper	mg/L		0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	0.002	<0.002
Total Iron	mg/L		0.01	0.73	0.71	0.58	2.65	4.08	2.57	1.70	0.94
Total Lead	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Lithium	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Magnesium	mg/L		0.05	7.47	7.37	4.14	8.24	4.64	7.26	2.96	3.88
Total Manganese	mg/L		0.002	0.214	0.229	0.138	0.177	0.912	0.459	0.129	0.121
Total Mercury	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Molybdenum	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Nickel	mg/L		0.003	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	<0.003
Total Potassium	mg/L		0.05	2.17	2.19	1.83	2.33	1.44	1.94	4.44	1.18
Total Selenium	mg/L		0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Total Silicon	mg/L		0.05	8.06	8.88	7.43	7.75	6.38	6.47	10.2	6.70
Total Silver	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Sodium	mg/L		0.05	3.68	4.21	2.32	5.75	2.74	4.38	3.43	2.25
Total Strontium	mg/L		0.005	0.065	0.072	0.050	0.078	0.043	0.057	0.039	0.042
Total Tellurium	mg/L		0.05	<0.05	<0.05	<0.05	0.05	0.06	<0.05	<0.05	0.07
Total Thallium	mg/L		0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Total Tin	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.003	<0.002
Total Titanium	mg/L		0.002	0.021	0.023	0.003	0.047	0.006	0.018	0.013	<0.002
Total Tungsten	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Total Metals & Cations in water

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW9	SW2	SW1	TL3	TL1a	JCTa	SW11	SW10
		SAMPLE TYPE:		Water	Water	Water	Water	Water	Water	Water	Water
		DATE SAMPLED:		4/16/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/17/2013	4/18/2013	4/18/2013
Parameter	Unit	G / S	RDL	4285424	4285571	4285586	4285601	4285614	4285630	4285644	4285659
Total Uranium	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Vanadium	mg/L		0.002	<0.002	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002
Total Zinc	mg/L		0.005	0.018	0.019	<0.005	0.020	0.007	0.024	0.051	<0.005

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Total Metals & Cations in water

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

SAMPLE DESCRIPTION:				SW7	SW8	Duplicate	Trip Blank	Field Blank
SAMPLE TYPE:				Water	Water	Water	Water	Water
DATE SAMPLED:				4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL	4285676	4285692	4285706	4285723	4285745
Total Aluminum	mg/L		0.004	0.109	0.076	1.67	<0.004	0.008
Total Antimony	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Arsenic	mg/L		0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Barium	mg/L		0.002	0.008	0.033	0.021	<0.002	<0.002
Total Beryllium	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Bismuth	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Boron	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Total Cadmium	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Calcium	mg/L		0.05	26.5	43.4	29.7	0.15	0.20
Total Chromium	mg/L		0.003	<0.003	<0.003	0.013	<0.003	<0.003
Total Cobalt	mg/L		0.0005	<0.0005	<0.0005	0.0013	<0.0005	<0.0005
Total Copper	mg/L		0.002	<0.002	<0.002	0.005	<0.002	<0.002
Total Iron	mg/L		0.01	0.62	2.18	3.54	0.03	0.03
Total Lead	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Lithium	mg/L		0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Magnesium	mg/L		0.05	4.43	3.93	8.56	0.24	0.23
Total Manganese	mg/L		0.002	0.043	0.921	0.241	<0.002	<0.002
Total Mercury	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Molybdenum	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Nickel	mg/L		0.003	<0.003	<0.003	0.003	<0.003	<0.003
Total Potassium	mg/L		0.05	2.16	1.05	2.53	<0.05	0.05
Total Selenium	mg/L		0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Total Silicon	mg/L		0.05	5.15	5.51	9.00	<0.05	<0.05
Total Silver	mg/L		0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Sodium	mg/L		0.05	1.66	2.17	5.86	<0.05	<0.05
Total Strontium	mg/L		0.005	0.040	0.060	0.082	<0.005	<0.005
Total Tellurium	mg/L		0.05	<0.05	<0.05	0.10	0.06	0.08
Total Thallium	mg/L		0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Total Tin	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Total Titanium	mg/L		0.002	0.003	0.004	0.091	<0.002	<0.002
Total Tungsten	mg/L		0.002	<0.002	<0.002	<0.002	<0.002	<0.002

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Certificate of Analysis

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

CLIENT NAME: TREASURY METALS INC

ATTENTION TO: MAC POTTER

Total Metals & Cations in water

DATE RECEIVED: 2013-04-22

DATE REPORTED: 2013-04-30

		SAMPLE DESCRIPTION:		SW7	SW8	Duplicate	Trip Blank	Field Blank
		SAMPLE TYPE:		Water	Water	Water	Water	Water
		DATE SAMPLED:		4/18/2013	4/18/2013	4/17/2013	4/16/2013	4/16/2013
Parameter	Unit	G / S	RDL	4285676	4285692	4285706	4285723	4285745
Total Uranium	mg/L		0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Vanadium	mg/L		0.002	<0.002	<0.002	0.004	<0.002	<0.002
Total Zinc	mg/L		0.005	0.158	<0.005	0.034	<0.005	<0.005

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

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Quality Assurance

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

Trace Organics Analysis

RPT Date: Apr 30, 2013			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Oil and Grease [water]															
Total Oil and Grease in water	1		0.6	0.6	0.0%	< 0.5	NA	70%	130%	96%	70%	130%	101%	70%	130%

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Quality Assurance

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

Water Analysis

RPT Date: Apr 30, 2013			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Inorganic Chemistry (Water)															
pH	1	4285644	6.61	6.81	3.0%	NA	100%	90%	110%	NA	0%	0%	NA	0%	0%
Alkalinity (as CaCO3)	1	4285644	17	21	NA	< 5	96%	80%	120%	NA	0%	0%	NA	0%	0%
Electrical Conductivity	1	4285644	100	99	1.0%	< 2	98%	80%	120%	NA	0%	0%	NA	0%	0%
Total Suspended Solids	1	4285644	< 10	< 10	0.0%	< 10	106%	80%	120%	NA	0%	0%	NA	0%	0%
Chloride	4283790		68.6	69.5	1.3%	< 0.10	98%	90%	110%	99%	90%	110%	98%	80%	120%
Nitrate as N	4283790		2.21	2.09	5.6%	< 0.05	95%	90%	110%	107%	90%	110%	108%	80%	120%
Nitrite as N	4283790		<0.05	<0.05	0.0%	< 0.05	NA	90%	110%	103%	90%	110%	109%	80%	120%
Sulphate	4283790		4.85	4.49	7.8%	< 0.10	101%	90%	110%	100%	90%	110%	100%	80%	120%
Ammonia as N	1	4285630	0.36	0.35	2.8%	< 0.02	103%	90%	110%	104%	90%	110%	114%	80%	120%
Total Phosphorus	1		1.08	1.14	5.4%	< 0.02	96%	90%	110%	92%	90%	110%	104%	80%	120%
Cyanide, Free	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	100%	90%	110%	101%	90%	110%	106%	70%	130%
Total Cyanide	1	4285745	< 0.002	< 0.002	0.0%	< 0.002	101%	80%	120%	104%	90%	110%	109%	70%	130%
Dissolved Metals & Cations (Water)															
Aluminum	1	4285424	0.014	0.014	0.0%	< 0.004	92%	90%	110%	96%	90%	110%	97%	70%	130%
Antimony	1	4285424	< 0.003	< 0.003	0.0%	< 0.003	102%	90%	110%	97%	90%	110%	100%	70%	130%
Arsenic	1	4285424	< 0.003	< 0.003	0.0%	< 0.003	99%	90%	110%	101%	90%	110%	105%	70%	130%
Barium	1	4285424	0.022	0.023	4.4%	< 0.002	101%	90%	110%	103%	90%	110%	105%	70%	130%
Beryllium	1	4285424	< 0.001	< 0.001	0.0%	< 0.001	96%	90%	110%	105%	90%	110%	107%	70%	130%
Bismuth	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	97%	90%	110%	94%	90%	110%	98%	70%	1300
Boron	1	4285424	< 0.01	< 0.01	0.0%	< 0.01	101%	90%	110%	105%	90%	110%	109%	70%	130%
Cadmium	1	4285424	< 0.0001	< 0.0001	0.0%	< 0.0001	99%	90%	110%	107%	90%	110%	106%	70%	130%
Calcium	1	4285424	39.5	38.8	1.8%	< 0.05	102%	90%	110%	104%	90%	110%	100%	70%	130%
Chromium	1	4285424	< 0.003	< 0.003	0.0%	< 0.003	98%	90%	110%	103%	90%	110%	96%	70%	130%
Cobalt	1	4285424	< 0.0005	< 0.0005	0.0%	< 0.0005	94%	90%	110%	99%	90%	110%	101%	70%	130%
Copper	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	98%	90%	110%	97%	90%	110%	101%	70%	130%
Iron	1	4285424	0.087	0.082	5.9%	< 0.01	95%	90%	110%	99%	90%	110%	82%	70%	130%
Lead	1	4285424	< 0.001	< 0.001	0.0%	< 0.001	95%	90%	110%	94%	90%	110%	98%	70%	130%
Lithium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	94%	90%	110%	99%	90%	110%	98%	70%	130%
Magnesium	1	4285424	7.14	7.09	0.7%	< 0.05	104%	90%	110%	105%	90%	110%	102%	70%	130%
Manganese	1	4285424	0.119	0.119	0.0%	< 0.002	91%	90%	110%	97%	90%	110%	90%	70%	130%
Mercury	1	4285424	< 0.0001	< 0.0001	0.0%	< 0.0001	99%	90%	110%	100%	90%	110%	102%	80%	120%
Molybdenum	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	100%	90%	110%	100%	90%	110%	100%	70%	130%
Nickel	1	4285424	< 0.003	< 0.003	0.0%	< 0.003	95%	90%	110%	101%	90%	110%	101%	70%	130%
Potassium	1	4285424	1.88	1.84	2.2%	< 0.05	104%	90%	110%	100%	90%	110%	99%	70%	130%
Selenium	1	4285424	< 0.004	< 0.004	0.0%	< 0.004	100%	90%	110%	103%	90%	110%	107%	70%	130%
Silicon	1	4285424	6.35	6.67	4.9%	< 0.05	99%	90%	110%	105%	90%	110%	105%	70%	130%
Silver	1	4285424	< 0.0001	< 0.0001	0.0%	< 0.0001	102%	90%	110%	108%	90%	110%	94%	70%	130%
Sodium	1	4285424	3.68	3.63	1.4%	< 0.05	104%	90%	110%	101%	90%	110%	100%	70%	130%

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Quality Assurance

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

Water Analysis (Continued)

RPT Date: Apr 30, 2013

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Strontium	1	4285424	0.057	0.060	5.1%	< 0.005	99%	90%	110%	103%	90%	110%	100%	70%	130%
Tellurium	1	4285424	< 0.05	< 0.05	0.0%	< 0.05	101%	90%	110%	106%	90%	110%	104%	70%	130%
Thallium	1	4285424	< 0.0003	< 0.0003	0.0%	< 0.0003	95%	90%	110%	100%	90%	110%	103%	70%	130%
Tin	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	102%	90%	110%	97%	90%	110%	99%	70%	130%
Titanium	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	101%	90%	110%	103%	90%	110%	100%	70%	130%
Tungsten	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	104%	90%	110%	97%	90%	110%	100%	70%	130%
Uranium	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	103%	90%	110%	93%	90%	110%	100%	70%	130%
Vanadium	1	4285424	< 0.002	< 0.002	0.0%	< 0.002	101%	90%	110%	103%	90%	110%	101%	70%	130%
Zinc	1	4285424	< 0.005	< 0.005	0.0%	< 0.005	98%	90%	110%	102%	90%	110%	103%	70%	130%
Total Metals & Cations in water															
Total Aluminum	1	4285424	0.418	0.420	0.5%	< 0.020	99%	90%	110%	101%	80%	120%	96%	70%	130%
Total Antimony	1	4285424	< 0.020	< 0.020	0.0%	< 0.020	99%	90%	110%	99%	80%	120%	100%	70%	130%
Total Arsenic	1	4285424	< 0.015	< 0.015	0.0%	< 0.015	96%	90%	110%	99%	80%	120%	97%	70%	130%
Total Barium	1	4285424	0.031	0.030	3.3%	< 0.010	101%	90%	110%	104%	80%	120%	104%	70%	130%
Total Beryllium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	104%	90%	110%	107%	80%	120%	105%	70%	130%
Total Bismuth	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	102%	90%	110%	93%	80%	120%	91%	70%	130%
Total Boron	1	4285424	< 0.050	< 0.050	0.0%	< 0.050	110%	90%	110%	110%	80%	120%	109%	70%	130%
Total Cadmium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	102%	90%	110%	119%	80%	120%	101%	70%	130%
Total Calcium	1	4285424	40.4	40.8	1.0%	< 0.20	100%	90%	110%	102%	80%	120%	96%	70%	130%
Total Chromium	1	4285424	< 0.015	< 0.015	0.0%	< 0.015	102%	90%	110%	108%	80%	120%	106%	70%	130%
Total Cobalt	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	99%	90%	110%	108%	80%	120%	104%	70%	130%
Total Copper	1	4285424	< 0.015	< 0.015	0.0%	< 0.015	101%	90%	110%	106%	80%	120%	102%	70%	130%
Total Iron	1	4285424	0.727	0.721	0.8%	< 0.050	98%	90%	110%	94%	80%	120%	96%	70%	130%
Total Lead	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	93%	90%	110%	94%	80%	120%	89%	70%	130%
Total Lithium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	106%	90%	110%	110%	80%	120%	103%	70%	130%
Total Magnesium	1	4285424	7.47	7.43	0.5%	< 0.20	98%	90%	110%	100%	80%	120%	96%	70%	130%
Total Manganese	1	4285424	0.214	0.204	4.8%	< 0.015	107%	90%	110%	108%	80%	120%	107%	70%	130%
Total Mercury	1	4285424	<0.0002	<0.0002	0.0%	< 0.0002	99%	90%	110%	100%	90%	110%	102%	80%	120%
Total Molybdenum	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	100%	90%	110%	99%	80%	120%	95%	70%	130%
Total Nickel	1	4285424	< 0.015	< 0.015	0.0%	< 0.015	98%	90%	110%	103%	80%	120%	101%	70%	130%
Total Potassium	1	4285424	2.17	1.89	13.8%	< 0.20	99%	90%	110%	100%	80%	120%	95%	70%	130%
Total Selenium	1	4285424	< 0.020	< 0.020	0.0%	< 0.020	100%	90%	110%	101%	80%	120%	99%	70%	130%
Total Silicon	1	4285424	8.06	7.84	2.8%	< 0.050	104%	90%	110%	109%	80%	120%	109%	70%	130%
Total Silver	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	101%	90%	110%	110%	80%	120%	117%	70%	130%
Total Sodium	1	4285424	3.51	3.47	1.1%	< 0.20	98%	90%	110%	98%	80%	120%	94%	70%	130%
Total Strontium	1	4285424	0.065	0.063	3.1%	< 0.020	99%	90%	110%	104%	80%	120%	102%	70%	130%
Total Tellurium	1	4285424	< 0.006	< 0.006	0.0%	< 0.006	98%	90%	110%	99%	90%	110%	101%	70%	130%
Total Thallium	1	4285424	< 0.030	< 0.030	0.0%	< 0.030	97%	90%	110%	90%	80%	120%	88%	70%	130%
Total Tin	1	4285424	< 0.015	< 0.015	0.0%	< 0.015	109%	90%	110%	109%	80%	120%	105%	70%	130%

AGAT Laboratories

5835 COOPERS AVENUE
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Quality Assurance

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

Water Analysis (Continued)

RPT Date: Apr 30, 2013			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Total Titanium	1	4285424	0.021	0.021	0.0%	< 0.010	105%	90%	110%	105%	80%	120%	105%	70%	130%
Total Tungsten	1	4285424	< 0.050	< 0.050	0.0%	< 0.050	104%	90%	110%	96%	80%	120%	97%	70%	130%
Total Uranium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	110%	90%	110%	102%	80%	120%	100%	70%	130%
Total Vanadium	1	4285424	< 0.010	< 0.010	0.0%	< 0.010	108%	90%	110%	109%	80%	120%	107%	70%	130%
Total Zinc	1	4285424	< 0.020	< 0.020	0.0%	< 0.020	100%	90%	110%	105%	80%	120%	102%	70%	130%

<Original signed by>

Certified By:

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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Method Summary

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Total Oil and Grease in water	VOL 5011	EPA SW-846 3510C & 8015B	GRAVIMETRIC

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Method Summary

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Aluminum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Antimony	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Arsenic	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Beryllium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Bismuth	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cadmium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Calcium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Chromium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Cobalt	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Copper	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Iron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lead	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Lithium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Magnesium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Manganese	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Mercury	MET-93-6100	EPA SW-846 7470 & 245.1	CVAAS
Molybdenum	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Nickel	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Potassium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Selenium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silicon	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Silver	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Strontium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Tellurium	MET-93-6103	EPA SW 846-6020A & 200.8	ICP-MS
Thallium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Tin	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Titanium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Tungsten	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Uranium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Vanadium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Zinc	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE
Alkalinity (as CaCO3)	INOR-93-6000	SM 2320 B	PC TITRATE
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
Total Hardness (as CaCO3)	MET-93-6105	EPA SW-846 6010C & 200.7 & SM 2340 B	ICP/OES
Total Suspended Solids	INOR-93-6028	SM 2540 D	BALANCE
Acidity (as CaCO3)		SM 2310 B	TITRATION
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrite as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Ammonia as N	INOR-93-6002	AQ2 EPA-103A & SM 4500 NH3-F	AQ-2 DISCRETE ANALYZER
Total Phosphorus	INOR-93-6022	SM 4500-P B&E	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	MOE CN-3015 & SM 4500 CN- I	TECHNICON AUTO ANALYZER
Total Cyanide	INOR-93-6051	MOE 3015 & SM 4500 CN- A,B,C	TECHNICON AUTO ANALYZER

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Method Summary

CLIENT NAME: TREASURY METALS INC

AGAT WORK ORDER: 13B708167

PROJECT NO: Goliath

ATTENTION TO: MAC POTTER

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Total Aluminum	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Antimony	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Arsenic	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Barium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Beryllium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Bismuth	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Boron	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Cadmium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Calcium	MET-93-6105	EPA SW-846 3010A & 6010C	ICP/OES
Total Chromium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Cobalt	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Copper	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Iron	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Lead	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Lithium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Magnesium	MET-93-6105	EPA SW-846 3010A & 6020A	ICP/OES
Total Manganese	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Mercury	MET-93-6100	EPA SW-846 7470 & 245.1	CVAAS
Total Molybdenum	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Nickel	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Potassium	MET-93-6105	EPA SW-846 3010A & 6020A	ICP/OES
Total Selenium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Silicon	MET-93-6103	EPA SW-846 3010A & 6010C	ICP-MS
Total Silver	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Sodium	MET-93-6105	EPA SW-846 3010A & 6020A	ICP/OES
Total Strontium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Tellurium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Thallium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Tin	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Titanium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Tungsten	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Uranium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Vanadium	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS
Total Zinc	MET-93-6103	EPA SW-846 3010A & 6020A	ICP-MS

5 Blank

T Bay Branch APRIL 22/13 Cooler #1 9.1-9.8-9.7
Debbie Jamieson #2 9.5-8.7-7.6
#3 9.4-9.1-9.4
#4 9.1-9.6-9.3
#5 8.7-8.4-7.1

AGAT Laboratories

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Chain of Custody Record

Laboratory Use Only
Arrival Temperature: 13B708167
AGAT WO #:
Lab Temperature: *See attached*
Notes:

Client Information
Company: Treasury Metals
Contact: Mac Potter
Address: 899 Tree Nursery Rd.
Phone: 807 938 6961 Fax: 807 938 6499
Project: Goliath PO:
AGAT Quotation #: 17860
Please note, if quotation number is not provided, client will be billed full price for analysis.

Regulatory Requirements
- [x] Regulation 153/04 (reg. 511 Amend.)
  - Table ____ (Indicate one)
  - [ ] Ind/Com
  - [ ] Res/Park
  - [ ] Agriculture
  - Soil Texture (check one): [ ] Coarse [ ] Fine
- [ ] Sewer Use
  - Region ____ (Indicate one)
  - [ ] Sanitary
  - [ ] Storm
- [x] ~~Regulation 558~~
- [ ] CCME
- [ ] Other (specify)
- [x] Prov. Water Quality Objectives (PWQO)
- [ ] None

Turnaround Time Required (TAT) Required*
Regular TAT
- [x] 5 to 7 Working Days

Rush TAT (please provide prior notification)
Rush Surcharges Apply
- [ ] 3 Working Days
- [ ] 2 Working Days
- [ ] 1 Working Day

OR
Date Required (Rush surcharges may apply):
*TAT is exclusive of weekends and statutory holidays

Invoice To
Same: Yes [x] No [ ]
Company:
Contact:
Address:

Is this a drinking water sample? (potable water intended for human consumption)
[ ] Yes [x] No
If "Yes", please use the *Drinking Water Chain of Custody Form*

Is this submission for a **Record of Site Condition?**
[x] Yes [ ] No

Legend Matrix
GW Ground Water · O Oil · SW Surface Water · P Paint · SD Sediment · S Soil

Report Information – reports to be sent to:
1. Name: Mac Potter
   Email: mac@treasurymetals.com
2. Name:
   Email:

Sample Identification	Date Sampled	Time Sampled	Sample Matrix	# of Containers	Comments Site/Sample information	Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: [ ] B-HWS [x] Cl [x] CN- [x] EC [ ] FOC [x] Cr+6- [ ] SAR [x] NO_3/NO_2 [ ] N-Total [x] Hg [x] pH	Nutrients: [x] TP [ ] NH_3 [ ] TKN [x] NO_3/NO_2 [ ] NO_3 [x] NO_2	VOC: [ ] BTEX [ ] VOC [ ] THM	CCME Fractions 1 to 4	ABNs	PAHs	Chlorophenols	PCBs	Organochlorine Pesticides	TCLP Metals/Inorganics	Sewer Use
Sw9	16/04/13	1pm	SW	10	- ALL DISSOLVED METALS / MERCURY FIELD FILTERED - COC MAY BE IN ERROR PLEASE SEE QUOTE FOR RESPECTIVE ANALYSIS - ANY QUESTIONS PLEASE CALL 807 938 6961 ext 217	x	x			x	x									
Sw2	17/04/13																			
Sw1																				
TL3																				
TL1a																				
JCTa																				
Sw11	19/04/13																			
Sw10																				
Sw7																				
Sw8																				
Duplicate	17/04/13																			
Travel / Field Blank	16/04/13																			

Samples Relinquished By (Print Name and Sign)	Date/Time	Samples Received By (Print Name and Sign)	Date/Time
Mac Potter <Original signed by>	1:00pm 16/04/13	<Original signed by>	Apr 23/2013
Frank Conci <Original signed by>	2:00pm 19/04/13		9:05am

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°: 194675

Document ID: DIV-78-1511.007 <Original signed by>
Date Issued: July 23, 2012

Treasury Metals

5 black coolers

1. 6.4 / 7.3 / 6.9
2. 5.1 / 5.4 / 5.6
3. 6.3 / 6.0 / 7.1
4. 4.3 / 5.7 / 5.5
5. 6.6 / 6.3 / 6.0.

<Original signed by>

Apr 23/2013.
9:05am.

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 31-JAN-13
Report Date: 13-FEB-13 13:59 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1263671

Project P.O. #: M0210-P0115
Job Reference: JOB M0906A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1263671-1	L1263671-2	L1263671-3	L1263671-4	L1263671-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13
Sampled Time	13:00	13:00	13:00	13:00	13:00
Client ID	SW1	SW2	SW4	SW5	SW6
Grouping / **Analyte**					
WATER					
Physical Tests					
Conductivity (EC) (uS/cm)	177	152	113	122	118
Hardness (as CaCO3) (mg/L)	98	93	60	59	63
pH (pH)	7.26	7.41	7.52	7.60	7.56
Total Suspended Solids (mg/L)	<2.0	10.1	<2.0	<2.0	<2.0
Anions and Nutrients					
Acidity (as CaCO3) (mg/L)	9.8	9.8	7.6	7.2	6.2
Alkalinity, Total (as CaCO3) (mg/L CaCO3)	84.8	74.8	45.6	49.1	50.0
Ammonia, Total (as N) (mg/L)	0.070	0.066	<0.020	<0.020	<0.020
Chloride (Cl) (mg/L)	0.86	0.78	4.13	4.75	3.64
Nitrate (as N) (mg/L)	0.047	0.053	0.038	0.055	0.075
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0069	0.0293	0.0087	0.0077	0.0292
Sulfate (SO4) (mg/L)	2.95	2.31	3.06	3.91	2.46
Cyanides					
Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals					
Aluminum (Al)-Total (mg/L)	0.096	0.262	<0.010	0.012	0.846
Antimony (Sb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Total (mg/L)	0.0147	0.0178	0.0087	0.0090	0.0162
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Calcium (Ca)-Total (mg/L)	31.9	26.2	17.9	17.5	19.2
Chromium (Cr)-Total (mg/L)	<0.00050	0.00092	<0.00050	<0.00050	0.00132
Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Total (mg/L)	<0.0010	0.0025	0.0015	0.0020	0.0036
Iron (Fe)-Total (mg/L)	1.13	1.24	<0.050	<0.050	0.734
Lead (Pb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Total (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
Magnesium (Mg)-Total (mg/L)	4.45	6.80	3.72	3.69	3.70
Manganese (Mn)-Total (mg/L)	0.193	0.0382	<0.0010	0.0010	0.0105
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Nickel (Ni)-Total (mg/L)	<0.0010	0.0016	<0.0010	<0.0010	0.0012
Phosphorus (P)-Total (mg/L)	<0.050	0.051	<0.050	<0.050	0.057
Potassium (K)-Total (mg/L)	1.8	<1.0	1.2	1.2	1.2

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1263671-6 WATER 28-JAN-13 13:00 SW7	L1263671-7 WATER 28-JAN-13 13:00 SW8	L1263671-8 WATER 28-JAN-13 13:00 SW10	L1263671-9 WATER 29-JAN-13 13:00 TL1A	L1263671-10 WATER 29-JAN-13 13:00 TL3
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	151	219	150	135	214
	Hardness (as CaCO3) (mg/L)	88	130	86	75	133
	pH (pH)	7.58	7.66	7.58	6.77	7.63
	Total Suspended Solids (mg/L)	4.5	4.4	<2.0	12.0	6.3
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	7.0	6.8	8.2	22.4	7.8
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	66.6	111	75.2	56.4	102
	Ammonia, Total (as N) (mg/L)	0.065	0.270	0.034	0.552	0.320
	Chloride (Cl) (mg/L)	0.70	0.38	0.38	3.10	2.75
	Nitrate (as N) (mg/L)	0.533	0.177	0.066	0.056	0.159
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.037
	Phosphorus (P)-Total (mg/L)	0.0106	<0.0050	<0.0050	0.0636	0.0529
	Sulfate (SO4) (mg/L)	8.35	1.69	2.56	5.58	3.29
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.057	0.034	0.030	0.428	0.470
	Antimony (Sb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	0.0014	<0.0010
	Barium (Ba)-Total (mg/L)	0.0137	0.0410	0.0182	0.0258	0.0187
	Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Total (mg/L)	27.0	45.5	28.1	21.5	37.3
	Chromium (Cr)-Total (mg/L)	<0.00050	<0.00050	0.00062	0.00123	0.00123
	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	0.00723	0.00071
	Copper (Cu)-Total (mg/L)	0.0015	0.0012	0.0014	0.0013	0.0018
	Iron (Fe)-Total (mg/L)	0.939	1.42	1.13	10.4	6.47
	Lead (Pb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Total (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Magnesium (Mg)-Total (mg/L)	5.04	4.06	3.91	5.13	9.74
	Manganese (Mn)-Total (mg/L)	0.0405	0.829	0.173	2.14	0.254
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Nickel (Ni)-Total (mg/L)	<0.0010	<0.0010	0.0011	0.0015	0.0012
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	0.090	0.085
	Potassium (K)-Total (mg/L)	<1.0	<1.0	<1.0	<1.0	1.8

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1263671-11	L1263671-12	L1263671-13	L1263671-14	
Description	WATER	WATER	WATER	WATER	
Sampled Date	28-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	
Sampled Time	13:00	13:00	13:00	13:00	
Client ID	JCTA	TRAVEL	FIELD	DUPLICATE	
Grouping	**Analyte**				
WATER					
Physical Tests	Conductivity (EC) (uS/cm)	191	<3.0	<3.0	136	
	Hardness (as CaCO3) (mg/L)	108	<10	<10	71	
	pH (pH)	7.86	5.53	5.52	6.83	
	Total Suspended Solids (mg/L)		<2.0	<2.0	11.7	
Anions and Nutrients	Acidity (as CaCO3) (mg/L)		<2.0	<2.0	21.0	
	Alkalinity, Total (as CaCO3) (mg/L CaCO3)		<5.0	<5.0	57.2	
	Ammonia, Total (as N) (mg/L)		<0.020	<0.020	0.545	
	Chloride (Cl) (mg/L)		<0.10	<0.10	2.68	
	Nitrate (as N) (mg/L)		<0.030	<0.030	<0.030	
	Nitrite (as N) (mg/L)		<0.020	<0.020	<0.020	
	Phosphorus (P)-Total (mg/L)		<0.0050	<0.0050	0.0574	
	Sulfate (SO4) (mg/L)		<0.30	<0.30	4.57	
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	
Total Metals	Aluminum (Al)-Total (mg/L)	0.529	<0.010	<0.010	0.453	
	Antimony (Sb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Arsenic (As)-Total (mg/L)	0.0011	<0.0010	<0.0010	0.0013	
	Barium (Ba)-Total (mg/L)	0.0262	<0.0020	<0.0020	0.0247	
	Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Total (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	
	Calcium (Ca)-Total (mg/L)	30.4	<0.50	<0.50	20.3	
	Chromium (Cr)-Total (mg/L)	0.00141	<0.00050	<0.00050	0.00129	
	Cobalt (Co)-Total (mg/L)	0.00314	<0.00050	<0.00050	0.00691	
	Copper (Cu)-Total (mg/L)	0.0014	<0.0010	<0.0010	0.0016	
	Iron (Fe)-Total (mg/L)	9.11	<0.050	<0.050	9.81	
	Lead (Pb)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Lithium (Li)-Total (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Magnesium (Mg)-Total (mg/L)	7.75	<0.50	<0.50	4.95	
	Manganese (Mn)-Total (mg/L)	2.08	<0.0010	<0.0010	2.02	
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Molybdenum (Mo)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Nickel (Ni)-Total (mg/L)	0.0014	<0.0010	<0.0010	0.0015	
	Phosphorus (P)-Total (mg/L)	0.101	<0.050	<0.050	0.091	
	Potassium (K)-Total (mg/L)	1.5	<1.0	<1.0	<1.0	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1263671-1	L1263671-2	L1263671-3	L1263671-4	L1263671-5
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13
Sampled Time	13:00	13:00	13:00	13:00	13:00
Client ID	SW1	SW2	SW4	SW5	SW6
Grouping / **Analyte**					
WATER					
Total Metals Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
Silicon (Si)-Total (mg/L)	7.9	4.8	1.5	1.4	2.4
Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Sodium (Na)-Total (mg/L)	2.57	1.82	3.98	3.93	3.75
Strontium (Sr)-Total (mg/L)	0.0554	0.0524	0.0340	0.0342	0.0345
Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Titanium (Ti)-Total (mg/L)	0.0043	0.0097	<0.0020	<0.0020	0.0269
Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Uranium (U)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Vanadium (V)-Total (mg/L)	<0.00050	0.00108	<0.00050	<0.00050	0.00152
Zinc (Zn)-Total (mg/L)	<0.0030	0.0076	<0.0030	0.0041	<0.0030
Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals Dissolved Metals Filtration Location	FIELD	FIELD	LAB	LAB	LAB
Aluminum (Al)-Dissolved (mg/L)	0.012	0.113	<0.010	<0.010	0.125
Antimony (Sb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Barium (Ba)-Dissolved (mg/L)	0.0126	0.0140	0.0077	0.0076	0.0100
Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
Calcium (Ca)-Dissolved (mg/L)	29.7	24.8	15.5	15.8	16.1
Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0017	<0.0010	0.0010	0.0018
Iron (Fe)-Dissolved (mg/L)	0.333	0.663	<0.050	<0.050	0.127
Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Lithium (Li)-Dissolved (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
Magnesium (Mg)-Dissolved (mg/L)	4.13	6.43	3.55	3.65	3.32
Manganese (Mn)-Dissolved (mg/L)	0.161	0.0258	<0.0010	<0.0010	0.0038
Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Nickel (Ni)-Dissolved (mg/L)	<0.0010	0.0014	<0.0010	<0.0010	<0.0010
Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Potassium (K)-Dissolved (mg/L)	1.6	<1.0	1.0	1.1	<1.0
Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1263671-6 WATER 28-JAN-13 13:00 SW7	L1263671-7 WATER 28-JAN-13 13:00 SW8	L1263671-8 WATER 28-JAN-13 13:00 SW10	L1263671-9 WATER 29-JAN-13 13:00 TL1A	L1263671-10 WATER 29-JAN-13 13:00 TL3
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Total Metals	Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040
	Silicon (Si)-Total (mg/L)	7.5	5.9	7.7	8.7	8.2
	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Total (mg/L)	2.27	2.10	2.15	2.61	4.49
	Strontium (Sr)-Total (mg/L)	0.0486	0.0627	0.0436	0.0512	0.0809
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Total (mg/L)	0.0025	<0.0020	<0.0020	0.0147	0.0197
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Vanadium (V)-Total (mg/L)	0.00075	<0.00050	0.00091	0.00362	0.00264
	Zinc (Zn)-Total (mg/L)	0.0034	<0.0030	<0.0030	0.0045	0.0056
	Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)	0.022	<0.010	0.015	0.176	0.047
	Antimony (Sb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	<0.0010
	Barium (Ba)-Dissolved (mg/L)	0.0097	0.0355	0.0116	0.0200	0.0122
	Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	<0.000090
	Calcium (Ca)-Dissolved (mg/L)	24.6	40.7	26.2	19.5	33.7
	Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	0.00593	<0.00050
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	0.0010
	Iron (Fe)-Dissolved (mg/L)	0.459	0.156	0.502	6.67	3.18
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Lithium (Li)-Dissolved (mg/L)	<0.10	<0.10	<0.10	<0.10	<0.10
	Magnesium (Mg)-Dissolved (mg/L)	4.52	3.69	3.77	4.60	8.67
	Manganese (Mn)-Dissolved (mg/L)	0.0317	0.675	0.144	1.76	0.197
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Nickel (Ni)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0012	<0.0010
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)	<1.0	<1.0	<1.0	<1.0	1.6
	Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1263671-11	L1263671-12	L1263671-13	L1263671-14	
	Description	WATER	WATER	WATER	WATER	
	Sampled Date	28-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	
	Sampled Time	13:00	13:00	13:00	13:00	
	Client ID	JCTA	TRAVEL	FIELD	DUPLICATE	
Grouping	**Analyte**					
WATER						
Total Metals	Selenium (Se)-Total (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	
	Silicon (Si)-Total (mg/L)	8.2	<1.0	<1.0	8.3	
	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Total (mg/L)	3.52	<0.50	<0.50	2.49	
	Strontium (Sr)-Total (mg/L)	0.0678	<0.0010	<0.0010	0.0484	
	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Total (mg/L)	0.0217	<0.0020	<0.0020	0.0164	
	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Vanadium (V)-Total (mg/L)	0.00320	<0.00050	<0.00050	0.00340	
	Zinc (Zn)-Total (mg/L)	0.0040	<0.0030	<0.0030	0.0051	
	Zirconium (Zr)-Total (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	
Dissolved Metals	Dissolved Metals Filtration Location	FIELD	FIELD	FIELD	FIELD	
	Aluminum (Al)-Dissolved (mg/L)	0.077	<0.010	<0.010	0.183	
	Antimony (Sb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	
	Barium (Ba)-Dissolved (mg/L)	0.0180	<0.0020	<0.0020	0.0199	
	Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Cadmium (Cd)-Dissolved (mg/L)	<0.000090	<0.000090	<0.000090	<0.000090	
	Calcium (Ca)-Dissolved (mg/L)	27.4	<0.50	<0.50	19.2	
	Chromium (Cr)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Cobalt (Co)-Dissolved (mg/L)	0.00225	<0.00050	<0.00050	0.00601	
	Copper (Cu)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	
	Iron (Fe)-Dissolved (mg/L)	4.48	<0.050	<0.050	6.64	
	Lead (Pb)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Lithium (Li)-Dissolved (mg/L)	<0.10	<0.10	<0.10	<0.10	
	Magnesium (Mg)-Dissolved (mg/L)	6.94	<0.50	<0.50	4.65	
	Manganese (Mn)-Dissolved (mg/L)	1.69	<0.0010	<0.0010	1.76	
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	
	Molybdenum (Mo)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	
	Nickel (Ni)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0012	
	Phosphorus (P)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	
	Potassium (K)-Dissolved (mg/L)	1.3	<1.0	<1.0	<1.0	
	Selenium (Se)-Dissolved (mg/L)	<0.00040	<0.00040	<0.00040	<0.00040	

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1263671-1 WATER 29-JAN-13 13:00 SW1	L1263671-2 WATER 29-JAN-13 13:00 SW2	L1263671-3 WATER 29-JAN-13 13:00 SW4	L1263671-4 WATER 29-JAN-13 13:00 SW5	L1263671-5 WATER 29-JAN-13 13:00 SW6
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Silicon (Si)-Dissolved (mg/L)	6.8	4.5	1.2	1.2	<1.0
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	2.34	1.71	3.66	3.83	3.29
	Strontium (Sr)-Dissolved (mg/L)	0.0461	0.0430	0.0276	0.0309	0.0271
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	0.0036	<0.0020	<0.0020	<0.0020
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	0.00060	<0.00050	<0.00050	0.00062
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	0.0076	<0.0030	0.0033	<0.0030
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	14.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1263671-6 WATER 28-JAN-13 13:00 SW7	L1263671-7 WATER 28-JAN-13 13:00 SW8	L1263671-8 WATER 28-JAN-13 13:00 SW10	L1263671-9 WATER 29-JAN-13 13:00 TL1A	L1263671-10 WATER 29-JAN-13 13:00 TL3
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
WATER						
Dissolved Metals	Silicon (Si)-Dissolved (mg/L)	6.5	5.2	7.2	7.4	6.9
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Sodium (Na)-Dissolved (mg/L)	1.95	1.89	2.01	2.34	3.97
	Strontium (Sr)-Dissolved (mg/L)	0.0400	0.0524	0.0375	0.0407	0.0632
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	0.0059	0.0023
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Uranium (U)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	0.00064	0.00197	0.00116
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	0.0047	<0.0030	0.0084	0.0058
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	<0.0040
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0		<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1263671-11	L1263671-12	L1263671-13	L1263671-14	
	Description	WATER	WATER	WATER	WATER	
	Sampled Date	28-JAN-13	29-JAN-13	29-JAN-13	29-JAN-13	
	Sampled Time	13:00	13:00	13:00	13:00	
	Client ID	JCTA	TRAVEL	FIELD	DUPLICATE	
Grouping	**Analyte**					
WATER						
Dissolved Metals	Silicon (Si)-Dissolved (mg/L)	6.5	<1.0	<1.0	7.5	
	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	
	Sodium (Na)-Dissolved (mg/L)	3.02	<0.50	<0.50	2.35	
	Strontium (Sr)-Dissolved (mg/L)	0.0534	<0.0010	<0.0010	0.0410	
	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	
	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Titanium (Ti)-Dissolved (mg/L)	0.0032	<0.0020	<0.0020	0.0059	
	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	
	Uranium (U)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	
	Vanadium (V)-Dissolved (mg/L)	0.00141	<0.00050	<0.00050	0.00199	
	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0070	
	Zirconium (Zr)-Dissolved (mg/L)	<0.0040	<0.0040	<0.0040	<0.0040	
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Number	Client Sample ID	Qualifier	Description
L1263671-3	SW4	SFPL	Sample was Filtered and Preserved at the laboratory - Dissolved Metals, Dissolved Mercury
L1263671-4	SW5	SFPL	Sample was Filtered and Preserved at the laboratory - Dissolved Metals, Dissolved Mercury
L1263671-5	SW6	SFPL	Sample was Filtered and Preserved at the laboratory - Dissolved Metals, Dissolved Mercury

QC Samples with Qualifiers & Comments:

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Duplicate	Sodium (Na)-Total	DLM	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Sodium (Na)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Aluminum (Al)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Silicon (Si)-Total	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1263671-3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1263671-3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1263671-3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1263671-3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -6, -7, -8, -9
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1263671-1, -10, -11, -12, -13, -14, -2, -6, -7, -8, -9
Matrix Spike	Nitrate (as N)	MS-B	L1263671-1, -10, -12, -13, -14, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted For Sample Matrix Effects
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-CFA-VA	Water	Free Cyanide in water by CFA	ASTM 7237

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

CN-WAD-WT	Water	Cyanide, Weak Acid Diss	APHA 4500CN I-Weak acid Dist Colorimet

Reference Information

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

ETL-HARDNESS-CALC-WT	Water	Hardness (as CaCO3)	APHA 2340 B
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	Modified from EPA1631 E
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	Modified from EPA1631 E
MET-D-MS-WT	Water	Dissolved Metals in Water by ICPMS	EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-T-MS-WT	Water	Total Metals in Water by ICPMS	EPA 200.8

The concentration of metals is determined on an unfiltered aqueous sample. The sample is digested with nitric acid and then analyzed directly by ICP-MS.

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
VA	ALS ENVIRONMENTAL - VANCOUVER, BRITISH COLUMBIA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2518618								
WG1621691-2 LCS								
Acidity (as CaCO3)			105.2		%		85-115	01-FEB-13
WG1621691-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	01-FEB-13
ALK-TOT-CAP-TB	**Water**							
Batch R2520149								
WG1622299-2 LCS								
Alkalinity, Total (as CaCO3)			88.7		%		85-115	01-FEB-13
WG1622299-5 LCS								
Alkalinity, Total (as CaCO3)			88.2		%		85-115	01-FEB-13
WG1622299-8 LCS								
Alkalinity, Total (as CaCO3)			88.8		%		85-115	01-FEB-13
WG1622299-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	01-FEB-13
WG1622299-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	01-FEB-13
WG1622299-7 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	01-FEB-13
CL-IC-TB	**Water**							
Batch R2521730								
WG1623351-10 LCS								
Chloride (Cl)			100.8		%		90-110	05-FEB-13
WG1623351-2 LCS								
Chloride (Cl)			98.5		%		90-110	05-FEB-13
WG1623351-6 LCS								
Chloride (Cl)			98.6		%		90-110	05-FEB-13
WG1623351-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	05-FEB-13
WG1623351-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	05-FEB-13
WG1623351-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	05-FEB-13
WG1623351-4 MS		**L1262741-1**						
Chloride (Cl)			103.4		%		75-125	05-FEB-13
WG1623351-8 MS		**L1263367-16**						
Chloride (Cl)			91.8		%		75-125	05-FEB-13
CN-FREE-CFA-VA	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-VA	**Water**							
Batch R2525657								
WG1624290-13 DUP		**L1263671-5**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	07-FEB-13
WG1624290-12 LCS								
Cyanide, Free			102.3		%		80-120	07-FEB-13
WG1624290-15 LCS								
Cyanide, Free			103.3		%		80-120	07-FEB-13
WG1624290-2 LCS								
Cyanide, Free			102.2		%		80-120	07-FEB-13
WG1624290-4 LCS								
Cyanide, Free			102.4		%		80-120	07-FEB-13
WG1624290-8 LCS								
Cyanide, Free			102.0		%		80-120	07-FEB-13
WG1624290-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-13
WG1624290-11 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-13
WG1624290-14 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-13
WG1624290-3 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-13
WG1624290-7 MB								
Cyanide, Free			<0.0050		mg/L		0.005	07-FEB-13
WG1624290-10 MS		**L1263843-1**						
Cyanide, Free			98.5		%		70-130	07-FEB-13
CN-TOT-WT	**Water**							
Batch R2529186								
WG1626449-4 CVS								
Cyanide, Total			101.0		%		85-115	13-FEB-13
WG1626449-2 DUP		**L1263671-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	13-FEB-13
WG1626449-3 LCS								
Cyanide, Total			89.3		%		80-120	13-FEB-13
WG1626449-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	13-FEB-13
WG1626449-5 MS		**L1263671-1**						
Cyanide, Total			94.0		%		70-130	13-FEB-13
CN-WAD-WT	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-WT	**Water**							
Batch R2529086								
WG1626198-4 CVS								
Cyanide, Weak Acid Diss			95.5		%		85-115	12-FEB-13
WG1626198-2 DUP		**L1263671-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	12-FEB-13
WG1626198-3 LCS								
Cyanide, Weak Acid Diss			100.8		%		80-120	12-FEB-13
WG1626198-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	12-FEB-13
EC-CAP-TB	**Water**							
Batch R2520149								
WG1622299-2 LCS								
Conductivity (EC)			99.6		%		90-110	01-FEB-13
WG1622299-5 LCS								
Conductivity (EC)			102.2		%		90-110	01-FEB-13
WG1622299-8 LCS								
Conductivity (EC)			102.0		%		90-110	01-FEB-13
WG1622299-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	01-FEB-13
WG1622299-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	01-FEB-13
WG1622299-7 MB								
Conductivity (EC)			<3.0		uS/cm		3	01-FEB-13
HG-D-CVAF-TB	**Water**							
Batch R2518450								
WG1621576-3 DUP		**L1263671-4**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	01-FEB-13
WG1621576-7 DUP		**L1263671-7**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	01-FEB-13
WG1621576-2 LCS								
Mercury (Hg)-Dissolved			98.5		%		80-120	01-FEB-13
WG1621576-6 LCS								
Mercury (Hg)-Dissolved			96.4		%		80-120	01-FEB-13
WG1621576-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	01-FEB-13
WG1621576-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	01-FEB-13
WG1621576-4 MS		**L1263671-4**						
Mercury (Hg)-Dissolved			87.9		%		70-130	01-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-TB	**Water**							
Batch R2518450								
WG1621576-8 MS		**L1263671-7**						
Mercury (Hg)-Dissolved			89.6		%		70-130	01-FEB-13
HG-T-CVAF-TB	**Water**							
Batch R2518444								
WG1621564-3 DUP		**L1263671-8**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	01-FEB-13
WG1621564-5 DUP		**L1263671-10**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	01-FEB-13
WG1621564-2 LCS								
Mercury (Hg)-Total			98.5		%		80-120	01-FEB-13
WG1621564-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	01-FEB-13
WG1621564-4 MS		**L1263671-8**						
Mercury (Hg)-Total			98.6		%		70-130	01-FEB-13
WG1621564-6 MS		**L1263671-10**						
Mercury (Hg)-Total			101.8		%		70-130	01-FEB-13
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1622370-10 CVS								
Aluminum (Al)-Dissolved			97.0		%		80-120	06-FEB-13
Antimony (Sb)-Dissolved			102.7		%		80-120	06-FEB-13
Arsenic (As)-Dissolved			104.9		%		80-120	06-FEB-13
Barium (Ba)-Dissolved			103.8		%		80-120	06-FEB-13
Beryllium (Be)-Dissolved			100.7		%		80-120	06-FEB-13
Bismuth (Bi)-Dissolved			101.1		%		80-120	06-FEB-13
Boron (B)-Dissolved			94.2		%		80-120	06-FEB-13
Cadmium (Cd)-Dissolved			103.2		%		80-120	06-FEB-13
Calcium (Ca)-Dissolved			103.7		%		80-120	06-FEB-13
Chromium (Cr)-Dissolved			97.5		%		80-120	06-FEB-13
Cobalt (Co)-Dissolved			102.1		%		80-120	06-FEB-13
Copper (Cu)-Dissolved			101.4		%		80-120	06-FEB-13
Iron (Fe)-Dissolved			101.5		%		80-120	06-FEB-13
Lead (Pb)-Dissolved			102.2		%		80-120	06-FEB-13
Lithium (Li)-Dissolved			99.5		%		80-120	06-FEB-13
Magnesium (Mg)-Dissolved			102.2		%		80-120	06-FEB-13
Manganese (Mn)-Dissolved			96.9		%		80-120	06-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1622370-10 CVS								
Molybdenum (Mo)-Dissolved			101.0		%		80-120	06-FEB-13
Nickel (Ni)-Dissolved			99.3		%		80-120	06-FEB-13
Phosphorus (P)-Dissolved			95.0		%		80-120	06-FEB-13
Potassium (K)-Dissolved			101.1		%		80-120	06-FEB-13
Selenium (Se)-Dissolved			98.0		%		80-120	06-FEB-13
Silicon (Si)-Dissolved			95.6		%		80-120	06-FEB-13
Silver (Ag)-Dissolved			107.1		%		80-120	06-FEB-13
Sodium (Na)-Dissolved			100.6		%		80-120	06-FEB-13
Strontium (Sr)-Dissolved			101.6		%		80-120	06-FEB-13
Thallium (Tl)-Dissolved			102.7		%		80-120	06-FEB-13
Tin (Sn)-Dissolved			101.6		%		80-120	06-FEB-13
Titanium (Ti)-Dissolved			100.1		%		80-120	06-FEB-13
Tungsten (W)-Dissolved			98.5		%		80-120	06-FEB-13
Uranium (U)-Dissolved			103.3		%		80-120	06-FEB-13
Vanadium (V)-Dissolved			98.1		%		80-120	06-FEB-13
Zinc (Zn)-Dissolved			103.2		%		80-120	06-FEB-13
Zirconium (Zr)-Dissolved			99.0		%		80-120	06-FEB-13
WG1622370-8 CVS								
Aluminum (Al)-Dissolved			102.0		%		80-120	05-FEB-13
Antimony (Sb)-Dissolved			102.6		%		80-120	05-FEB-13
Arsenic (As)-Dissolved			107.1		%		80-120	05-FEB-13
Barium (Ba)-Dissolved			104.8		%		80-120	05-FEB-13
Beryllium (Be)-Dissolved			106.5		%		80-120	05-FEB-13
Bismuth (Bi)-Dissolved			103.9		%		80-120	05-FEB-13
Boron (B)-Dissolved			99.95		%		80-120	05-FEB-13
Cadmium (Cd)-Dissolved			105.3		%		80-120	05-FEB-13
Calcium (Ca)-Dissolved			100.8		%		80-120	05-FEB-13
Chromium (Cr)-Dissolved			100.1		%		80-120	05-FEB-13
Cobalt (Co)-Dissolved			102.6		%		80-120	05-FEB-13
Copper (Cu)-Dissolved			102.5		%		80-120	05-FEB-13
Iron (Fe)-Dissolved			100.4		%		80-120	05-FEB-13
Lead (Pb)-Dissolved			104.3		%		80-120	05-FEB-13
Lithium (Li)-Dissolved			104.8		%		80-120	05-FEB-13
Magnesium (Mg)-Dissolved			98.6		%		80-120	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch	**R2520152**							
WG1622370-8	**CVS**							
Manganese (Mn)-Dissolved			100.4		%		80-120	05-FEB-13
Molybdenum (Mo)-Dissolved			101.7		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			101.1		%		80-120	05-FEB-13
Phosphorus (P)-Dissolved			98.4		%		80-120	05-FEB-13
Potassium (K)-Dissolved			98.4		%		80-120	05-FEB-13
Selenium (Se)-Dissolved			100.1		%		80-120	05-FEB-13
Silicon (Si)-Dissolved			98.0		%		80-120	05-FEB-13
Silver (Ag)-Dissolved			108.3		%		80-120	05-FEB-13
Sodium (Na)-Dissolved			98.7		%		80-120	05-FEB-13
Strontium (Sr)-Dissolved			101.9		%		80-120	05-FEB-13
Thallium (Tl)-Dissolved			105.7		%		80-120	05-FEB-13
Tin (Sn)-Dissolved			102.1		%		80-120	05-FEB-13
Titanium (Ti)-Dissolved			103.7		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			101.0		%		80-120	05-FEB-13
Uranium (U)-Dissolved			104.3		%		80-120	05-FEB-13
Vanadium (V)-Dissolved			100.7		%		80-120	05-FEB-13
Zinc (Zn)-Dissolved			104.5		%		80-120	05-FEB-13
Zirconium (Zr)-Dissolved			100.9		%		80-120	05-FEB-13
WG1621725-2	**LCS**							
Aluminum (Al)-Dissolved			111.3		%		80-120	05-FEB-13
Antimony (Sb)-Dissolved			100.4		%		80-120	05-FEB-13
Arsenic (As)-Dissolved			106.4		%		80-120	05-FEB-13
Barium (Ba)-Dissolved			101.5		%		80-120	05-FEB-13
Beryllium (Be)-Dissolved			119.9		%		80-120	05-FEB-13
Bismuth (Bi)-Dissolved			92.0		%		80-120	06-FEB-13
Boron (B)-Dissolved			110.9		%		80-120	05-FEB-13
Cadmium (Cd)-Dissolved			109.5		%		80-120	05-FEB-13
Calcium (Ca)-Dissolved			108.2		%		80-120	05-FEB-13
Chromium (Cr)-Dissolved			96.6		%		80-120	05-FEB-13
Cobalt (Co)-Dissolved			105.5		%		80-120	05-FEB-13
Copper (Cu)-Dissolved			106.5		%		80-120	05-FEB-13
Iron (Fe)-Dissolved			93.6		%		80-120	05-FEB-13
Lead (Pb)-Dissolved			103.0		%		80-120	05-FEB-13
Lithium (Li)-Dissolved			108.6		%		80-120	06-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621725-2 LCS								
Magnesium (Mg)-Dissolved			101.3		%		80-120	05-FEB-13
Manganese (Mn)-Dissolved			99.0		%		80-120	05-FEB-13
Molybdenum (Mo)-Dissolved			92.2		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			104.7		%		80-120	05-FEB-13
Phosphorus (P)-Dissolved			116.6		%		80-120	05-FEB-13
Potassium (K)-Dissolved			104.7		%		80-120	05-FEB-13
Selenium (Se)-Dissolved			115.7		%		80-120	05-FEB-13
Silicon (Si)-Dissolved			105.1		%		80-120	05-FEB-13
Silver (Ag)-Dissolved			104.5		%		80-120	05-FEB-13
Sodium (Na)-Dissolved			101.5		%		80-120	05-FEB-13
Strontium (Sr)-Dissolved			95.4		%		80-120	05-FEB-13
Thallium (Tl)-Dissolved			102.0		%		80-120	05-FEB-13
Tin (Sn)-Dissolved			104.2		%		80-120	05-FEB-13
Titanium (Ti)-Dissolved			104.9		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			104.2		%		80-120	05-FEB-13
Uranium (U)-Dissolved			96.4		%		80-120	05-FEB-13
Vanadium (V)-Dissolved			98.3		%		80-120	05-FEB-13
Zinc (Zn)-Dissolved			108.4		%		80-120	06-FEB-13
Zirconium (Zr)-Dissolved			94.0		%		80-120	05-FEB-13
WG1621729-2 LCS								
Aluminum (Al)-Dissolved			114.0		%		80-120	05-FEB-13
Antimony (Sb)-Dissolved			101.4		%		80-120	05-FEB-13
Arsenic (As)-Dissolved			107.3		%		80-120	05-FEB-13
Barium (Ba)-Dissolved			102.7		%		80-120	05-FEB-13
Beryllium (Be)-Dissolved			110.6		%		80-120	06-FEB-13
Bismuth (Bi)-Dissolved			100.0		%		80-120	06-FEB-13
Boron (B)-Dissolved			112.5		%		80-120	05-FEB-13
Cadmium (Cd)-Dissolved			108.9		%		80-120	05-FEB-13
Calcium (Ca)-Dissolved			105.9		%		80-120	05-FEB-13
Chromium (Cr)-Dissolved			98.1		%		80-120	05-FEB-13
Cobalt (Co)-Dissolved			108.3		%		80-120	05-FEB-13
Copper (Cu)-Dissolved			105.6		%		80-120	05-FEB-13
Iron (Fe)-Dissolved			96.1		%		80-120	05-FEB-13
Lead (Pb)-Dissolved			98.1		%		80-120	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621729-2 LCS								
Lithium (Li)-Dissolved			116.8		%		80-120	06-FEB-13
Magnesium (Mg)-Dissolved			105.8		%		80-120	05-FEB-13
Manganese (Mn)-Dissolved			102.8		%		80-120	05-FEB-13
Molybdenum (Mo)-Dissolved			93.8		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			106.0		%		80-120	05-FEB-13
Phosphorus (P)-Dissolved			113.1		%		80-120	05-FEB-13
Potassium (K)-Dissolved			106.5		%		80-120	05-FEB-13
Selenium (Se)-Dissolved			116.2		%		80-120	05-FEB-13
Silicon (Si)-Dissolved			104.0		%		80-120	05-FEB-13
Silver (Ag)-Dissolved			104.4		%		80-120	05-FEB-13
Sodium (Na)-Dissolved			106.2		%		80-120	05-FEB-13
Strontium (Sr)-Dissolved			96.5		%		80-120	05-FEB-13
Thallium (Tl)-Dissolved			97.7		%		80-120	05-FEB-13
Tin (Sn)-Dissolved			104.1		%		80-120	05-FEB-13
Titanium (Ti)-Dissolved			106.1		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			102.7		%		80-120	05-FEB-13
Uranium (U)-Dissolved			91.3		%		80-120	05-FEB-13
Vanadium (V)-Dissolved			99.2		%		80-120	05-FEB-13
Zinc (Zn)-Dissolved			106.8		%		80-120	06-FEB-13
Zirconium (Zr)-Dissolved			95.2		%		80-120	05-FEB-13
WG1621725-1 MB								
Aluminum (Al)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Antimony (Sb)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Barium (Ba)-Dissolved			<0.0020		mg/L		0.002	05-FEB-13
Beryllium (Be)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Boron (B)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Cadmium (Cd)-Dissolved			<0.000090		mg/L		0.00009	05-FEB-13
Calcium (Ca)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Iron (Fe)-Dissolved			<0.050		mg/L		0.05	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621725-1 MB								
Lead (Pb)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Lithium (Li)-Dissolved			<0.10		mg/L		0.1	06-FEB-13
Magnesium (Mg)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Molybdenum (Mo)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	05-FEB-13
Potassium (K)-Dissolved			<1.0		mg/L		1	05-FEB-13
Selenium (Se)-Dissolved			<0.00040		mg/L		0.0004	05-FEB-13
Silicon (Si)-Dissolved			<1.0		mg/L		1	05-FEB-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	05-FEB-13
Sodium (Na)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	05-FEB-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	05-FEB-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Uranium (U)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	05-FEB-13
Zirconium (Zr)-Dissolved			<0.0040		mg/L		0.004	05-FEB-13
WG1621729-1 MB								
Aluminum (Al)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Antimony (Sb)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Barium (Ba)-Dissolved			<0.0020		mg/L		0.002	05-FEB-13
Beryllium (Be)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Boron (B)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Cadmium (Cd)-Dissolved			<0.000090		mg/L		0.00009	05-FEB-13
Calcium (Ca)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Chromium (Cr)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621729-1 MB								
Iron (Fe)-Dissolved			<0.050		mg/L		0.05	05-FEB-13
Lead (Pb)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Lithium (Li)-Dissolved			<0.10		mg/L		0.1	06-FEB-13
Magnesium (Mg)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Molybdenum (Mo)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Phosphorus (P)-Dissolved			<0.050		mg/L		0.05	05-FEB-13
Potassium (K)-Dissolved			<1.0		mg/L		1	05-FEB-13
Selenium (Se)-Dissolved			<0.00040		mg/L		0.0004	05-FEB-13
Silicon (Si)-Dissolved			<1.0		mg/L		1	05-FEB-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	05-FEB-13
Sodium (Na)-Dissolved			<0.50		mg/L		0.5	05-FEB-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	05-FEB-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	05-FEB-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	05-FEB-13
Uranium (U)-Dissolved			<0.0010		mg/L		0.001	05-FEB-13
Vanadium (V)-Dissolved			<0.00050		mg/L		0.0005	05-FEB-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	05-FEB-13
Zirconium (Zr)-Dissolved			<0.0040		mg/L		0.004	05-FEB-13
WG1621725-5 MS		**WG1621725-3**						
Aluminum (Al)-Dissolved			103.9		%		70-130	05-FEB-13
Antimony (Sb)-Dissolved			93.4		%		70-130	05-FEB-13
Arsenic (As)-Dissolved			100.9		%		70-130	05-FEB-13
Barium (Ba)-Dissolved			96.0		%		70-130	05-FEB-13
Beryllium (Be)-Dissolved			115.5		%		70-130	05-FEB-13
Bismuth (Bi)-Dissolved			83.5		%		70-130	05-FEB-13
Boron (B)-Dissolved			103.7		%		70-130	05-FEB-13
Cadmium (Cd)-Dissolved			101.2		%		70-130	05-FEB-13
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Chromium (Cr)-Dissolved			90.2		%		70-130	05-FEB-13
Cobalt (Co)-Dissolved			99.1		%		70-130	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621725-5 MS		**WG1621725-3**						
Copper (Cu)-Dissolved			99.6		%		70-130	05-FEB-13
Iron (Fe)-Dissolved			89.4		%		70-130	05-FEB-13
Lead (Pb)-Dissolved			92.4		%		70-130	05-FEB-13
Lithium (Li)-Dissolved			108.1		%		70-130	06-FEB-13
Magnesium (Mg)-Dissolved			92.5		%		70-130	05-FEB-13
Manganese (Mn)-Dissolved			91.7		%		70-130	05-FEB-13
Molybdenum (Mo)-Dissolved			87.7		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			97.7		%		70-130	05-FEB-13
Phosphorus (P)-Dissolved			107.1		%		70-130	05-FEB-13
Selenium (Se)-Dissolved			104.3		%		70-130	05-FEB-13
Silicon (Si)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Silver (Ag)-Dissolved			95.6		%		70-130	05-FEB-13
Sodium (Na)-Dissolved			93.1		%		70-130	05-FEB-13
Strontium (Sr)-Dissolved			87.1		%		70-130	05-FEB-13
Thallium (Tl)-Dissolved			92.7		%		70-130	05-FEB-13
Tin (Sn)-Dissolved			95.2		%		70-130	05-FEB-13
Titanium (Ti)-Dissolved			95.4		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			96.1		%		70-130	05-FEB-13
Uranium (U)-Dissolved			87.7		%		70-130	05-FEB-13
Vanadium (V)-Dissolved			92.0		%		70-130	05-FEB-13
Zinc (Zn)-Dissolved			110.6		%		70-130	05-FEB-13
Zirconium (Zr)-Dissolved			86.9		%		70-130	05-FEB-13
WG1621725-8 MS		**WG1621725-6**						
Aluminum (Al)-Dissolved			108.1		%		70-130	05-FEB-13
Antimony (Sb)-Dissolved			93.7		%		70-130	05-FEB-13
Arsenic (As)-Dissolved			100.3		%		70-130	05-FEB-13
Barium (Ba)-Dissolved			97.6		%		70-130	05-FEB-13
Beryllium (Be)-Dissolved			117.8		%		70-130	05-FEB-13
Bismuth (Bi)-Dissolved			82.2		%		70-130	05-FEB-13
Boron (B)-Dissolved			104.2		%		70-130	05-FEB-13
Cadmium (Cd)-Dissolved			100.6		%		70-130	05-FEB-13
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Chromium (Cr)-Dissolved			90.9		%		70-130	05-FEB-13
Cobalt (Co)-Dissolved			99.7		%		70-130	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621725-8 MS		**WG1621725-6**						
Copper (Cu)-Dissolved			98.3		%		70-130	05-FEB-13
Iron (Fe)-Dissolved			91.1		%		70-130	05-FEB-13
Lead (Pb)-Dissolved			91.7		%		70-130	05-FEB-13
Magnesium (Mg)-Dissolved			96.9		%		70-130	05-FEB-13
Manganese (Mn)-Dissolved			94.2		%		70-130	05-FEB-13
Molybdenum (Mo)-Dissolved			86.7		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			98.6		%		70-130	05-FEB-13
Phosphorus (P)-Dissolved			105.3		%		70-130	05-FEB-13
Selenium (Se)-Dissolved			105.1		%		70-130	05-FEB-13
Silicon (Si)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Silver (Ag)-Dissolved			89.2		%		70-130	05-FEB-13
Sodium (Na)-Dissolved			98.3		%		70-130	05-FEB-13
Strontium (Sr)-Dissolved			88.6		%		70-130	05-FEB-13
Thallium (Tl)-Dissolved			93.3		%		70-130	05-FEB-13
Tin (Sn)-Dissolved			94.8		%		70-130	05-FEB-13
Titanium (Ti)-Dissolved			93.6		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			96.0		%		70-130	05-FEB-13
Uranium (U)-Dissolved			84.7		%		70-130	05-FEB-13
Vanadium (V)-Dissolved			93.2		%		70-130	05-FEB-13
Zinc (Zn)-Dissolved			111.8		%		70-130	05-FEB-13
Zirconium (Zr)-Dissolved			85.5		%		70-130	05-FEB-13
WG1621729-5 MS		**WG1621729-3**						
Aluminum (Al)-Dissolved			111.2		%		70-130	05-FEB-13
Antimony (Sb)-Dissolved			97.1		%		70-130	05-FEB-13
Arsenic (As)-Dissolved			104.8		%		70-130	05-FEB-13
Barium (Ba)-Dissolved			94.2		%		70-130	05-FEB-13
Beryllium (Be)-Dissolved			114.6		%		70-130	05-FEB-13
Bismuth (Bi)-Dissolved			80.3		%		70-130	05-FEB-13
Boron (B)-Dissolved			103.8		%		70-130	05-FEB-13
Cadmium (Cd)-Dissolved			104.0		%		70-130	05-FEB-13
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Chromium (Cr)-Dissolved			91.0		%		70-130	05-FEB-13
Cobalt (Co)-Dissolved			101.6		%		70-130	05-FEB-13
Copper (Cu)-Dissolved			99.5		%		70-130	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-WT	**Water**							
Batch R2520152								
WG1621729-5 MS		**WG1621729-3**						
Iron (Fe)-Dissolved			89.2		%		70-130	05-FEB-13
Lead (Pb)-Dissolved			93.8		%		70-130	05-FEB-13
Lithium (Li)-Dissolved			99		%		70-130	06-FEB-13
Magnesium (Mg)-Dissolved			92.3		%		70-130	05-FEB-13
Manganese (Mn)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Molybdenum (Mo)-Dissolved			91.8		%		80-120	05-FEB-13
Nickel (Ni)-Dissolved			100.0		%		70-130	05-FEB-13
Phosphorus (P)-Dissolved			107.3		%		70-130	05-FEB-13
Potassium (K)-Dissolved			88.6		%		70-130	06-FEB-13
Selenium (Se)-Dissolved			112.0		%		70-130	05-FEB-13
Silicon (Si)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Silver (Ag)-Dissolved			96.6		%		70-130	05-FEB-13
Sodium (Na)-Dissolved			92.3		%		70-130	05-FEB-13
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	05-FEB-13
Thallium (Tl)-Dissolved			95.5		%		70-130	05-FEB-13
Tin (Sn)-Dissolved			97.8		%		70-130	05-FEB-13
Titanium (Ti)-Dissolved			96.6		%		80-120	05-FEB-13
Tungsten (W)-Dissolved			98.8		%		70-130	05-FEB-13
Uranium (U)-Dissolved			90.3		%		70-130	05-FEB-13
Vanadium (V)-Dissolved			92.2		%		70-130	05-FEB-13
Zinc (Zn)-Dissolved			112.8		%		70-130	05-FEB-13
Zirconium (Zr)-Dissolved			91.6		%		70-130	05-FEB-13
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1622257-1 CVS								
Aluminum (Al)-Total			105.3		%		80-120	04-FEB-13
Antimony (Sb)-Total			104.1		%		80-120	04-FEB-13
Arsenic (As)-Total			108.0		%		80-120	04-FEB-13
Barium (Ba)-Total			106.2		%		80-120	04-FEB-13
Beryllium (Be)-Total			109.5		%		80-120	04-FEB-13
Bismuth (Bi)-Total			102.2		%		80-120	04-FEB-13
Boron (B)-Total			106.0		%		80-120	04-FEB-13
Cadmium (Cd)-Total			107.1		%		80-120	04-FEB-13
Calcium (Ca)-Total			101.5		%		80-120	04-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1622257-1 CVS								
Chromium (Cr)-Total			101.7		%		80-120	04-FEB-13
Cobalt (Co)-Total			104.6		%		80-120	04-FEB-13
Copper (Cu)-Total			104.6		%		80-120	04-FEB-13
Iron (Fe)-Total			103.9		%		80-120	04-FEB-13
Lead (Pb)-Total			103.9		%		80-120	04-FEB-13
Lithium (Li)-Total			110.4		%		80-120	04-FEB-13
Magnesium (Mg)-Total			105.7		%		80-120	04-FEB-13
Manganese (Mn)-Total			102.5		%		80-120	04-FEB-13
Molybdenum (Mo)-Total			103.7		%		80-120	04-FEB-13
Nickel (Ni)-Total			100.7		%		80-120	04-FEB-13
Phosphorus (P)-Total			101.6		%		80-120	04-FEB-13
Potassium (K)-Total			99.4		%		80-120	04-FEB-13
Selenium (Se)-Total			99.8		%		80-120	04-FEB-13
Silicon (Si)-Total			103.3		%		80-120	04-FEB-13
Silver (Ag)-Total			110.7		%		80-120	04-FEB-13
Sodium (Na)-Total			105.6		%		80-120	04-FEB-13
Strontium (Sr)-Total			101.2		%		80-120	04-FEB-13
Thallium (Tl)-Total			102.9		%		80-120	04-FEB-13
Tin (Sn)-Total			102.7		%		80-120	04-FEB-13
Titanium (Ti)-Total			102.9		%		80-120	04-FEB-13
Tungsten (W)-Total			101.4		%		80-120	04-FEB-13
Uranium (U)-Total			102.8		%		80-120	04-FEB-13
Vanadium (V)-Total			103.9		%		80-120	04-FEB-13
Zinc (Zn)-Total			106.5		%		80-120	04-FEB-13
Zirconium (Zr)-Total			99.8		%		80-120	04-FEB-13
WG1622257-3 CVS								
Aluminum (Al)-Total			102.0		%		80-120	05-FEB-13
Antimony (Sb)-Total			102.6		%		80-120	05-FEB-13
Arsenic (As)-Total			107.1		%		80-120	05-FEB-13
Barium (Ba)-Total			104.8		%		80-120	05-FEB-13
Beryllium (Be)-Total			106.5		%		80-120	05-FEB-13
Bismuth (Bi)-Total			103.9		%		80-120	05-FEB-13
Boron (B)-Total			99.95		%		80-120	05-FEB-13
Cadmium (Cd)-Total			105.3		%		80-120	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1622257-3 CVS								
Calcium (Ca)-Total			100.8		%		80-120	05-FEB-13
Chromium (Cr)-Total			100.1		%		80-120	05-FEB-13
Cobalt (Co)-Total			102.6		%		80-120	05-FEB-13
Copper (Cu)-Total			102.5		%		80-120	05-FEB-13
Iron (Fe)-Total			100.4		%		80-120	05-FEB-13
Lead (Pb)-Total			104.3		%		80-120	05-FEB-13
Lithium (Li)-Total			104.8		%		80-120	05-FEB-13
Magnesium (Mg)-Total			98.6		%		80-120	05-FEB-13
Manganese (Mn)-Total			100.4		%		80-120	05-FEB-13
Molybdenum (Mo)-Total			101.7		%		80-120	05-FEB-13
Nickel (Ni)-Total			101.1		%		80-120	05-FEB-13
Phosphorus (P)-Total			98.4		%		80-120	05-FEB-13
Potassium (K)-Total			98.4		%		80-120	05-FEB-13
Selenium (Se)-Total			100.1		%		80-120	05-FEB-13
Silicon (Si)-Total			98.0		%		80-120	05-FEB-13
Silver (Ag)-Total			108.3		%		80-120	05-FEB-13
Sodium (Na)-Total			98.7		%		80-120	05-FEB-13
Strontium (Sr)-Total			101.9		%		80-120	05-FEB-13
Thallium (Tl)-Total			105.7		%		80-120	05-FEB-13
Tin (Sn)-Total			102.1		%		80-120	05-FEB-13
Titanium (Ti)-Total			102.8		%		80-120	05-FEB-13
Tungsten (W)-Total			101.0		%		80-120	05-FEB-13
Uranium (U)-Total			104.3		%		80-120	05-FEB-13
Vanadium (V)-Total			100.7		%		80-120	05-FEB-13
Zinc (Zn)-Total			104.5		%		80-120	05-FEB-13
Zirconium (Zr)-Total			100.9		%		80-120	05-FEB-13
WG1621582-2 LCS								
Aluminum (Al)-Total			105.4		%		80-120	04-FEB-13
Antimony (Sb)-Total			101.1		%		80-120	04-FEB-13
Arsenic (As)-Total			103.0		%		80-120	04-FEB-13
Barium (Ba)-Total			102.6		%		80-120	04-FEB-13
Beryllium (Be)-Total			107.8		%		80-120	04-FEB-13
Bismuth (Bi)-Total			101.9		%		80-120	04-FEB-13
Boron (B)-Total			99.5		%		80-120	04-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1621582-2 LCS								
Cadmium (Cd)-Total			104.5		%		80-120	04-FEB-13
Calcium (Ca)-Total			103.6		%		80-120	04-FEB-13
Chromium (Cr)-Total			103.5		%		80-120	04-FEB-13
Cobalt (Co)-Total			102.7		%		80-120	04-FEB-13
Copper (Cu)-Total			101.4		%		80-120	04-FEB-13
Iron (Fe)-Total			105.1		%		80-120	04-FEB-13
Lead (Pb)-Total			101.4		%		80-120	04-FEB-13
Lithium (Li)-Total			108.5		%		80-120	04-FEB-13
Magnesium (Mg)-Total			103.6		%		80-120	04-FEB-13
Manganese (Mn)-Total			105.0		%		80-120	04-FEB-13
Molybdenum (Mo)-Total			101.7		%		80-120	04-FEB-13
Nickel (Ni)-Total			99.1		%		80-120	04-FEB-13
Phosphorus (P)-Total			109.9		%		80-120	04-FEB-13
Potassium (K)-Total			101.4		%		80-120	04-FEB-13
Selenium (Se)-Total			101.3		%		80-120	04-FEB-13
Silicon (Si)-Total			106.8		%		80-120	04-FEB-13
Silver (Ag)-Total			104.9		%		80-120	04-FEB-13
Sodium (Na)-Total			102.7		%		80-120	04-FEB-13
Strontium (Sr)-Total			101.9		%		80-120	04-FEB-13
Thallium (Tl)-Total			101.6		%		80-120	04-FEB-13
Tin (Sn)-Total			101.4		%		80-120	04-FEB-13
Titanium (Ti)-Total			102.4		%		80-120	04-FEB-13
Tungsten (W)-Total			106.8		%		80-120	04-FEB-13
Uranium (U)-Total			101.8		%		80-120	04-FEB-13
Vanadium (V)-Total			102.4		%		80-120	04-FEB-13
Zinc (Zn)-Total			103.9		%		80-120	04-FEB-13
Zirconium (Zr)-Total			100.0		%		80-120	04-FEB-13
WG1621582-1 MB								
Aluminum (Al)-Total			<0.010		mg/L		0.01	04-FEB-13
Antimony (Sb)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Arsenic (As)-Total			<0.0010		mg/L		0.001	04-FEB-13
Barium (Ba)-Total			<0.0020		mg/L		0.002	04-FEB-13
Beryllium (Be)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	04-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1621582-1 MB								
Boron (B)-Total			<0.010		mg/L		0.01	04-FEB-13
Cadmium (Cd)-Total			<0.000090		mg/L		0.00009	04-FEB-13
Calcium (Ca)-Total			<0.50		mg/L		0.5	04-FEB-13
Chromium (Cr)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Copper (Cu)-Total			<0.0010		mg/L		0.001	04-FEB-13
Iron (Fe)-Total			<0.050		mg/L		0.05	04-FEB-13
Lead (Pb)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Lithium (Li)-Total			<0.10		mg/L		0.1	04-FEB-13
Magnesium (Mg)-Total			<0.50		mg/L		0.5	04-FEB-13
Manganese (Mn)-Total			<0.0010		mg/L		0.001	04-FEB-13
Molybdenum (Mo)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Nickel (Ni)-Total			<0.0010		mg/L		0.001	04-FEB-13
Phosphorus (P)-Total			<0.050		mg/L		0.05	04-FEB-13
Potassium (K)-Total			<1.0		mg/L		1	04-FEB-13
Selenium (Se)-Total			<0.00040		mg/L		0.0004	04-FEB-13
Silicon (Si)-Total			<1.0		mg/L		1	04-FEB-13
Silver (Ag)-Total			<0.00010		mg/L		0.0001	04-FEB-13
Sodium (Na)-Total			<0.50		mg/L		0.5	04-FEB-13
Strontium (Sr)-Total			<0.0010		mg/L		0.001	04-FEB-13
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	04-FEB-13
Tin (Sn)-Total			<0.0010		mg/L		0.001	04-FEB-13
Titanium (Ti)-Total			<0.0020		mg/L		0.002	04-FEB-13
Tungsten (W)-Total			<0.010		mg/L		0.01	04-FEB-13
Uranium (U)-Total			<0.0010		mg/L		0.001	04-FEB-13
Vanadium (V)-Total			<0.00050		mg/L		0.0005	04-FEB-13
Zinc (Zn)-Total			<0.0030		mg/L		0.003	04-FEB-13
Zirconium (Zr)-Total			<0.0040		mg/L		0.004	04-FEB-13
WG1621582-5 MS		**WG1621582-3**						
Aluminum (Al)-Total			103.1		%		70-130	04-FEB-13
Antimony (Sb)-Total			103.2		%		70-130	04-FEB-13
Arsenic (As)-Total			109.6		%		70-130	04-FEB-13
Barium (Ba)-Total			106.4		%		70-130	04-FEB-13
Beryllium (Be)-Total			98.4		%		70-130	04-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1621582-5 MS		**WG1621582-3**						
Bismuth (Bi)-Total			101.9		%		70-130	04-FEB-13
Boron (B)-Total			89.7		%		70-130	04-FEB-13
Cadmium (Cd)-Total			103.1		%		70-130	04-FEB-13
Calcium (Ca)-Total			N/A	MS-B	%		-	04-FEB-13
Chromium (Cr)-Total			112.0		%		70-130	04-FEB-13
Cobalt (Co)-Total			126.3		%		70-130	04-FEB-13
Copper (Cu)-Total			105.7		%		70-130	04-FEB-13
Iron (Fe)-Total			104.4		%		70-130	04-FEB-13
Lead (Pb)-Total			103.8		%		70-130	04-FEB-13
Lithium (Li)-Total			105.4		%		70-130	04-FEB-13
Magnesium (Mg)-Total			97.0		%		70-130	04-FEB-13
Manganese (Mn)-Total			117.3		%		70-130	04-FEB-13
Molybdenum (Mo)-Total			114.2		%		70-130	04-FEB-13
Nickel (Ni)-Total			105.5		%		70-130	04-FEB-13
Phosphorus (P)-Total			103.4		%		70-130	04-FEB-13
Potassium (K)-Total			98.1		%		70-130	04-FEB-13
Selenium (Se)-Total			105.2		%		70-130	04-FEB-13
Silicon (Si)-Total			96.3		%		70-130	04-FEB-13
Silver (Ag)-Total			100.6		%		70-130	04-FEB-13
Sodium (Na)-Total			N/A	MS-B	%		-	04-FEB-13
Strontium (Sr)-Total			N/A	MS-B	%		-	04-FEB-13
Thallium (Tl)-Total			105.1		%		70-130	04-FEB-13
Tin (Sn)-Total			109.0		%		70-130	04-FEB-13
Titanium (Ti)-Total			103.0		%		70-130	04-FEB-13
Tungsten (W)-Total			113.5		%		70-130	04-FEB-13
Uranium (U)-Total			106.3		%		70-130	04-FEB-13
Vanadium (V)-Total			120.4		%		70-130	04-FEB-13
Zinc (Zn)-Total			104.8		%		70-130	04-FEB-13
Zirconium (Zr)-Total			113.7		%		70-130	04-FEB-13
WG1621582-8 MS		**WG1621582-6**						
Aluminum (Al)-Total			N/A	MS-B	%		-	04-FEB-13
Antimony (Sb)-Total			98.6		%		70-130	04-FEB-13
Arsenic (As)-Total			102.4		%		70-130	04-FEB-13
Barium (Ba)-Total			97.3		%		70-130	04-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WT	**Water**							
Batch R2519425								
WG1621582-8 MS		**WG1621582-6**						
Beryllium (Be)-Total			102.1		%		70-130	04-FEB-13
Bismuth (Bi)-Total			100.5		%		70-130	04-FEB-13
Boron (B)-Total			96.9		%		70-130	04-FEB-13
Cadmium (Cd)-Total			100.3		%		70-130	04-FEB-13
Calcium (Ca)-Total			N/A	MS-B	%		-	04-FEB-13
Chromium (Cr)-Total			101.6		%		70-130	04-FEB-13
Cobalt (Co)-Total			102.0		%		70-130	04-FEB-13
Copper (Cu)-Total			99.5		%		70-130	04-FEB-13
Iron (Fe)-Total			96.1		%		70-130	04-FEB-13
Lead (Pb)-Total			100.3		%		70-130	04-FEB-13
Lithium (Li)-Total			103.3		%		70-130	04-FEB-13
Magnesium (Mg)-Total			92.7		%		70-130	04-FEB-13
Manganese (Mn)-Total			N/A	MS-B	%		-	04-FEB-13
Molybdenum (Mo)-Total			102.0		%		70-130	04-FEB-13
Nickel (Ni)-Total			98.6		%		70-130	04-FEB-13
Phosphorus (P)-Total			104.7		%		70-130	04-FEB-13
Potassium (K)-Total			89.5		%		70-130	04-FEB-13
Selenium (Se)-Total			96.6		%		70-130	04-FEB-13
Silicon (Si)-Total			N/A	MS-B	%		-	04-FEB-13
Silver (Ag)-Total			101.3		%		70-130	04-FEB-13
Sodium (Na)-Total			96.3		%		70-130	04-FEB-13
Strontium (Sr)-Total			93.5		%		70-130	04-FEB-13
Thallium (Tl)-Total			98.8		%		70-130	04-FEB-13
Tin (Sn)-Total			99.5		%		70-130	04-FEB-13
Titanium (Ti)-Total			99.7		%		70-130	04-FEB-13
Tungsten (W)-Total			105.2		%		70-130	04-FEB-13
Uranium (U)-Total			99.7		%		70-130	04-FEB-13
Vanadium (V)-Total			101.1		%		70-130	04-FEB-13
Zinc (Zn)-Total			102.0		%		70-130	04-FEB-13
Zirconium (Zr)-Total			99.0		%		70-130	04-FEB-13
NH3-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2520148								
WG1621632-3 DUP		**L1263671-1**						
Ammonia, Total (as N)		0.070	0.071		mg/L	2.1	20	04-FEB-13
WG1621632-2 LCS								
Ammonia, Total (as N)			95.4		%		85-115	04-FEB-13
WG1621632-6 LCS								
Ammonia, Total (as N)			95.6		%		85-115	04-FEB-13
WG1621632-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	04-FEB-13
WG1621632-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	04-FEB-13
WG1621632-4 MS		**L1263671-1**						
Ammonia, Total (as N)			90.8		%		75-125	04-FEB-13
NO2-IC-TB	**Water**							
Batch R2521730								
WG1623351-10 LCS								
Nitrite (as N)			101.6		%		90-110	05-FEB-13
WG1623351-2 LCS								
Nitrite (as N)			98.8		%		90-110	05-FEB-13
WG1623351-6 LCS								
Nitrite (as N)			96.4		%		90-110	05-FEB-13
WG1623351-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	05-FEB-13
WG1623351-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	05-FEB-13
WG1623351-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	05-FEB-13
WG1623351-12 MS		**L1263685-2**						
Nitrite (as N)			91.3		%		75-115	05-FEB-13
WG1623351-4 MS		**L1262741-1**						
Nitrite (as N)			100.7		%		75-115	05-FEB-13
WG1623351-8 MS		**L1263367-16**						
Nitrite (as N)			92.1		%		75-115	05-FEB-13
NO3-IC-TB	**Water**							
Batch R2521730								
WG1623351-10 LCS								
Nitrate (as N)			101.8		%		90-110	05-FEB-13
WG1623351-2 LCS								
Nitrate (as N)			98.7		%		90-110	05-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2521730								
WG1623351-6 LCS								
Nitrate (as N)			97.9		%		90-110	05-FEB-13
WG1623351-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	05-FEB-13
WG1623351-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	05-FEB-13
WG1623351-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	05-FEB-13
WG1623351-12 MS		**L1263685-2**						
Nitrate (as N)			N/A	MS-B	%		-	05-FEB-13
WG1623351-4 MS		**L1262741-1**						
Nitrate (as N)			103.4		%		75-125	05-FEB-13
WG1623351-8 MS		**L1263367-16**						
Nitrate (as N)			91.9		%		75-125	05-FEB-13
OGG-TOT-WT	**Water**							
Batch R2521989								
WG1622475-2 LCS								
Oil and Grease, Total			88.4		%		70-130	04-FEB-13
WG1622475-3 LCSD		**WG1622475-2**						
Oil and Grease, Total		88.4	92		%	3.9	40	04-FEB-13
WG1622475-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	04-FEB-13
Batch R2521991								
WG1622740-2 LCS								
Oil and Grease, Total			88.2		%		70-130	05-FEB-13
WG1622740-3 LCSD		**WG1622740-2**						
Oil and Grease, Total		88.2	88		%	0.0	40	05-FEB-13
WG1622740-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	05-FEB-13
P-T-COL-TB	**Water**							
Batch R2518464								
WG1621378-2 LCS								
Phosphorus (P)-Total			101.2		%		80-120	01-FEB-13
WG1621378-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	01-FEB-13
WG1621378-4 MS		**L1263081-2**						
Phosphorus (P)-Total			101.6		%		70-130	01-FEB-13
PH-CAP-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-CAP-TB	**Water**							
Batch R2520149								
WG1622299-2 LCS								
pH			6.00		pH		5.9-6.1	01-FEB-13
WG1622299-5 LCS								
pH			6.03		pH		5.9-6.1	01-FEB-13
WG1622299-8 LCS								
pH			6.01		pH		5.9-6.1	01-FEB-13
SO4-IC-TB	**Water**							
Batch R2521730								
WG1623351-10 LCS								
Sulfate (SO4)			103.8		%		90-110	05-FEB-13
WG1623351-2 LCS								
Sulfate (SO4)			101.4		%		90-110	05-FEB-13
WG1623351-6 LCS								
Sulfate (SO4)			101.1		%		90-110	05-FEB-13
WG1623351-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	05-FEB-13
WG1623351-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	05-FEB-13
WG1623351-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	05-FEB-13
WG1623351-4 MS		**L1262741-1**						
Sulfate (SO4)			108.0		%		75-125	05-FEB-13
WG1623351-8 MS		**L1263367-16**						
Sulfate (SO4)			94.3		%		75-125	05-FEB-13
SOLIDS-TOTSUS-TB	**Water**							
Batch R2520155								
WG1622246-2 LCS								
Total Suspended Solids			100.2		%		85-115	04-FEB-13
WG1622246-1 MB								
Total Suspended Solids			<2.0		mg/L		2	04-FEB-13
Batch R2520228								
WG1621999-2 LCS								
Total Suspended Solids			93.4		%		85-115	02-FEB-13
WG1621999-1 MB								
Total Suspended Solids			<2.0		mg/L		2	02-FEB-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-TB	**Water**							
Batch R2521788								
WG1622779-3 DUP		**L1263671-14**						
Total Suspended Solids		11.7	10.9		mg/L	7.1	20	05-FEB-13
WG1622779-2 LCS								
Total Suspended Solids			88.2		%		85-115	05-FEB-13
WG1622779-1 MB								
Total Suspended Solids			<2.0		mg/L		2	05-FEB-13

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Leachable Anions & Nutrients							
Anions by Ion Chromatography							
	1	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	2	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	3	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	4	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	5	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	6	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	7	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	8	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	9	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	10	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	12	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	13	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	14	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
Anions by Ion Chromatography							
	1	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	2	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	3	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	4	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	5	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	6	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	7	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	8	28-JAN-13 13:00	05-FEB-13 16:37	5	8	days	EHT
	9	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	10	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	12	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	13	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
	14	29-JAN-13 13:00	05-FEB-13 16:37	5	7	days	EHT
Cyanides							
Cyanide, Total							
	1	29-JAN-13 13:00	13-FEB-13 10:45	14	15	days	EHT
	2	29-JAN-13 13:00	13-FEB-13 10:48	14	15	days	EHT
	3	29-JAN-13 13:00	13-FEB-13 10:49	14	15	days	EHT
	4	29-JAN-13 13:00	13-FEB-13 10:50	14	15	days	EHT
	5	29-JAN-13 13:00	13-FEB-13 10:51	14	15	days	EHT
	6	28-JAN-13 13:00	13-FEB-13 10:52	14	16	days	EHT
	7	28-JAN-13 13:00	13-FEB-13 10:53	14	16	days	EHT
	8	28-JAN-13 13:00	13-FEB-13 10:54	14	16	days	EHT
	9	29-JAN-13 13:00	13-FEB-13 10:55	14	15	days	EHT
	10	29-JAN-13 13:00	13-FEB-13 10:56	14	15	days	EHT
	11	28-JAN-13 13:00	13-FEB-13 10:57	14	16	days	EHT
	12	29-JAN-13 13:00	13-FEB-13 10:58	14	15	days	EHT
	13	29-JAN-13 13:00	13-FEB-13 10:59	14	15	days	EHT
	14	29-JAN-13 13:00	13-FEB-13 11:00	14	15	days	EHT
Cyanide, Weak Acid Diss							
	6	28-JAN-13 13:00	12-FEB-13 07:56	14	15	days	EHT
	7	28-JAN-13 13:00	12-FEB-13 07:57	14	15	days	EHT
	8	28-JAN-13 13:00	12-FEB-13 07:58	14	15	days	EHT
	11	28-JAN-13 13:00	12-FEB-13 08:01	14	15	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 L1263671 were received on 31-JAN-13 09:00.

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.

ALS Environment

L1263671-COFC

y Ontario P7B 5N3 Canada PHONE +1 807 623 6463 FAX +1 807 623 7598
A Campbell Brothers Limited Company www.alsglobal.com

L1263671

Company:	Treasury Metal		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P0115
Quote #	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler: MP + AT + RN	

Regulatory Information

g 153 (O. Reg 511 Amend) Table:
Record of Site Condition ☐ Yes ☐ No
PWQO ☑ MISA ☐ MMER ☐ CCME ☐
Guideline Required:
TCLP Regulation 558 ☐ Other:

Service Requested

☑ Regular TAT (7 Days)
☐ Priority TAT 50% Surcharge (3-5 Days)
☐ Emergency TAT 100% Surcharge (1-2 Days)
Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☑ No
If yes, an authorized DW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide (P)	WAD Cyanide (P)	CN-FREE-COL-VA (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (F/P)	Hardness		Number of Containers
	SW1	29/01/13	1⁰⁰	Water	x	x	x	x	x	x	x	x	x	x	x		9
	SW2	↓	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
	SW4 *				x	x	x	x	x	x	x	x	x	x	x		
	SW5 *				x	x	x	x	x	x	x	x	x	x	x		
	SW6 *	↓			x	x	x	x	x	x	x	x	x	x	x		
	SW7	28/01/13			x	x	x	x	x	x	x	x	x	x	x		
	SW8	28/01/13			x	x	x	x	x	x	x	x	x	x	x		
	SW10	28/01/13			x	x	x	x	x	x	x	x	x	x	x		
	TL1a	29/01/13			x	x	x	x	x	x	x	x	x	x	x		
	TL3	29/01/13			x	x	x	x	x	x	x	x	x	x	x		
	ICTa	28/01/13	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓

Special Instructions / Comments

* All starred sample did not get field filtered

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: Mac Dil ✓ <Original signed by>	Date & Time: 30/01/13 8:30 AM	Received by: <Original signed by>	Date & Time: Jan. 31/13 9:00	Temp: 8.4	Cooling Initiated ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: Jan. 31/13 9:20	Observations: Yes / No ? If Yes add SIF

Cooler #1: 8.3, 8.4 3: 5.4, 4.6 5: 6.8, 7.2
2: 8.0, 7.3 4: 7.3, 7.3

See SIF

ALS Environment

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ampbell Brothers Limited Company www.alsglobal.com

L1263671-COFC

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P0115
Quote #	Q32690		LSD Goliath Project
Invoice To:		Same as Report:	☑ Yes ☐ No
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler:	

Regulatory Information

(O Reg 511 Amend) Table:

Record of Site Condition: ☐ Yes ☐ No

PWQO: ☑ MISA ☐ MMER ☐ CCME ☐

Guideline Required:

TCLP Regulation 558: ☐ Other:

Service Requested

☑ Regular TAT (7 Days)

☐ Priority TAT 50% Surcharge (3-5 Days)

☐ Emergency TAT 100% Surcharge (1-2 Days)

Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☑ No

If yes, an authorized DW COC must be used.

Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total Cyanide	WAD Cyanide	CN-FREE-COL-VA	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness		Number of Containers
	Travel	29/01/13	10⁰⁰	Water	x	x	x	x	x	x	x	x	x	x	x		
	Field	↓	↓	↓	x	x	x	x	x	x	x	x	x	x	x		↓
	Duplicate				x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		
					x	x	x	x	x	x	x	x	x	x	x		

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)		
Released by: Mac Potter <Original signed by>	Date & Time: 30/01/13 8:30 am	Received by: <Original signed by>	Date & Time: Jan 31/13 9:20	Temp: 8.4	Cooling Initiated: ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: Jan 31/13 9:30	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

TY-FM-0204g v.2 Analytical COC

Cooler #1: 8.3, 8.4 3: 5.4, 4.6 5: 6.8, 7.2

2: 8.0, 7.3 4: 7.3, 7.3

See SIF

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 25-JUL-13
Report Date: 08-AUG-13 07:19 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1337914

Project P.O. #: M0210-P0115
Job Reference: M0906A01
C of C Numbers:
Legal Site Desc: GOLIATH PROJECT

<Original signed by>

Bobbie Shortreed
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1337914-1	L1337914-2	L1337914-3	L1337914-4	L1337914-5
	Description	SURFACE WATE	SURFACE WATE	SURFACE WATE	SURFACE WATE	SURFACE WATE
	Sampled Date	23-JUL-13	23-JUL-13	23-JUL-13	24-JUL-13	24-JUL-13
	Sampled Time	13:00	13:00	13:00	13:00	13:00
	Client ID	SW1	SW2	SW3	SW4	SW5
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	112	113	120	99.4	113
Physical Tests	Hardness (as CaCO3) (mg/L)	60.5	61.4	48.8	44.4	50.4
Physical Tests	pH (pH)	7.32	7.41	6.76	7.53	7.64
Physical Tests	Total Suspended Solids (mg/L)	2.3	17.1	3.0	7.5	<2.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.0	2.0	4.0	3.0	3.0
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	53.5	54.9	41.5	41.6	46.0
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	<0.020	0.023	<0.020	0.023	0.020
Anions and Nutrients	Chloride (Cl) (mg/L)	0.21	0.13	9.52	3.25	4.18
Anions and Nutrients	Nitrate (as N) (mg/L)	<0.030	0.043	<0.030	<0.030	<0.030
Anions and Nutrients	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Anions and Nutrients	Phosphorus (P)-Total (mg/L)	0.0099	0.0472	0.0215	0.0194	0.0081
Anions and Nutrients	Sulfate (SO4) (mg/L)	0.75	0.46	1.40	1.62	2.72
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0578	0.707	0.0647	0.751	0.0159
Total Metals	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Total Metals	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Barium (Ba)-Total (mg/L)	<0.010	0.014	<0.010	0.013	<0.010
Total Metals	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Total Metals	Calcium (Ca)-Total (mg/L)	19.0	17.7	14.1	13.9	14.7
Total Metals	Chromium (Cr)-Total (mg/L)	<0.0010	0.0017	<0.0010	0.0012	<0.0010
Total Metals	Cobalt (Co)-Total (mg/L)	<0.00050	0.00069	<0.00050	<0.00050	<0.00050
Total Metals	Copper (Cu)-Total (mg/L)	<0.0010	0.0016	<0.0010	0.0022 DTC	0.0012
Total Metals	Iron (Fe)-Total (mg/L)	0.472	2.34	0.638	0.692	0.022
Total Metals	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Magnesium (Mg)-Total (mg/L)	3.12	4.45	3.18	2.57	3.04
Total Metals	Manganese (Mn)-Total (mg/L)	0.0618	0.0853	0.0845	0.0159	0.0045
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-6 SURFACE WATE 24-JUL-13 13:00 SW6	L1337914-7 SURFACE WATE 23-JUL-13 13:00 SW7	L1337914-8 SURFACE WATE 23-JUL-13 13:00 SW8	L1337914-9 SURFACE WATE 24-JUL-13 13:00 SW9	L1337914-10 SURFACE WATE 24-JUL-13 13:00 TL3
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	113	149	111	284	147
Physical Tests	Hardness (as CaCO3) (mg/L)	56.0	83.8	57.7	154	82.7
Physical Tests	pH (pH)	7.68	7.58	7.27	7.89	7.27
Physical Tests	Total Suspended Solids (mg/L)	<2.0	<2.0	2.4	2.0	7.8
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	2.0	2.0	3.0	3.0	5.0
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	46.4	74.3	49.4	147	68.9
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	<0.020	<0.020	0.021	0.020	0.021
Anions and Nutrients	Chloride (Cl) (mg/L)	4.37	<0.10	0.28	0.39	1.54
Anions and Nutrients	Nitrate (as N) (mg/L)	<0.030	0.051	0.099	0.088	<0.030
Anions and Nutrients	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Anions and Nutrients	Phosphorus (P)-Total (mg/L)	0.0075	0.0075	0.0155	0.0148	0.0272
Anions and Nutrients	Sulfate (SO4) (mg/L)	2.88	0.56	3.80	0.65	0.35
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0237	0.0221	0.0978	0.466	0.380
Total Metals	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Total Metals	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	0.0014	<0.0010	<0.0010
Total Metals	Barium (Ba)-Total (mg/L)	<0.010	0.021	0.012	0.033	0.013
Total Metals	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Total Metals	Calcium (Ca)-Total (mg/L)	15.3	30.1	18.9	47.1	23.5
Total Metals	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	0.0011	0.0011
Total Metals	Cobalt (Co)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Total Metals	Copper (Cu)-Total (mg/L)	0.0012	<0.0010	0.0011 DTC	<0.0010	0.0015
Total Metals	Iron (Fe)-Total (mg/L)	0.036	0.441	1.17	0.686	0.992
Total Metals	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Magnesium (Mg)-Total (mg/L)	3.19	2.60	3.17	8.00	5.60
Total Metals	Manganese (Mn)-Total (mg/L)	0.0053	0.0844	0.0296	0.280	0.128
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-11 SURFACE WATE 24-JUL-13 13:00 JCTA	L1337914-12 SURFACE WATE 23-JUL-13 13:00 TL1A	L1337914-13 SURFACE WATE 23-JUL-13 13:00 DUPLICATE	L1337914-14 SURFACE WATE 23-JUL-13 13:00 FIELD BLANK	L1337914-15 SURFACE WATE 23-JUL-13 13:00 TRAVEL BLANK
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	136	111	110	<3.0	<3.0
Physical Tests	Hardness (as CaCO3) (mg/L)	76.1	59.7	58.5	<0.51	<0.51
Physical Tests	pH (pH)	7.26	6.99	7.30	5.69	5.46
Physical Tests	Total Suspended Solids (mg/L)	4.9	2.9	<2.0	<2.0	<2.0
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	6.0	6.0	4.0	<2.0	<2.0
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	66.3	53.3	50.1	<5.0	<5.0
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	0.056	0.185	<0.020	<0.020	<0.020
Anions and Nutrients	Chloride (Cl) (mg/L)	0.68	0.41	0.17	<0.10	0.22 RRV
Anions and Nutrients	Nitrate (as N) (mg/L)	<0.030	<0.030	0.095	<0.030	<0.030
Anions and Nutrients	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Anions and Nutrients	Phosphorus (P)-Total (mg/L)	0.0205	0.0208	0.0154	<0.0050	<0.0050
Anions and Nutrients	Sulfate (SO4) (mg/L)	<0.30	<0.30	3.75	<0.30	<0.30
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanides	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0869	0.0806	0.101	<0.0050	<0.0050
Total Metals	Antimony (Sb)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Total Metals	Arsenic (As)-Total (mg/L)	<0.0010	<0.0010	0.0014	<0.0010	<0.0010
Total Metals	Barium (Ba)-Total (mg/L)	0.010	0.016	0.012	<0.010	<0.010
Total Metals	Beryllium (Be)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Bismuth (Bi)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Boron (B)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Cadmium (Cd)-Total (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Total Metals	Calcium (Ca)-Total (mg/L)	21.8	16.7	19.5	<0.20	<0.20
Total Metals	Chromium (Cr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Cobalt (Co)-Total (mg/L)	<0.00050	0.00532	<0.00050	<0.00050	<0.00050
Total Metals	Copper (Cu)-Total (mg/L)	<0.0010	<0.0010	0.0011	<0.0010	<0.0010
Total Metals	Iron (Fe)-Total (mg/L)	1.04	3.34	1.19	<0.020	<0.020
Total Metals	Lead (Pb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Lithium (Li)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Total Metals	Magnesium (Mg)-Total (mg/L)	5.18	3.69	3.19	<0.020	<0.020
Total Metals	Manganese (Mn)-Total (mg/L)	0.124	2.02	0.0305	<0.0010	<0.0010
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1337914-16				
	Description	SURFACE WATE				
	Sampled Date	23-JUL-13				
	Sampled Time	13:00				
	Client ID	SW10				
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	118				
Physical Tests	Hardness (as CaCO3) (mg/L)	61.1				
Physical Tests	pH (pH)	7.38				
Physical Tests	Total Suspended Solids (mg/L)	<2.0				
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	5.0				
Anions and Nutrients	Alkalinity, Total (as CaCO3) (mg/L CaCO3)	56.7				
Anions and Nutrients	Ammonia, Total (as N) (mg/L)	0.039				
Anions and Nutrients	Chloride (Cl) (mg/L)	0.18				
Anions and Nutrients	Nitrate (as N) (mg/L)	0.045				
Anions and Nutrients	Nitrite (as N) (mg/L)	<0.020				
Anions and Nutrients	Phosphorus (P)-Total (mg/L)	0.0066				
Anions and Nutrients	Sulfate (SO4) (mg/L)	1.49				
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020				
Cyanides	Cyanide, Total (mg/L)	<0.0020				
Cyanides	Cyanide, Free (mg/L)	<0.0050				
Total Metals	Aluminum (Al)-Total (mg/L)	0.0718				
Total Metals	Antimony (Sb)-Total (mg/L)	<0.00060				
Total Metals	Arsenic (As)-Total (mg/L)	<0.0010				
Total Metals	Barium (Ba)-Total (mg/L)	0.013				
Total Metals	Beryllium (Be)-Total (mg/L)	<0.0010				
Total Metals	Bismuth (Bi)-Total (mg/L)	<0.0010				
Total Metals	Boron (B)-Total (mg/L)	<0.050				
Total Metals	Cadmium (Cd)-Total (mg/L)	<0.000017				
Total Metals	Calcium (Ca)-Total (mg/L)	21.3				
Total Metals	Chromium (Cr)-Total (mg/L)	<0.0010				
Total Metals	Cobalt (Co)-Total (mg/L)	<0.00050				
Total Metals	Copper (Cu)-Total (mg/L)	<0.0010				
Total Metals	Iron (Fe)-Total (mg/L)	1.52				
Total Metals	Lead (Pb)-Total (mg/L)	<0.0010				
Total Metals	Lithium (Li)-Total (mg/L)	<0.050				
Total Metals	Magnesium (Mg)-Total (mg/L)	2.73				
Total Metals	Manganese (Mn)-Total (mg/L)	0.0454				
Total Metals	Mercury (Hg)-Total (mg/L)	<0.000010				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-1 SURFACE WATE 23-JUL-13 13:00 SW1	L1337914-2 SURFACE WATE 23-JUL-13 13:00 SW2	L1337914-3 SURFACE WATE 23-JUL-13 13:00 SW3	L1337914-4 SURFACE WATE 24-JUL-13 13:00 SW4	L1337914-5 SURFACE WATE 24-JUL-13 13:00 SW5
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Nickel (Ni)-Total (mg/L)	<0.0020	0.0022	<0.0020	<0.0020	<0.0020
Total Metals	Potassium (K)-Total (mg/L)	0.53	0.79	0.89	0.95	1.02
Total Metals	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Sodium (Na)-Total (mg/L)	1.50	1.68	6.39	2.82	3.26
Total Metals	Strontium (Sr)-Total (mg/L)	0.0352	0.0334	0.0324	0.0259	0.0292
Total Metals	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Total Metals	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Titanium (Ti)-Total (mg/L)	0.0026	0.0329	0.0025	0.0278	<0.0020
Total Metals	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Vanadium (V)-Total (mg/L)	<0.0010	0.0023	<0.0010	0.0014	<0.0010
Total Metals	Zinc (Zn)-Total (mg/L)	<0.0030	0.0036	0.0267	<0.0030	<0.0030
Total Metals	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0135	0.0379	0.0282	0.0309	<0.0050
Dissolved Metals	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Dissolved Metals	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Barium (Ba)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	18.9	17.2	14.0	13.6	14.9
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0014	<0.0010	0.0044 DTC	0.0011
Dissolved Metals	Iron (Fe)-Dissolved (mg/L)	0.232	0.741	0.195	<0.020	<0.020
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	3.26	4.47	3.33	2.51	3.19
Dissolved Metals	Manganese (Mn)-Dissolved (mg/L)	0.0201	0.0127	0.0023	<0.0010	<0.0010
Dissolved Metals	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Metals	Potassium (K)-Dissolved (mg/L)	0.53	0.68	0.89	0.86	1.02

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-6 SURFACE WATE 24-JUL-13 13:00 SW6	L1337914-7 SURFACE WATE 23-JUL-13 13:00 SW7	L1337914-8 SURFACE WATE 23-JUL-13 13:00 SW8	L1337914-9 SURFACE WATE 24-JUL-13 13:00 SW9	L1337914-10 SURFACE WATE 24-JUL-13 13:00 TL3
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Metals	Potassium (K)-Total (mg/L)	1.06	<0.50	0.82	1.82	1.05
Total Metals	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Sodium (Na)-Total (mg/L)	3.43	1.27	1.55	3.60	2.06
Total Metals	Strontium (Sr)-Total (mg/L)	0.0297	0.0478	0.0375	0.0817	0.0537
Total Metals	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Total Metals	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Titanium (Ti)-Total (mg/L)	<0.0020	<0.0020	0.0047	0.0226	0.0151
Total Metals	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Vanadium (V)-Total (mg/L)	<0.0010	<0.0010	0.0015	0.0012	0.0013
Total Metals	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030 DTC	<0.0030	<0.0030
Total Metals	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	<0.0050	<0.0050	0.0483	0.0110	0.0364
Dissolved Metals	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
Dissolved Metals	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	0.0012	<0.0010	<0.0010
Dissolved Metals	Barium (Ba)-Dissolved (mg/L)	<0.010	0.019	0.011	0.024	<0.010
Dissolved Metals	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	16.5	29.2	17.8	48.3	23.5
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)	0.0011	<0.0010	0.0165 DTC	<0.0010	0.0014
Dissolved Metals	Iron (Fe)-Dissolved (mg/L)	<0.020	0.030	0.684	<0.020	0.389
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	3.58	2.65	3.23	8.10	5.84
Dissolved Metals	Manganese (Mn)-Dissolved (mg/L)	<0.0010	0.0212	0.0067	0.0515	0.0454
Dissolved Metals	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Metals	Potassium (K)-Dissolved (mg/L)	1.17	<0.50	0.79	1.71	0.99

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-11 SURFACE WATE 24-JUL-13 13:00 JCTA	L1337914-12 SURFACE WATE 23-JUL-13 13:00 TL1A	L1337914-13 SURFACE WATE 23-JUL-13 13:00 DUPLICATE	L1337914-14 SURFACE WATE 23-JUL-13 13:00 FIELD BLANK	L1337914-15 SURFACE WATE 23-JUL-13 13:00 TRAVEL BLANK
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Nickel (Ni)-Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Total Metals	Potassium (K)-Total (mg/L)	0.79	<0.50	0.82	<0.50	<0.50
Total Metals	Selenium (Se)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Total Metals	Sodium (Na)-Total (mg/L)	1.68	1.13	1.54	<0.10	<0.10
Total Metals	Strontium (Sr)-Total (mg/L)	0.0484	0.0393	0.0382	<0.0010	<0.0010
Total Metals	Tellurium (Te)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Thallium (Tl)-Total (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Total Metals	Tin (Sn)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Total Metals	Titanium (Ti)-Total (mg/L)	0.0034	0.0027	0.0049	<0.0020	<0.0020
Total Metals	Tungsten (W)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Total Metals	Uranium (U)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Vanadium (V)-Total (mg/L)	<0.0010	0.0011	0.0015	<0.0010	<0.0010
Total Metals	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
Total Metals	Zirconium (Zr)-Total (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0318	0.0551	0.0501	<0.0050	<0.0050
Dissolved Metals	Antimony (Sb)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	0.00088 RRV	<0.00060
Dissolved Metals	Arsenic (As)-Dissolved (mg/L)	<0.0010	<0.0010	0.0012	<0.0010	<0.0010
Dissolved Metals	Barium (Ba)-Dissolved (mg/L)	<0.010	0.014	0.011	<0.010	<0.010
Dissolved Metals	Beryllium (Be)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Bismuth (Bi)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Cadmium (Cd)-Dissolved (mg/L)	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	21.4	17.2	18.0	<0.20	<0.20
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00050	0.00458	<0.00050	<0.00050	<0.00050
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)	<0.0010	0.0011	0.0011	<0.0010	<0.0010
Dissolved Metals	Iron (Fe)-Dissolved (mg/L)	0.566	1.79	0.717	<0.020	<0.020
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	5.51	4.10	3.28	<0.020	<0.020
Dissolved Metals	Manganese (Mn)-Dissolved (mg/L)	0.0317	1.83	0.0074	<0.0010	<0.0010
Dissolved Metals	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Dissolved Metals	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Nickel (Ni)-Dissolved (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Dissolved Metals	Potassium (K)-Dissolved (mg/L)	0.84	<0.50	0.80	<0.50	<0.50

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1337914-16				
	Description	SURFACE WATE				
	Sampled Date	23-JUL-13				
	Sampled Time	13:00				
	Client ID	SW10				
Grouping	**Analyte**					
WATER						
Total Metals	Molybdenum (Mo)-Total (mg/L)	<0.0010				
Total Metals	Nickel (Ni)-Total (mg/L)	<0.0020				
Total Metals	Potassium (K)-Total (mg/L)	0.58				
Total Metals	Selenium (Se)-Total (mg/L)	<0.0010				
Total Metals	Silver (Ag)-Total (mg/L)	<0.00010				
Total Metals	Sodium (Na)-Total (mg/L)	1.65				
Total Metals	Strontium (Sr)-Total (mg/L)	0.0366				
Total Metals	Tellurium (Te)-Total (mg/L)	<0.0010				
Total Metals	Thallium (Tl)-Total (mg/L)	<0.00030				
Total Metals	Tin (Sn)-Total (mg/L)	<0.0010				
Total Metals	Titanium (Ti)-Total (mg/L)	0.0026				
Total Metals	Tungsten (W)-Total (mg/L)	<0.010				
Total Metals	Uranium (U)-Total (mg/L)	<0.0050				
Total Metals	Vanadium (V)-Total (mg/L)	<0.0010				
Total Metals	Zinc (Zn)-Total (mg/L)	<0.0030				
Total Metals	Zirconium (Zr)-Total (mg/L)	<0.0010				
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0368				
Dissolved Metals	Antimony (Sb)-Dissolved (mg/L)	<0.00060				
Dissolved Metals	Arsenic (As)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Barium (Ba)-Dissolved (mg/L)	0.012				
Dissolved Metals	Beryllium (Be)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Bismuth (Bi)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Boron (B)-Dissolved (mg/L)	<0.050				
Dissolved Metals	Cadmium (Cd)-Dissolved (mg/L)	<0.000017				
Dissolved Metals	Calcium (Ca)-Dissolved (mg/L)	19.7				
Dissolved Metals	Chromium (Cr)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Cobalt (Co)-Dissolved (mg/L)	<0.00050				
Dissolved Metals	Copper (Cu)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Iron (Fe)-Dissolved (mg/L)	0.749				
Dissolved Metals	Lead (Pb)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Lithium (Li)-Dissolved (mg/L)	<0.050				
Dissolved Metals	Magnesium (Mg)-Dissolved (mg/L)	2.86				
Dissolved Metals	Manganese (Mn)-Dissolved (mg/L)	0.0076				
Dissolved Metals	Mercury (Hg)-Dissolved (mg/L)	<0.000010				
Dissolved Metals	Molybdenum (Mo)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Nickel (Ni)-Dissolved (mg/L)	<0.0020				
Dissolved Metals	Potassium (K)-Dissolved (mg/L)	0.57				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-1 SURFACE WATE 23-JUL-13 13:00 SW1	L1337914-2 SURFACE WATE 23-JUL-13 13:00 SW2	L1337914-3 SURFACE WATE 23-JUL-13 13:00 SW3	L1337914-4 SURFACE WATE 24-JUL-13 13:00 SW4	L1337914-5 SURFACE WATE 24-JUL-13 13:00 SW5
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Sodium (Na)-Dissolved (mg/L)	1.59	1.73	6.78	2.95	3.50
Dissolved Metals	Strontium (Sr)-Dissolved (mg/L)	0.0329	0.0293	0.0312	0.0225	0.0276
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Titanium (Ti)-Dissolved (mg/L)	<0.0020	0.0029	<0.0020	<0.0020	<0.0020
Dissolved Metals	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	<0.0030	0.0032	<0.0030
Dissolved Metals	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-6 SURFACE WATE 24-JUL-13 13:00 SW6	L1337914-7 SURFACE WATE 23-JUL-13 13:00 SW7	L1337914-8 SURFACE WATE 23-JUL-13 13:00 SW8	L1337914-9 SURFACE WATE 24-JUL-13 13:00 SW9	L1337914-10 SURFACE WATE 24-JUL-13 13:00 TL3
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Sodium (Na)-Dissolved (mg/L)	3.92	1.32	1.59	3.71	2.17
Dissolved Metals	Strontium (Sr)-Dissolved (mg/L)	0.0297	0.0444	0.0343	0.0771	0.0499
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	0.0025	<0.0020	<0.0020
Dissolved Metals	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	0.0010	<0.0010	<0.0010
Dissolved Metals	Zinc (Zn)-Dissolved (mg/L)	<0.0030	<0.0030	0.0109 DTC	<0.0030	<0.0030
Dissolved Metals	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1337914-11 SURFACE WATE 24-JUL-13 13:00 JCTA	L1337914-12 SURFACE WATE 23-JUL-13 13:00 TL1A	L1337914-13 SURFACE WATE 23-JUL-13 13:00 DUPLICATE	L1337914-14 SURFACE WATE 23-JUL-13 13:00 FIELD BLANK	L1337914-15 SURFACE WATE 23-JUL-13 13:00 TRAVEL BLANK
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Silver (Ag)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Dissolved Metals	Sodium (Na)-Dissolved (mg/L)	1.81	1.28	1.61	<0.10	<0.10
Dissolved Metals	Strontium (Sr)-Dissolved (mg/L)	0.0466	0.0387	0.0343	<0.0010	<0.0010
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030	<0.00030
Dissolved Metals	Tin (Sn)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Dissolved Metals	Titanium (Ti)-Dissolved (mg/L)	<0.0020	<0.0020	0.0025	<0.0020	<0.0020
Dissolved Metals	Tungsten (W)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Dissolved Metals	Uranium (U)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0010	<0.0010	0.0010	<0.0010	<0.0010
Dissolved Metals	Zinc (Zn)-Dissolved (mg/L)	<0.0030	0.0031	<0.0030	<0.0030	<0.0030
Dissolved Metals	Zirconium (Zr)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1337914-16				
	Description	SURFACE WATE				
	Sampled Date	23-JUL-13				
	Sampled Time	13:00				
	Client ID	SW10				
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Silver (Ag)-Dissolved (mg/L)	<0.00010				
Dissolved Metals	Sodium (Na)-Dissolved (mg/L)	1.75				
Dissolved Metals	Strontium (Sr)-Dissolved (mg/L)	0.0342				
Dissolved Metals	Tellurium (Te)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Thallium (Tl)-Dissolved (mg/L)	<0.00030				
Dissolved Metals	Tin (Sn)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Titanium (Ti)-Dissolved (mg/L)	<0.0020				
Dissolved Metals	Tungsten (W)-Dissolved (mg/L)	<0.010				
Dissolved Metals	Uranium (U)-Dissolved (mg/L)	<0.0050				
Dissolved Metals	Vanadium (V)-Dissolved (mg/L)	<0.0010				
Dissolved Metals	Zinc (Zn)-Dissolved (mg/L)	<0.0030				
Dissolved Metals	Zirconium (Zr)-Dissolved (mg/L)	<0.0010				
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0				

* 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)
Matrix Spike	Ammonia, Total (as N)	MS-B	L1337914-1, -12, -13, -14, -15, -16, -2, -3, -7, -8
Matrix Spike	Ammonia, Total (as N)	MS-B	L1337914-10, -11, -4, -5, -6, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Manganese (Mn)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Calcium (Ca)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Magnesium (Mg)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Strontium (Sr)-Total	MS-B	L1337914-1, -10, -11, -12, -13, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DTC	Dissolved concentration exceeds total. Results were confirmed by re-analysis.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION

Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.

ALK-TOT-CAP-TB	Water	Alkalinity, Total (as CaCO3)	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

CN-FREE-CFA-TB	Water	Free Cyanide by Continuous Flow Analyzer	ASTM D7237-10 (modified)

This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.

CN-T-CFA-TB	Water	Total Cyanide by CFA	ISO 14403:2002 (modified)

This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis.
Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.

CN-WAD-CFA-TB	Water	Weak Acid Dissociable Cyanide by CFA	APHA 4500-CN CYANIDE (modified)

This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE

Reference Information

This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.

HARDNESS-CALC-TB	Water	Hardness (as CaCO3)	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	Modified from EPA1631 E
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	Modified from EPA1631 E
MET-D-MS-TB	Water	Dissolved Metals by ICPMS	APHA 3030B/EPA 6020A

This analysis involves filtration (APHA 3030B) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

MET-T-MS-TB	Water	Total Metals by ICPMS	APHA 3030E/EPA 6020A

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).

NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)

Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.

NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2659461								
WG1716215-3 DUP		**L1337914-9**						
Acidity (as CaCO3)		3.0	3.0		mg/L	0.0	20	29-JUL-13
WG1716215-2 LCS								
Acidity (as CaCO3)			106.0		%		85-115	29-JUL-13
WG1716215-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	29-JUL-13
Batch R2660647								
WG1716994-2 LCS								
Acidity (as CaCO3)			100.0		%		85-115	30-JUL-13
WG1716994-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	30-JUL-13
ALK-TOT-CAP-TB	**Water**							
Batch R2658224								
WG1714268-6 DUP		**L1337914-11**						
Alkalinity, Total (as CaCO3)		66.3	65.3		mg/L CaCO3	1.5	20	26-JUL-13
WG1714268-11 LCS								
Alkalinity, Total (as CaCO3)			92.6		%		85-115	26-JUL-13
WG1714268-5 LCS								
Alkalinity, Total (as CaCO3)			94.2		%		85-115	26-JUL-13
WG1714268-8 LCS								
Alkalinity, Total (as CaCO3)			92.6		%		85-115	26-JUL-13
WG1714268-10 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	26-JUL-13
WG1714268-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	26-JUL-13
WG1714268-7 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	26-JUL-13
Batch R2659340								
WG1715906-2 LCS								
Alkalinity, Total (as CaCO3)			93.1		%		85-115	29-JUL-13
WG1715906-5 LCS								
Alkalinity, Total (as CaCO3)			94.3		%		85-115	29-JUL-13
WG1715906-1 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	29-JUL-13
WG1715906-4 MB								
Alkalinity, Total (as CaCO3)			<5.0		mg/L CaCO3		5	29-JUL-13
CL-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2658280								
WG1716076-2 LCS								
Chloride (Cl)			93.7		%		90-110	28-JUL-13
WG1716076-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	28-JUL-13
WG1716076-4 MS		**L1337999-1**						
Chloride (Cl)			104.9		%		75-125	28-JUL-13
Batch R2660328								
WG1715671-6 LCS								
Chloride (Cl)			100.4		%		90-110	29-JUL-13
WG1715671-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	29-JUL-13
WG1715671-8 MS		**L1338443-1**						
Chloride (Cl)			104.6		%		75-125	29-JUL-13
Batch R2662220								
WG1716962-13 LCS								
Chloride (Cl)			101.9		%		90-110	30-JUL-13
WG1716962-2 LCS								
Chloride (Cl)			100.8		%		90-110	30-JUL-13
WG1716962-5 LCS								
Chloride (Cl)			102.8		%		90-110	30-JUL-13
WG1716962-9 LCS								
Chloride (Cl)			101.6		%		90-110	30-JUL-13
WG1716962-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	30-JUL-13
WG1716962-12 MB								
Chloride (Cl)			<0.10		mg/L		0.1	30-JUL-13
WG1716962-8 MB								
Chloride (Cl)			<0.10		mg/L		0.1	30-JUL-13
WG1716962-11 MS		**L1337291-13**						
Chloride (Cl)			87.5		%		75-125	30-JUL-13
WG1716962-4 MS		**L1338403-2**						
Chloride (Cl)			78.7		%		75-125	30-JUL-13
WG1716962-7 MS		**L1338638-1**						
Chloride (Cl)			95.3		%		75-125	30-JUL-13
CN-FREE-CFA-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-FREE-CFA-TB	**Water**							
Batch R2662248								
WG1717473-8 DUP		**L1337914-5**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	30-JUL-13
WG1717473-10 LCS								
Cyanide, Free			97.4		%		80-120	30-JUL-13
WG1717473-2 LCS								
Cyanide, Free			97.8		%		80-120	30-JUL-13
WG1717473-6 LCS								
Cyanide, Free			97.6		%		80-120	30-JUL-13
WG1717473-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	30-JUL-13
WG1717473-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	30-JUL-13
WG1717473-9 MB								
Cyanide, Free			<0.0050		mg/L		0.005	30-JUL-13
WG1717473-11 MS		**L1337632-3**						
Cyanide, Free			96.7		%		70-130	30-JUL-13
WG1717473-4 MS		**L1337291-2**						
Cyanide, Free			96.9		%		70-130	30-JUL-13
WG1717473-7 MS		**L1337914-5**						
Cyanide, Free			98.2		%		70-130	30-JUL-13
CN-T-CFA-TB	**Water**							
Batch R2662259								
WG1717468-8 DUP		**L1337914-5**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	30-JUL-13
WG1717468-10 LCS								
Cyanide, Total			97.6		%		80-120	30-JUL-13
WG1717468-2 LCS								
Cyanide, Total			97.1		%		80-120	30-JUL-13
WG1717468-6 LCS								
Cyanide, Total			95.5		%		80-120	30-JUL-13
WG1717468-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	30-JUL-13
WG1717468-5 MB								
Cyanide, Total			<0.0020		mg/L		0.002	30-JUL-13
WG1717468-9 MB								
Cyanide, Total			<0.0020		mg/L		0.002	30-JUL-13
WG1717468-11 MS		**L1337632-3**						
Cyanide, Total			96.3		%		70-130	30-JUL-13
WG1717468-4 MS		**L1337291-2**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-TB	**Water**							
Batch R2662259								
WG1717468-4 MS		**L1337291-2**						
Cyanide, Total			94.0		%		70-130	30-JUL-13
WG1717468-7 MS		**L1337914-5**						
Cyanide, Total			96.8		%		70-130	30-JUL-13
CN-WAD-CFA-TB	**Water**							
Batch R2662253								
WG1717469-8 DUP		**L1337914-5**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	30-JUL-13
WG1717469-10 LCS								
Cyanide, Weak Acid Diss			102.0		%		80-120	30-JUL-13
WG1717469-2 LCS								
Cyanide, Weak Acid Diss			101.6		%		80-120	30-JUL-13
WG1717469-6 LCS								
Cyanide, Weak Acid Diss			100.9		%		80-120	30-JUL-13
WG1717469-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	30-JUL-13
WG1717469-5 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	30-JUL-13
WG1717469-9 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	30-JUL-13
WG1717469-11 MS		**L1337632-3**						
Cyanide, Weak Acid Diss			98.8		%		70-130	30-JUL-13
WG1717469-4 MS		**L1337291-2**						
Cyanide, Weak Acid Diss			98.6		%		70-130	30-JUL-13
WG1717469-7 MS		**L1337914-5**						
Cyanide, Weak Acid Diss			101.0		%		70-130	30-JUL-13
EC-CAP-TB	**Water**							
Batch R2658224								
WG1714268-6 DUP		**L1337914-11**						
Conductivity (EC)		136	137		uS/cm	0.1	10	26-JUL-13
WG1714268-11 LCS								
Conductivity (EC)			98.9		%		90-110	26-JUL-13
WG1714268-5 LCS								
Conductivity (EC)			100.4		%		90-110	26-JUL-13
WG1714268-8 LCS								
Conductivity (EC)			98.9		%		90-110	26-JUL-13
WG1714268-10 MB								
Conductivity (EC)			<3.0		uS/cm		3	26-JUL-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2658224								
WG1714268-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	26-JUL-13
WG1714268-7 MB								
Conductivity (EC)			<3.0		uS/cm		3	26-JUL-13
HG-D-CVAF-TB	**Water**							
Batch R2656933								
WG1714603-8 DUP		**L1337914-5**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	26-JUL-13
WG1714603-2 LCS								
Mercury (Hg)-Dissolved			101.0		%		80-120	26-JUL-13
WG1714603-6 LCS								
Mercury (Hg)-Dissolved			96.0		%		80-120	26-JUL-13
WG1714603-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	26-JUL-13
WG1714603-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	26-JUL-13
WG1714603-4 MS		**L1337168-3**						
Mercury (Hg)-Dissolved			75.3		%		70-130	26-JUL-13
WG1714603-7 MS		**L1337914-5**						
Mercury (Hg)-Dissolved			74.8		%		70-130	26-JUL-13
HG-T-CVAF-TB	**Water**							
Batch R2656928								
WG1714598-2 LCS								
Mercury (Hg)-Total			105.7		%		80-120	26-JUL-13
WG1714598-6 LCS								
Mercury (Hg)-Total			105.4		%		80-120	26-JUL-13
WG1714598-1 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	26-JUL-13
WG1714598-5 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	26-JUL-13
WG1714598-7 MS		**L1337666-5**						
Mercury (Hg)-Total			97.5		%		70-130	26-JUL-13
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-10 LCS								
Aluminum (Al)-Dissolved			96.9		%		80-120	01-AUG-13
Antimony (Sb)-Dissolved			102.0		%		80-120	01-AUG-13
Arsenic (As)-Dissolved			99.3		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-10 LCS								
Barium (Ba)-Dissolved			100.4		%		80-120	01-AUG-13
Beryllium (Be)-Dissolved			99.0		%		80-120	01-AUG-13
Bismuth (Bi)-Dissolved			105.8		%		80-120	01-AUG-13
Boron (B)-Dissolved			88.1		%		80-120	01-AUG-13
Cadmium (Cd)-Dissolved			107.4		%		80-120	01-AUG-13
Calcium (Ca)-Dissolved			102.3		%		80-120	01-AUG-13
Chromium (Cr)-Dissolved			104.1		%		80-120	01-AUG-13
Cobalt (Co)-Dissolved			100.8		%		80-120	01-AUG-13
Copper (Cu)-Dissolved			101.0		%		80-120	01-AUG-13
Iron (Fe)-Dissolved			97.1		%		80-120	01-AUG-13
Lead (Pb)-Dissolved			102.8		%		80-120	01-AUG-13
Lithium (Li)-Dissolved			103.4		%		80-120	01-AUG-13
Magnesium (Mg)-Dissolved			105.8		%		80-120	01-AUG-13
Manganese (Mn)-Dissolved			102.5		%		80-120	01-AUG-13
Molybdenum (Mo)-Dissolved			99.5		%		80-120	01-AUG-13
Nickel (Ni)-Dissolved			101.9		%		80-120	01-AUG-13
Potassium (K)-Dissolved			102.4		%		80-120	01-AUG-13
Selenium (Se)-Dissolved			104.7		%		80-120	01-AUG-13
Silver (Ag)-Dissolved			104.0		%		80-120	01-AUG-13
Sodium (Na)-Dissolved			105.3		%		80-120	01-AUG-13
Strontium (Sr)-Dissolved			93.0		%		80-120	01-AUG-13
Tellurium (Te)-Dissolved			103.9		%		80-120	01-AUG-13
Thallium (Tl)-Dissolved			104.0		%		80-120	01-AUG-13
Tin (Sn)-Dissolved			100.4		%		80-120	01-AUG-13
Titanium (Ti)-Dissolved			99.2		%		80-120	01-AUG-13
Tungsten (W)-Dissolved			97.7		%		80-120	01-AUG-13
Uranium (U)-Dissolved			99.8		%		80-120	01-AUG-13
Vanadium (V)-Dissolved			101.4		%		80-120	01-AUG-13
Zinc (Zn)-Dissolved			103.3		%		80-120	01-AUG-13
Zirconium (Zr)-Dissolved			81.5		%		80-120	01-AUG-13
WG1717992-14 LCS								
Aluminum (Al)-Dissolved			85.0		%		80-120	01-AUG-13
Antimony (Sb)-Dissolved			98.9		%		80-120	01-AUG-13
Arsenic (As)-Dissolved			96.0		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-14 LCS								
Barium (Ba)-Dissolved			95.3		%		80-120	01-AUG-13
Beryllium (Be)-Dissolved			95.5		%		80-120	01-AUG-13
Bismuth (Bi)-Dissolved			102.8		%		80-120	01-AUG-13
Boron (B)-Dissolved			87.1		%		80-120	01-AUG-13
Cadmium (Cd)-Dissolved			105.7		%		80-120	01-AUG-13
Calcium (Ca)-Dissolved			96.8		%		80-120	01-AUG-13
Chromium (Cr)-Dissolved			100.6		%		80-120	01-AUG-13
Cobalt (Co)-Dissolved			97.0		%		80-120	01-AUG-13
Copper (Cu)-Dissolved			95.8		%		80-120	01-AUG-13
Iron (Fe)-Dissolved			92.8		%		80-120	01-AUG-13
Lead (Pb)-Dissolved			99.8		%		80-120	01-AUG-13
Lithium (Li)-Dissolved			95.5		%		80-120	01-AUG-13
Magnesium (Mg)-Dissolved			94.3		%		80-120	01-AUG-13
Manganese (Mn)-Dissolved			98.2		%		80-120	01-AUG-13
Molybdenum (Mo)-Dissolved			96.8		%		80-120	01-AUG-13
Nickel (Ni)-Dissolved			95.9		%		80-120	01-AUG-13
Potassium (K)-Dissolved			98.0		%		80-120	01-AUG-13
Selenium (Se)-Dissolved			98.3		%		80-120	01-AUG-13
Silver (Ag)-Dissolved			101.4		%		80-120	01-AUG-13
Sodium (Na)-Dissolved			97.8		%		80-120	01-AUG-13
Strontium (Sr)-Dissolved			92.7		%		80-120	01-AUG-13
Tellurium (Te)-Dissolved			97.4		%		80-120	01-AUG-13
Thallium (Tl)-Dissolved			103.5		%		80-120	01-AUG-13
Tin (Sn)-Dissolved			100.1		%		80-120	01-AUG-13
Titanium (Ti)-Dissolved			95.0		%		80-120	01-AUG-13
Tungsten (W)-Dissolved			96.6		%		80-120	01-AUG-13
Uranium (U)-Dissolved			98.7		%		80-120	01-AUG-13
Vanadium (V)-Dissolved			96.4		%		80-120	01-AUG-13
Zinc (Zn)-Dissolved			97.6		%		80-120	01-AUG-13
Zirconium (Zr)-Dissolved			80.1		%		80-120	01-AUG-13
WG1717992-2 LCS								
Aluminum (Al)-Dissolved			93.7		%		80-120	01-AUG-13
Antimony (Sb)-Dissolved			100.3		%		80-120	01-AUG-13
Arsenic (As)-Dissolved			99.3		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-2 LCS								
Barium (Ba)-Dissolved			99.3		%		80-120	01-AUG-13
Beryllium (Be)-Dissolved			103.0		%		80-120	01-AUG-13
Bismuth (Bi)-Dissolved			103.4		%		80-120	01-AUG-13
Boron (B)-Dissolved			85.8		%		80-120	01-AUG-13
Cadmium (Cd)-Dissolved			106.9		%		80-120	01-AUG-13
Calcium (Ca)-Dissolved			102.6		%		80-120	01-AUG-13
Chromium (Cr)-Dissolved			103.6		%		80-120	01-AUG-13
Cobalt (Co)-Dissolved			99.8		%		80-120	01-AUG-13
Copper (Cu)-Dissolved			99.9		%		80-120	01-AUG-13
Iron (Fe)-Dissolved			96.7		%		80-120	01-AUG-13
Lead (Pb)-Dissolved			101.4		%		80-120	01-AUG-13
Lithium (Li)-Dissolved			101.0		%		80-120	01-AUG-13
Magnesium (Mg)-Dissolved			100.8		%		80-120	01-AUG-13
Manganese (Mn)-Dissolved			102.6		%		80-120	01-AUG-13
Molybdenum (Mo)-Dissolved			95.8		%		80-120	01-AUG-13
Nickel (Ni)-Dissolved			99.7		%		80-120	01-AUG-13
Potassium (K)-Dissolved			101.7		%		80-120	01-AUG-13
Selenium (Se)-Dissolved			99.2		%		80-120	01-AUG-13
Silver (Ag)-Dissolved			105.3		%		80-120	01-AUG-13
Sodium (Na)-Dissolved			103.3		%		80-120	01-AUG-13
Strontium (Sr)-Dissolved			93.3		%		80-120	01-AUG-13
Tellurium (Te)-Dissolved			104.5		%		80-120	01-AUG-13
Thallium (Tl)-Dissolved			102.1		%		80-120	01-AUG-13
Tin (Sn)-Dissolved			101.8		%		80-120	01-AUG-13
Titanium (Ti)-Dissolved			98.4		%		80-120	01-AUG-13
Tungsten (W)-Dissolved			97.1		%		80-120	01-AUG-13
Uranium (U)-Dissolved			97.2		%		80-120	01-AUG-13
Vanadium (V)-Dissolved			99.6		%		80-120	01-AUG-13
Zinc (Zn)-Dissolved			101.8		%		80-120	01-AUG-13
Zirconium (Zr)-Dissolved			86.1		%		80-120	01-AUG-13
WG1717992-6 LCS								
Aluminum (Al)-Dissolved			96.2		%		80-120	01-AUG-13
Antimony (Sb)-Dissolved			101.4		%		80-120	01-AUG-13
Arsenic (As)-Dissolved			100.1		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-6 LCS								
Barium (Ba)-Dissolved			99.9		%		80-120	01-AUG-13
Beryllium (Be)-Dissolved			100.4		%		80-120	01-AUG-13
Bismuth (Bi)-Dissolved			103.6		%		80-120	01-AUG-13
Boron (B)-Dissolved			88.1		%		80-120	01-AUG-13
Cadmium (Cd)-Dissolved			106.9		%		80-120	01-AUG-13
Calcium (Ca)-Dissolved			101.5		%		80-120	01-AUG-13
Chromium (Cr)-Dissolved			104.9		%		80-120	01-AUG-13
Cobalt (Co)-Dissolved			99.8		%		80-120	01-AUG-13
Copper (Cu)-Dissolved			102.6		%		80-120	01-AUG-13
Iron (Fe)-Dissolved			97.7		%		80-120	01-AUG-13
Lead (Pb)-Dissolved			102.0		%		80-120	01-AUG-13
Lithium (Li)-Dissolved			103.0		%		80-120	01-AUG-13
Magnesium (Mg)-Dissolved			103.7		%		80-120	01-AUG-13
Manganese (Mn)-Dissolved			104.1		%		80-120	01-AUG-13
Molybdenum (Mo)-Dissolved			101.6		%		80-120	01-AUG-13
Nickel (Ni)-Dissolved			101.0		%		80-120	01-AUG-13
Potassium (K)-Dissolved			104.0		%		80-120	01-AUG-13
Selenium (Se)-Dissolved			96.4		%		80-120	01-AUG-13
Silver (Ag)-Dissolved			103.1		%		80-120	01-AUG-13
Sodium (Na)-Dissolved			104.8		%		80-120	01-AUG-13
Strontium (Sr)-Dissolved			99.0		%		80-120	01-AUG-13
Tellurium (Te)-Dissolved			101.3		%		80-120	01-AUG-13
Thallium (Tl)-Dissolved			101.5		%		80-120	01-AUG-13
Tin (Sn)-Dissolved			101.9		%		80-120	01-AUG-13
Titanium (Ti)-Dissolved			99.1		%		80-120	01-AUG-13
Tungsten (W)-Dissolved			98.7		%		80-120	01-AUG-13
Uranium (U)-Dissolved			101.1		%		80-120	01-AUG-13
Vanadium (V)-Dissolved			100.4		%		80-120	01-AUG-13
Zinc (Zn)-Dissolved			105.0		%		80-120	01-AUG-13
Zirconium (Zr)-Dissolved			90.4		%		80-120	01-AUG-13
WG1717992-1 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-1 MB								
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Boron (B)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Dissolved			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
WG1717992-13 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-13 MB								
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Boron (B)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Dissolved			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
WG1717992-5 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-5 MB								
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Boron (B)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Dissolved			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
WG1717992-9 MB								
Aluminum (Al)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Dissolved			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-9 MB								
Barium (Ba)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Boron (B)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Dissolved			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Dissolved			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Dissolved			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Dissolved			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Dissolved			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Dissolved			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Dissolved			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Dissolved			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Dissolved			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Dissolved			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Dissolved			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Dissolved			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Dissolved			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Dissolved			<0.0010		mg/L		0.001	01-AUG-13
WG1717992-12 MS		**L1337632-20**						
Aluminum (Al)-Dissolved			89.1		%		70-130	01-AUG-13
Antimony (Sb)-Dissolved			106.1		%		70-130	01-AUG-13
Arsenic (As)-Dissolved			111.6		%		70-130	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-12 MS		**L1337632-20**						
Beryllium (Be)-Dissolved			112.2		%		70-130	01-AUG-13
Bismuth (Bi)-Dissolved			88.6		%		70-130	01-AUG-13
Boron (B)-Dissolved			101.7		%		70-130	01-AUG-13
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Chromium (Cr)-Dissolved			105.2		%		70-130	01-AUG-13
Cobalt (Co)-Dissolved			105.5		%		70-130	01-AUG-13
Copper (Cu)-Dissolved			99.9		%		70-130	01-AUG-13
Iron (Fe)-Dissolved			101.8		%		70-130	01-AUG-13
Lead (Pb)-Dissolved			101.1		%		70-130	01-AUG-13
Lithium (Li)-Dissolved			105.1		%		70-130	01-AUG-13
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Manganese (Mn)-Dissolved			106.8		%		70-130	01-AUG-13
Molybdenum (Mo)-Dissolved			104.5		%		70-130	01-AUG-13
Nickel (Ni)-Dissolved			100.8		%		70-130	01-AUG-13
Potassium (K)-Dissolved			106.6		%		70-130	01-AUG-13
Selenium (Se)-Dissolved			113.1		%		70-130	01-AUG-13
Silver (Ag)-Dissolved			108.7		%		70-130	01-AUG-13
Sodium (Na)-Dissolved			102.3		%		70-130	01-AUG-13
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Tellurium (Te)-Dissolved			115.1		%		70-130	01-AUG-13
Thallium (Tl)-Dissolved			97.6		%		70-130	01-AUG-13
Tin (Sn)-Dissolved			105.7		%		70-130	01-AUG-13
Titanium (Ti)-Dissolved			100.9		%		70-130	01-AUG-13
Tungsten (W)-Dissolved			102.8		%		70-130	01-AUG-13
Uranium (U)-Dissolved			102.5		%		70-130	01-AUG-13
Vanadium (V)-Dissolved			105.3		%		70-130	01-AUG-13
Zinc (Zn)-Dissolved			109.3		%		70-130	01-AUG-13
Zirconium (Zr)-Dissolved			97.8		%		70-130	01-AUG-13
WG1717992-4 MS		**L1337666-4**						
Aluminum (Al)-Dissolved			90.8		%		70-130	01-AUG-13
Antimony (Sb)-Dissolved			108.1		%		70-130	01-AUG-13
Arsenic (As)-Dissolved			116.2		%		70-130	01-AUG-13
Beryllium (Be)-Dissolved			112.9		%		70-130	01-AUG-13
Bismuth (Bi)-Dissolved			85.6		%		70-130	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-4 MS		**L1337666-4**						
Boron (B)-Dissolved			99.7		%		70-130	01-AUG-13
Calcium (Ca)-Dissolved			103.8		%		70-130	01-AUG-13
Chromium (Cr)-Dissolved			109.8		%		70-130	01-AUG-13
Cobalt (Co)-Dissolved			110.9		%		70-130	01-AUG-13
Copper (Cu)-Dissolved			102.4		%		70-130	01-AUG-13
Iron (Fe)-Dissolved			107.1		%		70-130	01-AUG-13
Lead (Pb)-Dissolved			107.0		%		70-130	01-AUG-13
Lithium (Li)-Dissolved			110.4		%		70-130	01-AUG-13
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Manganese (Mn)-Dissolved			110.6		%		70-130	01-AUG-13
Molybdenum (Mo)-Dissolved			99.7		%		70-130	01-AUG-13
Nickel (Ni)-Dissolved			101.4		%		70-130	01-AUG-13
Potassium (K)-Dissolved			110.9		%		70-130	01-AUG-13
Selenium (Se)-Dissolved			120.1		%		70-130	01-AUG-13
Silver (Ag)-Dissolved			114.1		%		70-130	01-AUG-13
Sodium (Na)-Dissolved			96.7		%		70-130	01-AUG-13
Strontium (Sr)-Dissolved			96.3		%		70-130	01-AUG-13
Tellurium (Te)-Dissolved			118.1		%		70-130	01-AUG-13
Thallium (Tl)-Dissolved			102.2		%		70-130	01-AUG-13
Tin (Sn)-Dissolved			108.4		%		70-130	01-AUG-13
Titanium (Ti)-Dissolved			107.4		%		70-130	01-AUG-13
Tungsten (W)-Dissolved			103.0		%		70-130	01-AUG-13
Uranium (U)-Dissolved			108.0		%		70-130	01-AUG-13
Vanadium (V)-Dissolved			110.6		%		70-130	01-AUG-13
Zinc (Zn)-Dissolved			114.1		%		70-130	01-AUG-13
Zirconium (Zr)-Dissolved			98.8		%		70-130	01-AUG-13
WG1717992-8 MS		**L1338344-2**						
Aluminum (Al)-Dissolved			105.6		%		70-130	01-AUG-13
Antimony (Sb)-Dissolved			107.4		%		70-130	01-AUG-13
Arsenic (As)-Dissolved			119.7		%		70-130	01-AUG-13
Barium (Ba)-Dissolved			118.2		%		70-130	01-AUG-13
Beryllium (Be)-Dissolved			110.6		%		70-130	01-AUG-13
Bismuth (Bi)-Dissolved			82.3		%		70-130	01-AUG-13
Boron (B)-Dissolved			109.8		%		70-130	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-MS-TB	**Water**							
Batch R2664664								
WG1717992-8 MS		**L1338344-2**						
Calcium (Ca)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Chromium (Cr)-Dissolved			111.0		%		70-130	01-AUG-13
Cobalt (Co)-Dissolved			110.9		%		70-130	01-AUG-13
Copper (Cu)-Dissolved			109.6		%		70-130	01-AUG-13
Iron (Fe)-Dissolved			106.6		%		70-130	01-AUG-13
Lead (Pb)-Dissolved			110.1		%		70-130	01-AUG-13
Lithium (Li)-Dissolved			111.5		%		70-130	01-AUG-13
Magnesium (Mg)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Manganese (Mn)-Dissolved			112.6		%		70-130	01-AUG-13
Molybdenum (Mo)-Dissolved			106.1		%		70-130	01-AUG-13
Nickel (Ni)-Dissolved			106.8		%		70-130	01-AUG-13
Potassium (K)-Dissolved			107.4		%		70-130	01-AUG-13
Selenium (Se)-Dissolved			117.4		%		70-130	01-AUG-13
Silver (Ag)-Dissolved			114.2		%		70-130	01-AUG-13
Sodium (Na)-Dissolved			99.4		%		70-130	01-AUG-13
Strontium (Sr)-Dissolved			N/A	MS-B	%		-	01-AUG-13
Tellurium (Te)-Dissolved			116.7		%		70-130	01-AUG-13
Thallium (Tl)-Dissolved			104.4		%		70-130	01-AUG-13
Tin (Sn)-Dissolved			109.1		%		70-130	01-AUG-13
Titanium (Ti)-Dissolved			103.0		%		70-130	01-AUG-13
Tungsten (W)-Dissolved			107.2		%		70-130	01-AUG-13
Uranium (U)-Dissolved			111.6		%		70-130	01-AUG-13
Vanadium (V)-Dissolved			113.1		%		70-130	01-AUG-13
Zinc (Zn)-Dissolved			121.1		%		70-130	01-AUG-13
Zirconium (Zr)-Dissolved			104.5		%		70-130	01-AUG-13
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-11 DUP		**L1337914-16**						
Aluminum (Al)-Total		0.0718	0.0659		mg/L	8.5	20	01-AUG-13
Antimony (Sb)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	20	01-AUG-13
Arsenic (As)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Barium (Ba)-Total		0.013	0.012		mg/L	5.6	20	01-AUG-13
Beryllium (Be)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Bismuth (Bi)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-11 DUP		**L1337914-16**						
Boron (B)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	01-AUG-13
Cadmium (Cd)-Total		<0.000017	<0.000017	RPD-NA	mg/L	N/A	20	01-AUG-13
Calcium (Ca)-Total		21.3	19.9		mg/L	6.7	20	01-AUG-13
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Cobalt (Co)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	01-AUG-13
Copper (Cu)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Iron (Fe)-Total		1.52	1.41		mg/L	7.8	20	01-AUG-13
Lead (Pb)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Lithium (Li)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	20	01-AUG-13
Magnesium (Mg)-Total		2.73	2.54		mg/L	7.4	20	01-AUG-13
Manganese (Mn)-Total		0.0454	0.0429		mg/L	5.6	20	01-AUG-13
Molybdenum (Mo)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	01-AUG-13
Potassium (K)-Total		0.58	0.55		mg/L	6.3	20	01-AUG-13
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	01-AUG-13
Sodium (Na)-Total		1.65	1.54		mg/L	7.0	20	01-AUG-13
Strontium (Sr)-Total		0.0366	0.0342		mg/L	7.0	20	01-AUG-13
Tellurium (Te)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Thallium (Tl)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	01-AUG-13
Tin (Sn)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Titanium (Ti)-Total		0.0026	0.0023		mg/L	12	20	01-AUG-13
Tungsten (W)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	01-AUG-13
Uranium (U)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	01-AUG-13
Vanadium (V)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
Zinc (Zn)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	01-AUG-13
Zirconium (Zr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	20	01-AUG-13
WG1714600-10 LCS								
Aluminum (Al)-Total			91.4		%		80-120	01-AUG-13
Antimony (Sb)-Total			101.4		%		80-120	01-AUG-13
Arsenic (As)-Total			98.8		%		80-120	01-AUG-13
Barium (Ba)-Total			100.6		%		80-120	01-AUG-13
Beryllium (Be)-Total			96.7		%		80-120	01-AUG-13
Bismuth (Bi)-Total			103.7		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-10 LCS								
Boron (B)-Total			87.7		%		80-120	01-AUG-13
Cadmium (Cd)-Total			106.9		%		80-120	01-AUG-13
Calcium (Ca)-Total			102.2		%		80-120	01-AUG-13
Chromium (Cr)-Total			101.2		%		80-120	01-AUG-13
Cobalt (Co)-Total			97.9		%		80-120	01-AUG-13
Copper (Cu)-Total			102.1		%		80-120	01-AUG-13
Iron (Fe)-Total			96.0		%		80-120	01-AUG-13
Lead (Pb)-Total			102.2		%		80-120	01-AUG-13
Lithium (Li)-Total			93.8		%		80-120	01-AUG-13
Magnesium (Mg)-Total			97.8		%		80-120	01-AUG-13
Manganese (Mn)-Total			102.3		%		80-120	01-AUG-13
Molybdenum (Mo)-Total			97.9		%		80-120	01-AUG-13
Nickel (Ni)-Total			102.8		%		80-120	01-AUG-13
Potassium (K)-Total			99.2		%		80-120	01-AUG-13
Selenium (Se)-Total			98.0		%		80-120	01-AUG-13
Silver (Ag)-Total			105.2		%		80-120	01-AUG-13
Sodium (Na)-Total			100.9		%		80-120	01-AUG-13
Strontium (Sr)-Total			94.2		%		80-120	01-AUG-13
Tellurium (Te)-Total			102.7		%		80-120	01-AUG-13
Thallium (Tl)-Total			101.2		%		80-120	01-AUG-13
Tin (Sn)-Total			103.8		%		80-120	01-AUG-13
Titanium (Ti)-Total			95.3		%		80-120	01-AUG-13
Tungsten (W)-Total			100.1		%		80-120	01-AUG-13
Uranium (U)-Total			98.4		%		80-120	01-AUG-13
Vanadium (V)-Total			100.5		%		80-120	01-AUG-13
Zinc (Zn)-Total			101.4		%		80-120	01-AUG-13
Zirconium (Zr)-Total			86.1		%		80-120	01-AUG-13
WG1714600-2 LCS								
Aluminum (Al)-Total			99.5		%		80-120	01-AUG-13
Antimony (Sb)-Total			106.7		%		80-120	01-AUG-13
Arsenic (As)-Total			103.4		%		80-120	01-AUG-13
Barium (Ba)-Total			104.4		%		80-120	01-AUG-13
Beryllium (Be)-Total			101.7		%		80-120	01-AUG-13
Bismuth (Bi)-Total			112.8		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-2 LCS								
Boron (B)-Total			89.0		%		80-120	01-AUG-13
Cadmium (Cd)-Total			114.0		%		80-120	01-AUG-13
Calcium (Ca)-Total			105.3		%		80-120	01-AUG-13
Chromium (Cr)-Total			107.8		%		80-120	01-AUG-13
Cobalt (Co)-Total			100.8		%		80-120	01-AUG-13
Copper (Cu)-Total			106.7		%		80-120	01-AUG-13
Iron (Fe)-Total			102.1		%		80-120	01-AUG-13
Lead (Pb)-Total			108.7		%		80-120	01-AUG-13
Lithium (Li)-Total			100.6		%		80-120	01-AUG-13
Magnesium (Mg)-Total			105.4		%		80-120	01-AUG-13
Manganese (Mn)-Total			107.7		%		80-120	01-AUG-13
Molybdenum (Mo)-Total			103.2		%		80-120	01-AUG-13
Nickel (Ni)-Total			105.7		%		80-120	01-AUG-13
Potassium (K)-Total			104.7		%		80-120	01-AUG-13
Selenium (Se)-Total			102.2		%		80-120	01-AUG-13
Silver (Ag)-Total			107.8		%		80-120	01-AUG-13
Sodium (Na)-Total			105.8		%		80-120	01-AUG-13
Strontium (Sr)-Total			101.4		%		80-120	01-AUG-13
Tellurium (Te)-Total			107.1		%		80-120	01-AUG-13
Thallium (Tl)-Total			107.6		%		80-120	01-AUG-13
Tin (Sn)-Total			105.1		%		80-120	01-AUG-13
Titanium (Ti)-Total			103.5		%		80-120	01-AUG-13
Tungsten (W)-Total			105.7		%		80-120	01-AUG-13
Uranium (U)-Total			106.8		%		80-120	01-AUG-13
Vanadium (V)-Total			105.6		%		80-120	01-AUG-13
Zinc (Zn)-Total			107.3		%		80-120	01-AUG-13
Zirconium (Zr)-Total			90.3		%		80-120	01-AUG-13
WG1714600-6 LCS								
Aluminum (Al)-Total			90.5		%		80-120	01-AUG-13
Antimony (Sb)-Total			101.9		%		80-120	01-AUG-13
Arsenic (As)-Total			96.7		%		80-120	01-AUG-13
Barium (Ba)-Total			100.2		%		80-120	01-AUG-13
Beryllium (Be)-Total			98.4		%		80-120	01-AUG-13
Bismuth (Bi)-Total			103.8		%		80-120	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-6 LCS								
Boron (B)-Total			87.2		%		80-120	01-AUG-13
Cadmium (Cd)-Total			108.2		%		80-120	01-AUG-13
Calcium (Ca)-Total			100.4		%		80-120	01-AUG-13
Chromium (Cr)-Total			103.1		%		80-120	01-AUG-13
Cobalt (Co)-Total			98.3		%		80-120	01-AUG-13
Copper (Cu)-Total			99.7		%		80-120	01-AUG-13
Iron (Fe)-Total			97.3		%		80-120	01-AUG-13
Lead (Pb)-Total			102.7		%		80-120	01-AUG-13
Lithium (Li)-Total			95.5		%		80-120	01-AUG-13
Magnesium (Mg)-Total			97.6		%		80-120	01-AUG-13
Manganese (Mn)-Total			101.1		%		80-120	01-AUG-13
Molybdenum (Mo)-Total			96.1		%		80-120	01-AUG-13
Nickel (Ni)-Total			100.3		%		80-120	01-AUG-13
Potassium (K)-Total			97.4		%		80-120	01-AUG-13
Selenium (Se)-Total			101.1		%		80-120	01-AUG-13
Silver (Ag)-Total			104.4		%		80-120	01-AUG-13
Sodium (Na)-Total			98.3		%		80-120	01-AUG-13
Strontium (Sr)-Total			94.2		%		80-120	01-AUG-13
Tellurium (Te)-Total			101.2		%		80-120	01-AUG-13
Thallium (Tl)-Total			102.0		%		80-120	01-AUG-13
Tin (Sn)-Total			102.8		%		80-120	01-AUG-13
Titanium (Ti)-Total			96.9		%		80-120	01-AUG-13
Tungsten (W)-Total			98.5		%		80-120	01-AUG-13
Uranium (U)-Total			99.2		%		80-120	01-AUG-13
Vanadium (V)-Total			98.0		%		80-120	01-AUG-13
Zinc (Zn)-Total			99.3		%		80-120	01-AUG-13
Zirconium (Zr)-Total			85.1		%		80-120	01-AUG-13
WG1714600-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Total			<0.0010		mg/L		0.001	01-AUG-13
Barium (Ba)-Total			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Total			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-1 MB								
Boron (B)-Total			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Total			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Total			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Total			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Total			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Total			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Total			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Total			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Total			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Total			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Total			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Total			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Total			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Total			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Total			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Total			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Total			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Total			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	01-AUG-13
WG1714600-5 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Total			<0.0010		mg/L		0.001	01-AUG-13
Barium (Ba)-Total			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Total			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-5 MB								
Boron (B)-Total			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Total			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Total			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Total			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Total			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Total			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Total			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Total			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Total			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Total			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Total			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Total			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Total			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Total			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Total			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Total			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Total			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Total			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	01-AUG-13
WG1714600-9 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	01-AUG-13
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	01-AUG-13
Arsenic (As)-Total			<0.0010		mg/L		0.001	01-AUG-13
Barium (Ba)-Total			<0.010		mg/L		0.01	01-AUG-13
Beryllium (Be)-Total			<0.0010		mg/L		0.001	01-AUG-13
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-9 MB								
Boron (B)-Total			<0.050		mg/L		0.05	01-AUG-13
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	01-AUG-13
Calcium (Ca)-Total			<0.20		mg/L		0.2	01-AUG-13
Chromium (Cr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	01-AUG-13
Copper (Cu)-Total			<0.0010		mg/L		0.001	01-AUG-13
Iron (Fe)-Total			<0.020		mg/L		0.02	01-AUG-13
Lead (Pb)-Total			<0.0010		mg/L		0.001	01-AUG-13
Lithium (Li)-Total			<0.050		mg/L		0.05	01-AUG-13
Magnesium (Mg)-Total			<0.020		mg/L		0.02	01-AUG-13
Manganese (Mn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	01-AUG-13
Nickel (Ni)-Total			<0.0020		mg/L		0.002	01-AUG-13
Potassium (K)-Total			<0.50		mg/L		0.5	01-AUG-13
Selenium (Se)-Total			<0.0010		mg/L		0.001	01-AUG-13
Silver (Ag)-Total			<0.00010		mg/L		0.0001	01-AUG-13
Sodium (Na)-Total			<0.10		mg/L		0.1	01-AUG-13
Strontium (Sr)-Total			<0.0010		mg/L		0.001	01-AUG-13
Tellurium (Te)-Total			<0.0010		mg/L		0.001	01-AUG-13
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	01-AUG-13
Tin (Sn)-Total			<0.0010		mg/L		0.001	01-AUG-13
Titanium (Ti)-Total			<0.0020		mg/L		0.002	01-AUG-13
Tungsten (W)-Total			<0.010		mg/L		0.01	01-AUG-13
Uranium (U)-Total			<0.0050		mg/L		0.005	01-AUG-13
Vanadium (V)-Total			<0.0010		mg/L		0.001	01-AUG-13
Zinc (Zn)-Total			<0.0030		mg/L		0.003	01-AUG-13
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	01-AUG-13
WG1714600-12 MS		**L1337914-16**						
Aluminum (Al)-Total			92.8		%		70-130	01-AUG-13
Antimony (Sb)-Total			103.7		%		70-130	01-AUG-13
Arsenic (As)-Total			109.6		%		70-130	01-AUG-13
Barium (Ba)-Total			103.7		%		70-130	01-AUG-13
Beryllium (Be)-Total			103.4		%		70-130	01-AUG-13
Bismuth (Bi)-Total			107.8		%		70-130	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-12 MS		**L1337914-16**						
Boron (B)-Total			97.7		%		70-130	01-AUG-13
Calcium (Ca)-Total			N/A	MS-B	%		-	01-AUG-13
Chromium (Cr)-Total			108.3		%		70-130	01-AUG-13
Cobalt (Co)-Total			107.8		%		70-130	01-AUG-13
Copper (Cu)-Total			100.8		%		70-130	01-AUG-13
Iron (Fe)-Total			103.0		%		70-130	01-AUG-13
Lead (Pb)-Total			104.5		%		70-130	01-AUG-13
Lithium (Li)-Total			107.1		%		70-130	01-AUG-13
Magnesium (Mg)-Total			N/A	MS-B	%		-	01-AUG-13
Manganese (Mn)-Total			N/A	MS-B	%		-	01-AUG-13
Molybdenum (Mo)-Total			104.7		%		70-130	01-AUG-13
Nickel (Ni)-Total			98.9		%		70-130	01-AUG-13
Potassium (K)-Total			99.1		%		70-130	01-AUG-13
Selenium (Se)-Total			101.9		%		70-130	01-AUG-13
Silver (Ag)-Total			110.6		%		70-130	01-AUG-13
Sodium (Na)-Total			84.3		%		70-130	01-AUG-13
Strontium (Sr)-Total			N/A	MS-B	%		-	01-AUG-13
Tellurium (Te)-Total			99.9		%		70-130	01-AUG-13
Thallium (Tl)-Total			100.6		%		70-130	01-AUG-13
Tin (Sn)-Total			109.0		%		70-130	01-AUG-13
Titanium (Ti)-Total			105.9		%		70-130	01-AUG-13
Tungsten (W)-Total			106.1		%		70-130	01-AUG-13
Uranium (U)-Total			108.8		%		70-130	01-AUG-13
Vanadium (V)-Total			109.0		%		70-130	01-AUG-13
Zinc (Zn)-Total			96.7		%		70-130	01-AUG-13
Zirconium (Zr)-Total			101.9		%		70-130	01-AUG-13
WG1714600-4 MS		**L1337632-20**						
Aluminum (Al)-Total			88.6		%		70-130	01-AUG-13
Antimony (Sb)-Total			101.9		%		70-130	01-AUG-13
Arsenic (As)-Total			108.0		%		70-130	01-AUG-13
Beryllium (Be)-Total			105.3		%		70-130	01-AUG-13
Bismuth (Bi)-Total			105.1		%		70-130	01-AUG-13
Boron (B)-Total			94.5		%		70-130	01-AUG-13
Calcium (Ca)-Total			N/A	MS-B	%		-	01-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2664690								
WG1714600-4 MS		**L1337632-20**						
Chromium (Cr)-Total			105.2		%		70-130	01-AUG-13
Cobalt (Co)-Total			103.8		%		70-130	01-AUG-13
Copper (Cu)-Total			97.7		%		70-130	01-AUG-13
Iron (Fe)-Total			101.0		%		70-130	01-AUG-13
Lead (Pb)-Total			102.2		%		70-130	01-AUG-13
Lithium (Li)-Total			103.2		%		70-130	01-AUG-13
Magnesium (Mg)-Total			N/A	MS-B	%		-	01-AUG-13
Manganese (Mn)-Total			106.8		%		70-130	01-AUG-13
Molybdenum (Mo)-Total			108.1		%		70-130	01-AUG-13
Nickel (Ni)-Total			99.7		%		70-130	01-AUG-13
Potassium (K)-Total			107.1		%		70-130	01-AUG-13
Selenium (Se)-Total			105.7		%		70-130	01-AUG-13
Silver (Ag)-Total			109.5		%		70-130	01-AUG-13
Sodium (Na)-Total			93.9		%		70-130	01-AUG-13
Strontium (Sr)-Total			N/A	MS-B	%		-	01-AUG-13
Tellurium (Te)-Total			99.8		%		70-130	01-AUG-13
Thallium (Tl)-Total			99.0		%		70-130	01-AUG-13
Tin (Sn)-Total			105.5		%		70-130	01-AUG-13
Titanium (Ti)-Total			102.9		%		70-130	01-AUG-13
Tungsten (W)-Total			105.5		%		70-130	01-AUG-13
Uranium (U)-Total			106.4		%		70-130	01-AUG-13
Vanadium (V)-Total			108.9		%		70-130	01-AUG-13
Zinc (Zn)-Total			97.5		%		70-130	01-AUG-13
Zirconium (Zr)-Total			101.9		%		70-130	01-AUG-13
Batch R2667228								
WG1714600-14 LCS								
Aluminum (Al)-Total			95.0		%		80-120	06-AUG-13
Antimony (Sb)-Total			99.0		%		80-120	06-AUG-13
Arsenic (As)-Total			97.8		%		80-120	06-AUG-13
Barium (Ba)-Total			98.6		%		80-120	06-AUG-13
Beryllium (Be)-Total			93.0		%		80-120	06-AUG-13
Bismuth (Bi)-Total			101.8		%		80-120	06-AUG-13
Boron (B)-Total			99.4		%		80-120	06-AUG-13
Cadmium (Cd)-Total			100.8		%		80-120	06-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2667228								
WG1714600-14 LCS								
Calcium (Ca)-Total			98.6		%		80-120	06-AUG-13
Chromium (Cr)-Total			100.2		%		80-120	06-AUG-13
Cobalt (Co)-Total			98.7		%		80-120	06-AUG-13
Copper (Cu)-Total			101.0		%		80-120	06-AUG-13
Iron (Fe)-Total			106.3		%		80-120	06-AUG-13
Lead (Pb)-Total			98.6		%		80-120	06-AUG-13
Lithium (Li)-Total			88.2		%		80-120	06-AUG-13
Magnesium (Mg)-Total			103.0		%		80-120	06-AUG-13
Manganese (Mn)-Total			101.4		%		80-120	06-AUG-13
Molybdenum (Mo)-Total			99.3		%		80-120	06-AUG-13
Nickel (Ni)-Total			103.7		%		80-120	06-AUG-13
Potassium (K)-Total			99.9		%		80-120	06-AUG-13
Selenium (Se)-Total			91.1		%		80-120	06-AUG-13
Silver (Ag)-Total			100.4		%		80-120	06-AUG-13
Sodium (Na)-Total			102.7		%		80-120	06-AUG-13
Strontium (Sr)-Total			94.3		%		80-120	06-AUG-13
Tellurium (Te)-Total			96.7		%		80-120	06-AUG-13
Thallium (Tl)-Total			101.0		%		80-120	06-AUG-13
Tin (Sn)-Total			97.2		%		80-120	06-AUG-13
Titanium (Ti)-Total			90.4		%		80-120	06-AUG-13
Tungsten (W)-Total			96.5		%		80-120	06-AUG-13
Uranium (U)-Total			95.8		%		80-120	06-AUG-13
Vanadium (V)-Total			98.6		%		80-120	06-AUG-13
Zinc (Zn)-Total			101.9		%		80-120	06-AUG-13
Zirconium (Zr)-Total			82.1		%		80-120	06-AUG-13
WG1714600-13 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.005	06-AUG-13
Antimony (Sb)-Total			<0.00060		mg/L		0.0006	06-AUG-13
Arsenic (As)-Total			<0.0010		mg/L		0.001	06-AUG-13
Barium (Ba)-Total			<0.010		mg/L		0.01	06-AUG-13
Beryllium (Be)-Total			<0.0010		mg/L		0.001	06-AUG-13
Bismuth (Bi)-Total			<0.0010		mg/L		0.001	06-AUG-13
Boron (B)-Total			<0.050		mg/L		0.05	06-AUG-13
Cadmium (Cd)-Total			<0.000017		mg/L		0.000017	06-AUG-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-TB	**Water**							
Batch R2667228								
WG1714600-13 MB								
Calcium (Ca)-Total			<0.20		mg/L		0.2	06-AUG-13
Chromium (Cr)-Total			<0.0010		mg/L		0.001	06-AUG-13
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	06-AUG-13
Copper (Cu)-Total			<0.0010		mg/L		0.001	06-AUG-13
Iron (Fe)-Total			<0.020		mg/L		0.02	06-AUG-13
Lead (Pb)-Total			<0.0010		mg/L		0.001	06-AUG-13
Lithium (Li)-Total			<0.050		mg/L		0.05	06-AUG-13
Magnesium (Mg)-Total			<0.020		mg/L		0.02	06-AUG-13
Manganese (Mn)-Total			<0.0010		mg/L		0.001	06-AUG-13
Molybdenum (Mo)-Total			<0.0010		mg/L		0.001	06-AUG-13
Nickel (Ni)-Total			<0.0020		mg/L		0.002	06-AUG-13
Potassium (K)-Total			<0.50		mg/L		0.5	06-AUG-13
Selenium (Se)-Total			<0.0010		mg/L		0.001	06-AUG-13
Silver (Ag)-Total			<0.00010		mg/L		0.0001	06-AUG-13
Sodium (Na)-Total			<0.10		mg/L		0.1	06-AUG-13
Strontium (Sr)-Total			<0.0010		mg/L		0.001	06-AUG-13
Tellurium (Te)-Total			<0.0010		mg/L		0.001	06-AUG-13
Thallium (Tl)-Total			<0.00030		mg/L		0.0003	06-AUG-13
Tin (Sn)-Total			<0.0010		mg/L		0.001	06-AUG-13
Titanium (Ti)-Total			<0.0020		mg/L		0.002	06-AUG-13
Tungsten (W)-Total			<0.010		mg/L		0.01	06-AUG-13
Uranium (U)-Total			<0.0050		mg/L		0.005	06-AUG-13
Vanadium (V)-Total			<0.0010		mg/L		0.001	06-AUG-13
Zinc (Zn)-Total			<0.0030		mg/L		0.003	06-AUG-13
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	06-AUG-13
NH3-COL-TB	**Water**							
Batch R2657960								
WG1714611-10 LCS								
Ammonia, Total (as N)			97.3		%		85-115	26-JUL-13
WG1714611-14 LCS								
Ammonia, Total (as N)			97.0		%		85-115	26-JUL-13
WG1714611-18 LCS								
Ammonia, Total (as N)			94.4		%		85-115	26-JUL-13
WG1714611-2 LCS								
Ammonia, Total (as N)			96.3		%		85-115	26-JUL-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2657960								
WG1714611-22 LCS								
Ammonia, Total (as N)			97.4		%		85-115	26-JUL-13
WG1714611-6 LCS								
Ammonia, Total (as N)			93.5		%		85-115	26-JUL-13
WG1714611-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-13 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-17 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-21 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	26-JUL-13
WG1714611-16 MS		**L1337291-9**						
Ammonia, Total (as N)			87.5		%		75-125	26-JUL-13
WG1714611-20 MS		**L1337663-6**						
Ammonia, Total (as N)			91.1		%		75-125	26-JUL-13
WG1714611-24 MS		**L1337632-13**						
Ammonia, Total (as N)			91.6		%		75-125	26-JUL-13
WG1714611-4 MS		**L1336878-1**						
Ammonia, Total (as N)			N/A	MS-B	%		-	26-JUL-13
WG1714611-8 MS		**L1337168-8**						
Ammonia, Total (as N)			78.2		%		75-125	26-JUL-13
Batch R2662392								
WG1716816-10 LCS								
Ammonia, Total (as N)			98.5		%		85-115	30-JUL-13
WG1716816-2 LCS								
Ammonia, Total (as N)			96.8		%		85-115	30-JUL-13
WG1716816-6 LCS								
Ammonia, Total (as N)			97.3		%		85-115	30-JUL-13
WG1716816-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	30-JUL-13
WG1716816-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	30-JUL-13
WG1716816-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	30-JUL-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2662392								
WG1716816-12 MS		**L1338443-1**						
Ammonia, Total (as N)			87.0		%		75-125	30-JUL-13
WG1716816-8 MS		**L1337666-8**						
Ammonia, Total (as N)			N/A	MS-B	%		-	30-JUL-13
NO2-IC-TB	**Water**							
Batch R2658280								
WG1716076-2 LCS								
Nitrite (as N)			97.2		%		90-110	28-JUL-13
WG1716076-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	28-JUL-13
WG1716076-4 MS		**L1337999-1**						
Nitrite (as N)			107.4		%		75-115	28-JUL-13
Batch R2660328								
WG1715671-6 LCS								
Nitrite (as N)			100.2		%		90-110	29-JUL-13
WG1715671-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	29-JUL-13
WG1715671-8 MS		**L1338443-1**						
Nitrite (as N)			103.8		%		75-115	29-JUL-13
Batch R2662220								
WG1716962-13 LCS								
Nitrite (as N)			99.3		%		90-110	30-JUL-13
WG1716962-2 LCS								
Nitrite (as N)			98.1		%		90-110	30-JUL-13
WG1716962-5 LCS								
Nitrite (as N)			101.6		%		90-110	30-JUL-13
WG1716962-9 LCS								
Nitrite (as N)			99.7		%		90-110	30-JUL-13
WG1716962-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	30-JUL-13
WG1716962-12 MB								
Nitrite (as N)			<0.020		mg/L		0.02	30-JUL-13
WG1716962-8 MB								
Nitrite (as N)			<0.020		mg/L		0.02	30-JUL-13
WG1716962-7 MS		**L1338638-1**						
Nitrite (as N)			91.3		%		75-115	30-JUL-13
NO3-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2658280								
WG1716076-2 LCS								
Nitrate (as N)			99.7		%		90-110	28-JUL-13
WG1716076-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	28-JUL-13
WG1716076-4 MS		**L1337999-1**						
Nitrate (as N)			110.0		%		75-125	28-JUL-13
Batch R2660328								
WG1715671-6 LCS								
Nitrate (as N)			102.2		%		90-110	29-JUL-13
WG1715671-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	29-JUL-13
WG1715671-8 MS		**L1338443-1**						
Nitrate (as N)			106.7		%		75-125	29-JUL-13
Batch R2662220								
WG1716962-13 LCS								
Nitrate (as N)			104.8		%		90-110	30-JUL-13
WG1716962-2 LCS								
Nitrate (as N)			102.2		%		90-110	30-JUL-13
WG1716962-5 LCS								
Nitrate (as N)			103.9		%		90-110	30-JUL-13
WG1716962-9 LCS								
Nitrate (as N)			103.9		%		90-110	30-JUL-13
WG1716962-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	30-JUL-13
WG1716962-12 MB								
Nitrate (as N)			<0.030		mg/L		0.03	30-JUL-13
WG1716962-8 MB								
Nitrate (as N)			<0.030		mg/L		0.03	30-JUL-13
WG1716962-4 MS		**L1338403-2**						
Nitrate (as N)			79.9		%		75-125	30-JUL-13
WG1716962-7 MS		**L1338638-1**						
Nitrate (as N)			95.6		%		75-125	30-JUL-13
OGG-TOT-WT	**Water**							
Batch R2664144								
WG1715992-2 LCS								
Oil and Grease, Total			106.6		%		70-130	29-JUL-13
WG1715992-3 LCSD		**WG1715992-2**						
Oil and Grease, Total		106.6	104		%	2.8	40	29-JUL-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
OGG-TOT-WT	**Water**							
Batch R2664144								
WG1715992-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	29-JUL-13
P-T-COL-TB	**Water**							
Batch R2660379								
WG1715880-10 LCS								
Phosphorus (P)-Total			100.1		%		80-120	29-JUL-13
WG1715880-2 LCS								
Phosphorus (P)-Total			102.7		%		80-120	29-JUL-13
WG1715880-6 LCS								
Phosphorus (P)-Total			102.0		%		80-120	29-JUL-13
WG1715880-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	29-JUL-13
WG1715880-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	29-JUL-13
WG1715880-9 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	29-JUL-13
WG1715880-12 MS		**L1337574-4**						
Phosphorus (P)-Total			92.5		%		70-130	29-JUL-13
WG1715880-4 MS		**L1337663-15**						
Phosphorus (P)-Total			95.0		%		70-130	29-JUL-13
WG1715880-8 MS		**L1337666-3**						
Phosphorus (P)-Total			77.8		%		70-130	29-JUL-13
Batch R2662515								
WG1716304-2 LCS								
Phosphorus (P)-Total			104.6		%		80-120	31-JUL-13
WG1716304-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	31-JUL-13
WG1716304-4 MS		**L1337999-2**						
Phosphorus (P)-Total			93.3		%		70-130	31-JUL-13
PH-CAP-TB	**Water**							
Batch R2658224								
WG1714268-6 DUP		**L1337914-11**						
pH		7.26	7.26	J	pH	0.00	0.2	26-JUL-13
WG1714268-11 LCS								
pH			6.01		pH		5.9-6.1	26-JUL-13
WG1714268-5 LCS								
pH			6.02		pH		5.9-6.1	26-JUL-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-CAP-TB	**Water**							
Batch R2658224								
WG1714268-8 LCS								
pH			6.01		pH		5.9-6.1	26-JUL-13
SO4-IC-TB	**Water**							
Batch R2658280								
WG1716076-2 LCS								
Sulfate (SO4)			97.4		%		90-110	28-JUL-13
WG1716076-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	28-JUL-13
WG1716076-4 MS		**L1337999-1**						
Sulfate (SO4)			108.0		%		75-125	28-JUL-13
Batch R2660328								
WG1715671-6 LCS								
Sulfate (SO4)			103.8		%		90-110	29-JUL-13
WG1715671-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	29-JUL-13
WG1715671-8 MS		**L1338443-1**						
Sulfate (SO4)			104.8		%		75-125	29-JUL-13
Batch R2662220								
WG1716962-13 LCS								
Sulfate (SO4)			107.0		%		90-110	30-JUL-13
WG1716962-2 LCS								
Sulfate (SO4)			105.5		%		90-110	30-JUL-13
WG1716962-5 LCS								
Sulfate (SO4)			108.5		%		90-110	30-JUL-13
WG1716962-9 LCS								
Sulfate (SO4)			106.8		%		90-110	30-JUL-13
WG1716962-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-JUL-13
WG1716962-12 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-JUL-13
WG1716962-8 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-JUL-13
WG1716962-11 MS		**L1337291-13**						
Sulfate (SO4)			91.5		%		75-125	30-JUL-13
WG1716962-4 MS		**L1338403-2**						
Sulfate (SO4)			82.4		%		75-125	30-JUL-13
WG1716962-7 MS		**L1338638-1**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2662220								
WG1716962-7 MS		**L1338638-1**						
Sulfate (SO4)			98.6		%		75-125	30-JUL-13
SOLIDS-TOTSUS-TB	**Water**							
Batch R2658040								
WG1714284-2 LCS								
Total Suspended Solids			94.8		%		85-115	26-JUL-13
WG1714284-1 MB								
Total Suspended Solids			<2.0		mg/L		2	26-JUL-13
Batch R2660481								
WG1715489-2 LCS								
Total Suspended Solids			97.9		%		85-115	27-JUL-13
WG1715489-1 MB								
Total Suspended Solids			<2.0		mg/L		2	27-JUL-13
Batch R2662350								
WG1716643-2 LCS								
Total Suspended Solids			99.8		%		85-115	30-JUL-13
WG1716643-1 MB								
Total Suspended Solids			<2.0		mg/L		2	30-JUL-13

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier

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 L1337914 were received on 25-JUL-13 11:00.

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.

ALS Environmental
ADDRESS 1081 Barton Street, Thunder Bay Ontario P7B 5N3 Canada | PHONE +1 807 623 6463 | FAX +1 807 623 7598
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L1337914

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807-938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P011S
Quote #	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler: MP AT	

Regulatory Information

- ☑ O. Reg 153 (O. Reg 511 Amend) Table: ___
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☑ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total, WAD, Free Cyanide	WAD Cyanide	Ammonia, Total Phosphorus	DGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness			Number of Containers
12	Tuig	28/07/13	100	Water	x	x	x	x	x	x	x	x	x	x			8
13	Duplicate	"	"	"	x	x	x	x	x	x	x	x	x	x			1
14	Field Blank	"	"	"	x	x	x	x	x	x	x	x	x	x			1
15	Travel Blank	"	"	"	x	x	x	x	x	x	x	x	x	x			1
16	SW10				x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			
					x	x	x	x	x	x	x	x	x	x			

L1337914-COFC

Special Instructions / Comments

SHIPMENT RELEASE (client use)

Released by:	Date & Time
24/07/13 <Original signed by>	2PM CST 24/07/13

SHIPMENT RECEPTION (lab use only)

Received by:	Date & Time	Temp	Cooling initiated
			☐ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
CRF	25-Jul-13 12:04	

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

ADDRESS 1081 Barton Street, Thunder Bay Ontario P7B 5N3 Canada | PHONE +1 807 623 6463 | FAX +1 807 623 7598
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L1337914

Company:	Treasury Metals		
Contact:	Mac Potter		
Address:	899 Tree Nursery Rd		
	Wabigoon ON P0V 2W0		
Phone:	807 938-6961	Fax:	
Email:	mac@treasurymetals.com		
Project:	Job M0906A01	PO:	M0210-P011S
Quote #	Q32690	LSD Goliath Project	
Invoice To:		Same as Report: ☑ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	Karen R.	Sampler: MP AT	

Regulatory Information

- ☑ O. Reg 153 (O. Reg 511 Amend) Table: ____
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☑ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total, WAD, Free Cyanide (P)	WAD Cyanide (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (P)	Hardness	Number of Containers
1	SW1	23/07/13	1:00	WATER	x	x	x	x	x	x	x	x	x	x	8
2	SW2	"	"	"	x	x	x	x	x	x	x	x	x	x	"
3	SW3	"	"	"	x	x	x	x	x	x	x	x	x	x	"
4	SW4	24/07/13	"	"	x	x	x	x	x	x	x	x	x	x	"
5	SW5	"	"	"	x	x	x	x	x	x	x	x	x	x	"
6	SW6	"	"	"	x	x	x	x	x	x	x	x	x	x	"
7	SW7	23/07/13	"	"	x	x	x	x	x	x	x	x	x	x	"
8	SW8	"	"	"	x	x	x	x	x	x	x	x	x	x	"
9	SW9	24/07/13	"	"	x	x	x	x	x	x	x	x	x	x	9
10	SW TL3	"	"	"	x	x	x	x	x	x	x	x	x	x	8
11	JCTa	"	"	"	x	x	x	x	x	x	x	x	x	x	1

L1337914-COFC

Special Instructions / Comments

* ALL CONTAINER DATED 22/07/13 CORRECT TO 23/07/13, SWITCH SAMPLE ID ON BOTTLES OF SW3 + SW1
* NO FIELD FILTER COMPLETED

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)			SHIPMENT VERIFICATION (lab use only)		
Released by: 24/07/13 <Original signed by>	Date & Time: 2 PM CST 24/07/13	Received by: <Original signed by>	Date & Time: 25 July 2013 11:00	Temp: 18.4	Cooling Initiated: ☐ Yes ☐ No	Verified by: <Original signed by>	Date & Time: 25-Jul-13 13:00	Observations: Yes / No ? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

SBB SIF/M

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 01-NOV-13
Report Date: 20-NOV-13 09:38 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1386380

Project P.O. #: NOT SUBMITTED
Job Reference:
C of C Numbers:
Legal Site Desc:

<Original signed by>

Bobbie Shortreed
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1386380-1 WATER 30-OCT-13 12:00 SW1	L1386380-2 WATER 30-OCT-13 12:00 SW2	L1386380-3 WATER 30-OCT-13 12:00 SW3	L1386380-4 WATER 30-OCT-13 12:00 TL3	L1386380-5 WATER 30-OCT-13 12:00 JCTA
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	114	112	124	120	96.8
	Hardness (as CaCO3) (mg/L)	57.4	58.5	48.6	59.0	48.6
	pH (pH)	7.69	7.67	7.51	7.59	7.49
	Total Suspended Solids (mg/L)	29.2	20.6	3.4	8.0	3.1
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	5.0	5.0	4.0	8.0	7.0
	Alkalinity, Total (as CaCO3) (mg/L)	56.7	55.0	44.9	57.8	47.6
	Ammonia, Total (as N) (mg/L)	0.024	<0.020	0.091	<0.020	<0.020
	Chloride (Cl) (mg/L)	0.69	1.21	9.41	1.90	1.32
	Nitrate (as N) (mg/L)	<0.030	<0.030	0.045	<0.030	0.042
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0099	0.0271	0.0112	0.0162	0.0156
	Sulfate (SO4) (mg/L)	1.66	0.56	2.08	0.87	0.72
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0484	0.147	0.0545	0.140	0.0634
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00030	0.00056	0.00048	0.00054	0.00054
	Barium (Ba)-Total (mg/L)	0.00888	0.0107	0.0103	0.00823	0.00626
	Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.000010	0.000011	<0.000010	<0.000010	<0.000010
	Calcium (Ca)-Total (mg/L)	17.8	15.8	14.8	16.5	13.2
	Cesium (Cs)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Chromium (Cr)-Total (mg/L)	0.00018	0.00059	0.00030	0.00047	0.00036
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00024	0.00010	0.00018	0.00025
	Copper (Cu)-Total (mg/L)	0.00035	0.00140	0.00079	0.00246	0.00131
	Iron (Fe)-Total (mg/L)	0.263	0.658	0.195	0.890	1.11
	Lead (Pb)-Total (mg/L)	<0.000050	0.000170	<0.000050	0.000401	0.000058
	Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Total (mg/L)	2.55	4.17	3.00	4.04	3.67
	Manganese (Mn)-Total (mg/L)	0.0215	0.0376	0.0127	0.0319	0.118
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	0.000219	0.000098	0.000153	0.000117	0.000174
	Nickel (Ni)-Total (mg/L)	0.00036	0.00123	0.00049	0.00122	0.00063
	Potassium (K)-Total (mg/L)	1.11	1.15	1.13	0.950	0.795

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1386380-6 WATER 30-OCT-13 12:00 TL1A	L1386380-7 WATER 30-OCT-13 12:00 SW10	L1386380-8 WATER 30-OCT-13 12:00 SW7	L1386380-9 WATER 30-OCT-13 12:00 SW8	L1386380-10 WATER 30-OCT-13 12:00 SW9
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	57.1	103	99.4	148	196
	Hardness (as CaCO3) (mg/L)	27.3	49.1	48.9	73.0	95.6
	pH (pH)	7.06	7.57	7.77	7.90	7.91
	Total Suspended Solids (mg/L)	8.0	17.0	4.2	3.6	3.4
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	7.0	5.0	4.0	4.0	3.0
	Alkalinity, Total (as CaCO3) (mg/L)	27.3	51.0	44.9	77.5	107
	Ammonia, Total (as N) (mg/L)	0.044	0.047	0.027	0.031	0.031
	Chloride (Cl) (mg/L)	0.71	0.29	0.29	0.33	0.48
	Nitrate (as N) (mg/L)	0.043	0.058	0.201	0.053	0.101
	Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
	Phosphorus (P)-Total (mg/L)	0.0194	0.0118	0.0128	<0.0050	0.0062
	Sulfate (SO4) (mg/L)	<0.30	1.44	3.86	0.76	0.60
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
	Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals	Aluminum (Al)-Total (mg/L)	0.0580	0.105	0.0995	0.0176	0.0420
	Antimony (Sb)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Total (mg/L)	0.00050	0.00061	0.00078	0.00035	0.00027
	Barium (Ba)-Total (mg/L)	0.00665	0.0126	0.00927	0.0178	0.0176
	Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Calcium (Ca)-Total (mg/L)	7.82	15.6	15.2	26.3	30.2
	Cesium (Cs)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Chromium (Cr)-Total (mg/L)	0.00030	0.00068	0.00055	0.00011	0.00030
	Cobalt (Co)-Total (mg/L)	0.00080	0.00035	0.00016	<0.00010	<0.00010
	Copper (Cu)-Total (mg/L)	0.00021	0.00028	0.00075	0.00038	0.00078
	Iron (Fe)-Total (mg/L)	1.64	1.72	1.03	0.548	0.267
	Lead (Pb)-Total (mg/L)	0.000052	0.000087	0.000085	<0.000050	0.000051
	Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Total (mg/L)	1.86	2.35	2.56	2.17	5.13
	Manganese (Mn)-Total (mg/L)	0.235	0.153	0.0350	0.120	0.132
	Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Total (mg/L)	0.000058	0.000196	0.000208	0.000069	0.000158
	Nickel (Ni)-Total (mg/L)	0.00052	0.00036	0.00063	0.00037	0.00092
	Potassium (K)-Total (mg/L)	0.340	0.591	0.679	0.651	1.39

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID	L1386380-11	L1386380-12	L1386380-13	L1386380-14	L1386380-15
Description	WATER	WATER	WATER	WATER	WATER
Sampled Date	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13
Sampled Time	12:00	12:00	12:00	12:00	12:00
Client ID	SW11	FIELD BLANK	TRAVEL BLANK	SW5	SW6
Grouping / **Analyte**					
WATER					
Physical Tests Conductivity (EC) (uS/cm)	30.1	<3.0	<3.0	113	112
Hardness (as CaCO3) (mg/L)	15.5	<0.50	<0.50	47.8	47.5
pH (pH)	5.36	5.61	5.72	7.75	7.78
Total Suspended Solids (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0
Anions and Nutrients Acidity (as CaCO3) (mg/L)	16.0	2.0	2.0	4.0	3.0
Alkalinity, Total (as CaCO3) (mg/L)	<5.0	<5.0	<5.0	48.3	48.6
Ammonia, Total (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	0.028
Chloride (Cl) (mg/L)	0.50	<0.10	<0.10	4.22	4.21
Nitrate (as N) (mg/L)	0.063	<0.030	<0.030	<0.030	<0.030
Nitrite (as N) (mg/L)	<0.020	<0.020	<0.020	<0.020	<0.020
Phosphorus (P)-Total (mg/L)	0.0245	<0.0050	<0.0050	0.0063	0.0068
Sulfate (SO4) (mg/L)	0.30	<0.30	<0.30	2.88	2.86
Cyanides Cyanide, Weak Acid Diss (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Total (mg/L)	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020
Cyanide, Free (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Total Metals Aluminum (Al)-Total (mg/L)	0.350	<0.0030	<0.0030	0.0141	0.0171
Antimony (Sb)-Total (mg/L)	<0.00010	0.00033 RRV	<0.00010	<0.00010	<0.00010
Arsenic (As)-Total (mg/L)	0.00097	<0.00010	<0.00010	0.00033	0.00036
Barium (Ba)-Total (mg/L)	0.00690	<0.000050	<0.000050	0.00898	0.00909
Beryllium (Be)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
Boron (B)-Total (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
Cadmium (Cd)-Total (mg/L)	0.000027	<0.000010	<0.000010	<0.000010	<0.000010
Calcium (Ca)-Total (mg/L)	4.50	<0.020	<0.020	14.6	14.4
Cesium (Cs)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Chromium (Cr)-Total (mg/L)	0.00101	<0.00010	<0.00010	0.00022	0.00014
Cobalt (Co)-Total (mg/L)	0.00043	<0.00010	<0.00010	<0.00010	<0.00010
Copper (Cu)-Total (mg/L)	0.00033	<0.00010	<0.00010	0.00096	0.00096
Iron (Fe)-Total (mg/L)	1.49	<0.010	<0.010	0.028	0.027
Lead (Pb)-Total (mg/L)	0.000543	<0.000050	<0.000050	<0.000050	<0.000050
Lithium (Li)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Magnesium (Mg)-Total (mg/L)	0.971	<0.0050	<0.0050	2.89	2.68
Manganese (Mn)-Total (mg/L)	0.0371	<0.000050	<0.000050	0.00603	0.00480
Mercury (Hg)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
Molybdenum (Mo)-Total (mg/L)	<0.000050	<0.000050	<0.000050	0.000167	0.000165
Nickel (Ni)-Total (mg/L)	0.00090	<0.00010	<0.00010	0.00053	0.00053
Potassium (K)-Total (mg/L)	0.075	<0.050	<0.050	1.06	1.01

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-16				
	Description	WATER				
	Sampled Date	30-OCT-13				
	Sampled Time	12:00				
	Client ID	DUPLICATE				
Grouping	**Analyte**					
WATER						
Physical Tests	Conductivity (EC) (uS/cm)	123				
	Hardness (as CaCO3) (mg/L)	48.1				
	pH (pH)	7.48				
	Total Suspended Solids (mg/L)	<2.0				
Anions and Nutrients	Acidity (as CaCO3) (mg/L)	4.0				
	Alkalinity, Total (as CaCO3) (mg/L)	44.8				
	Ammonia, Total (as N) (mg/L)	0.098				
	Chloride (Cl) (mg/L)	9.07				
	Nitrate (as N) (mg/L)	0.041				
	Nitrite (as N) (mg/L)	<0.020				
	Phosphorus (P)-Total (mg/L)	0.0128				
	Sulfate (SO4) (mg/L)	1.96				
Cyanides	Cyanide, Weak Acid Diss (mg/L)	<0.0020				
	Cyanide, Total (mg/L)	<0.0020				
	Cyanide, Free (mg/L)	<0.0050				
Total Metals	Aluminum (Al)-Total (mg/L)	0.0454				
	Antimony (Sb)-Total (mg/L)	<0.00010				
	Arsenic (As)-Total (mg/L)	0.00048				
	Barium (Ba)-Total (mg/L)	0.0102				
	Beryllium (Be)-Total (mg/L)	<0.00050				
	Bismuth (Bi)-Total (mg/L)	<0.000050				
	Boron (B)-Total (mg/L)	<0.010				
	Cadmium (Cd)-Total (mg/L)	<0.000010				
	Calcium (Ca)-Total (mg/L)	14.2				
	Cesium (Cs)-Total (mg/L)	<0.00010				
	Chromium (Cr)-Total (mg/L)	0.00030				
	Cobalt (Co)-Total (mg/L)	<0.00010				
	Copper (Cu)-Total (mg/L)	0.00078				
	Iron (Fe)-Total (mg/L)	0.179				
	Lead (Pb)-Total (mg/L)	<0.000050				
	Lithium (Li)-Total (mg/L)	<0.0050				
	Magnesium (Mg)-Total (mg/L)	3.00				
	Manganese (Mn)-Total (mg/L)	0.0123				
	Mercury (Hg)-Total (mg/L)	<0.000010				
	Molybdenum (Mo)-Total (mg/L)	0.000152				
	Nickel (Ni)-Total (mg/L)	0.00054				
	Potassium (K)-Total (mg/L)	1.10				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1386380-1 WATER 30-OCT-13 12:00 SW1	L1386380-2 WATER 30-OCT-13 12:00 SW2	L1386380-3 WATER 30-OCT-13 12:00 SW3	L1386380-4 WATER 30-OCT-13 12:00 TL3	L1386380-5 WATER 30-OCT-13 12:00 JCTA
WATER						
Total Metals	Rubidium (Rb)-Total (mg/L)	0.0014	0.0010	0.0019	0.0015	0.0015
	Selenium (Se)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Total (mg/L)	4.93	3.28	2.32	4.26	3.99
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.55	2.13	5.70	2.04	1.79
	Strontium (Sr)-Total (mg/L)	0.0309	0.0284	0.0337	0.0344	0.0300
	Tellurium (Te)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	0.00012	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00242	0.00590	0.00094	0.00558	0.00233
	Uranium (U)-Total (mg/L)	0.000056	0.000094	0.000095	0.000069	0.000049
	Vanadium (V)-Total (mg/L)	0.00031	0.00080	0.00043	0.00084	0.00062
	Zinc (Zn)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0108	0.0740	0.0432	0.0365	0.0407
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00029	0.00040	0.00040	0.00049	0.00051
	Barium (Ba)-Dissolved (mg/L)	0.00785	0.00843	0.00971	0.00645	0.00601
	Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000011	0.000010	<0.000010	<0.000010	<0.000010
	Calcium (Ca)-Dissolved (mg/L)	18.2	15.9	14.4	16.4	13.4
	Cesium (Cs)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Chromium (Cr)-Dissolved (mg/L)	0.00010	0.00040	0.00028	0.00030	0.00030
	Cobalt (Co)-Dissolved (mg/L)	<0.00010	0.00014	<0.00010	0.00010	0.00021
	Copper (Cu)-Dissolved (mg/L)	0.00044	0.00114	0.00051	0.00022	0.00081
	Iron (Fe)-Dissolved (mg/L)	0.137	0.387	0.153	0.535	0.729
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000083	<0.000050	0.000059	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Dissolved (mg/L)	2.89	4.55	3.07	4.40	3.68
	Manganese (Mn)-Dissolved (mg/L)	0.0180	0.0131	0.0105	0.0268	0.115
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	0.000215	0.000119	0.000158	0.000141	0.000133
	Nickel (Ni)-Dissolved (mg/L)	0.00032	0.00105	0.00048	0.00070	0.00061
	Potassium (K)-Dissolved (mg/L)	1.05	1.04	1.07	0.918	0.830
	Rubidium (Rb)-Dissolved (mg/L)	0.0013	<0.0010	0.0017	0.0014	0.0014

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1386380-6 WATER 30-OCT-13 12:00 TL1A	L1386380-7 WATER 30-OCT-13 12:00 SW10	L1386380-8 WATER 30-OCT-13 12:00 SW7	L1386380-9 WATER 30-OCT-13 12:00 SW8	L1386380-10 WATER 30-OCT-13 12:00 SW9
WATER						
Total Metals	Rubidium (Rb)-Total (mg/L)	0.0011	0.0015	0.0016	0.0015	0.0018
	Selenium (Se)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Total (mg/L)	4.25	6.59	5.91	3.86	6.22
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	0.000028
	Sodium (Na)-Total (mg/L)	1.19	1.48	1.39	1.25	2.80
	Strontium (Sr)-Total (mg/L)	0.0172	0.0276	0.0290	0.0376	0.0514
	Tellurium (Te)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00122	0.00359	0.00292	0.00067	0.00150
	Uranium (U)-Total (mg/L)	0.000012	0.000029	0.000058	0.000072	0.000052
	Vanadium (V)-Total (mg/L)	0.00076	0.00119	0.00090	0.00024	0.00038
	Zinc (Zn)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0465	0.0637	0.0851	0.0041	0.0257
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00037	0.00054	0.00069	0.00030	0.00022
	Barium (Ba)-Dissolved (mg/L)	0.00537	0.0112	0.00895	0.0171	0.0164
	Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Calcium (Ca)-Dissolved (mg/L)	7.66	15.9	14.9	25.6	29.1
	Cesium (Cs)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Chromium (Cr)-Dissolved (mg/L)	0.00024	0.00059	0.00051	<0.00010	0.00022
	Cobalt (Co)-Dissolved (mg/L)	0.00047	0.00030	0.00015	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	<0.00010	<0.00010	0.00036	<0.00010	<0.00010
	Iron (Fe)-Dissolved (mg/L)	0.831	1.36	0.865	0.351	0.120
	Lead (Pb)-Dissolved (mg/L)	<0.000050	0.000089	0.000093	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Dissolved (mg/L)	1.99	2.27	2.85	2.23	5.55
	Manganese (Mn)-Dissolved (mg/L)	0.150	0.149	0.0314	0.115	0.0980
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	0.000063	0.000234	0.000210	0.000070	0.000172
	Nickel (Ni)-Dissolved (mg/L)	0.00048	0.00033	0.00061	0.00030	0.00035
	Potassium (K)-Dissolved (mg/L)	0.324	0.571	0.660	0.627	1.30
	Rubidium (Rb)-Dissolved (mg/L)	0.0010	0.0014	0.0014	0.0014	0.0016

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-11	L1386380-12	L1386380-13	L1386380-14	L1386380-15
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13
	Sampled Time	12:00	12:00	12:00	12:00	12:00
	Client ID	SW11	FIELD BLANK	TRAVEL BLANK	SW5	SW6
Grouping	**Analyte**					
WATER						
Total Metals	Rubidium (Rb)-Total (mg/L)	<0.0010	<0.0010	<0.0010	0.0018	0.0017
	Selenium (Se)-Total (mg/L)	0.00013	<0.00010	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Total (mg/L)	6.48	<0.050	<0.050	1.48	1.44
	Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Total (mg/L)	1.04	<0.050	<0.050	3.28	3.15
	Strontium (Sr)-Total (mg/L)	0.0114	<0.00010	<0.00010	0.0285	0.0275
	Tellurium (Te)-Total (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	0.00844	<0.00030	<0.00030	0.00050	0.00060
	Uranium (U)-Total (mg/L)	0.000021	<0.000010	<0.000010	0.000031	0.000029
	Vanadium (V)-Total (mg/L)	0.00085	<0.00010	<0.00010	0.00035	0.00033
	Zinc (Zn)-Total (mg/L)	0.0059	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Total (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.350	<0.0010	<0.0010	0.0042	0.0041
	Antimony (Sb)-Dissolved (mg/L)	<0.00010	0.00034 RRV	<0.00010	<0.00010	<0.00010
	Arsenic (As)-Dissolved (mg/L)	0.00092	<0.00010	<0.00010	0.00030	0.00032
	Barium (Ba)-Dissolved (mg/L)	0.00672	<0.000050	<0.000050	0.00787	0.00790
	Beryllium (Be)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)	<0.010	<0.010	<0.010	<0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)	0.000026	<0.000010	<0.000010	<0.000010	<0.000010
	Calcium (Ca)-Dissolved (mg/L)	4.41	<0.020	<0.020	14.0	14.1
	Cesium (Cs)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Chromium (Cr)-Dissolved (mg/L)	0.00093	<0.00010	<0.00010	<0.00010	<0.00010
	Cobalt (Co)-Dissolved (mg/L)	0.00043	<0.00010	<0.00010	<0.00010	<0.00010
	Copper (Cu)-Dissolved (mg/L)	0.00013	<0.00010	<0.00010	0.00048	0.00050
	Iron (Fe)-Dissolved (mg/L)	1.47	<0.010	<0.010	0.011	<0.010
	Lead (Pb)-Dissolved (mg/L)	0.000433	<0.000050	<0.000050	<0.000050	0.000065
	Lithium (Li)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Magnesium (Mg)-Dissolved (mg/L)	1.09	<0.0050	<0.0050	3.11	2.99
	Manganese (Mn)-Dissolved (mg/L)	0.0389	<0.000050	<0.000050	0.000590	0.000548
	Mercury (Hg)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Molybdenum (Mo)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	0.000152	0.000156
	Nickel (Ni)-Dissolved (mg/L)	0.00090	<0.00010	<0.00010	0.00040	0.00037
	Potassium (K)-Dissolved (mg/L)	0.086	<0.050	<0.050	0.988	1.00
	Rubidium (Rb)-Dissolved (mg/L)	<0.0010	<0.0010	<0.0010	0.0016	0.0016

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-16				
	Description	WATER				
	Sampled Date	30-OCT-13				
	Sampled Time	12:00				
	Client ID	DUPLICATE				
Grouping	**Analyte**					
WATER						
Total Metals	Rubidium (Rb)-Total (mg/L)	0.0017				
	Selenium (Se)-Total (mg/L)	<0.00010				
	Silicon (Si)-Total (mg/L)	2.24				
	Silver (Ag)-Total (mg/L)	<0.000010				
	Sodium (Na)-Total (mg/L)	5.64				
	Strontium (Sr)-Total (mg/L)	0.0337				
	Tellurium (Te)-Total (mg/L)	<0.00060				
	Thallium (Tl)-Total (mg/L)	<0.000050				
	Tin (Sn)-Total (mg/L)	<0.00010				
	Titanium (Ti)-Total (mg/L)	0.00089				
	Uranium (U)-Total (mg/L)	0.000093				
	Vanadium (V)-Total (mg/L)	0.00044				
	Zinc (Zn)-Total (mg/L)	<0.0050				
	Zirconium (Zr)-Total (mg/L)	<0.0050				
Dissolved Metals	Aluminum (Al)-Dissolved (mg/L)	0.0415				
	Antimony (Sb)-Dissolved (mg/L)	<0.00010				
	Arsenic (As)-Dissolved (mg/L)	0.00041				
	Barium (Ba)-Dissolved (mg/L)	0.00938				
	Beryllium (Be)-Dissolved (mg/L)	<0.00050				
	Bismuth (Bi)-Dissolved (mg/L)	<0.000050				
	Boron (B)-Dissolved (mg/L)	<0.010				
	Cadmium (Cd)-Dissolved (mg/L)	<0.000010				
	Calcium (Ca)-Dissolved (mg/L)	14.1				
	Cesium (Cs)-Dissolved (mg/L)	<0.00010				
	Chromium (Cr)-Dissolved (mg/L)	0.00028				
	Cobalt (Co)-Dissolved (mg/L)	<0.00010				
	Copper (Cu)-Dissolved (mg/L)	0.00061				
	Iron (Fe)-Dissolved (mg/L)	0.160				
	Lead (Pb)-Dissolved (mg/L)	0.000055				
	Lithium (Li)-Dissolved (mg/L)	<0.0050				
	Magnesium (Mg)-Dissolved (mg/L)	3.15				
	Manganese (Mn)-Dissolved (mg/L)	0.0106				
	Mercury (Hg)-Dissolved (mg/L)	<0.000010				
	Molybdenum (Mo)-Dissolved (mg/L)	0.000143				
	Nickel (Ni)-Dissolved (mg/L)	0.00046				
	Potassium (K)-Dissolved (mg/L)	1.06				
	Rubidium (Rb)-Dissolved (mg/L)	0.0017				

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-1	L1386380-2	L1386380-3	L1386380-4	L1386380-5
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13
	Sampled Time	12:00	12:00	12:00	12:00	12:00
	Client ID	SW1	SW2	SW3	TL3	JCTA
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.00010	0.00011	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Dissolved (mg/L)	5.01	3.43	2.43	4.41	4.37
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.61	2.06	5.84	2.18	1.78
	Strontium (Sr)-Dissolved (mg/L)	0.0325	0.0295	0.0344	0.0369	0.0300
	Tellurium (Te)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Dissolved (mg/L)	0.00024	<0.00010	0.00015	<0.00010	0.00012
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	0.00235	0.00070	0.00106	0.00135
	Uranium (U)-Dissolved (mg/L)	0.000051	0.000083	0.000091	0.000060	0.000043
	Vanadium (V)-Dissolved (mg/L)	0.00015	0.00042	0.00030	0.00039	0.00041
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1386380-6 WATER 30-OCT-13 12:00 TL1A	L1386380-7 WATER 30-OCT-13 12:00 SW10	L1386380-8 WATER 30-OCT-13 12:00 SW7	L1386380-9 WATER 30-OCT-13 12:00 SW8	L1386380-10 WATER 30-OCT-13 12:00 SW9
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Dissolved (mg/L)	4.52	7.27	6.04	4.15	6.61
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.17	1.55	1.39	1.12	2.84
	Strontium (Sr)-Dissolved (mg/L)	0.0182	0.0290	0.0301	0.0371	0.0523
	Tellurium (Te)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00075	0.00129	0.00186	<0.00030	0.00048
	Uranium (U)-Dissolved (mg/L)	0.000011	0.000023	0.000056	0.000070	0.000049
	Vanadium (V)-Dissolved (mg/L)	0.00033	0.00075	0.00063	<0.00010	0.00021
	Zinc (Zn)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-11	L1386380-12	L1386380-13	L1386380-14	L1386380-15
	Description	WATER	WATER	WATER	WATER	WATER
	Sampled Date	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13	30-OCT-13
	Sampled Time	12:00	12:00	12:00	12:00	12:00
	Client ID	SW11	FIELD BLANK	TRAVEL BLANK	SW5	SW6
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00017	<0.00010	<0.00010	<0.00010	<0.00010
	Silicon (Si)-Dissolved (mg/L)	7.11	<0.050	<0.050	1.57	1.53
	Silver (Ag)-Dissolved (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010
	Sodium (Na)-Dissolved (mg/L)	1.10	<0.050	0.090 RRV	3.16	3.21
	Strontium (Sr)-Dissolved (mg/L)	0.0117	<0.00010	<0.00010	0.0286	0.0294
	Tellurium (Te)-Dissolved (mg/L)	<0.00060	<0.00060	<0.00060	<0.00060	<0.00060
	Thallium (Tl)-Dissolved (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Tin (Sn)-Dissolved (mg/L)	0.00011	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	0.00769	<0.00030	<0.00030	<0.00030	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.000020	<0.000010	<0.000010	0.000028	0.000029
	Vanadium (V)-Dissolved (mg/L)	0.00064	<0.00010	<0.00010	0.00016	0.00017
	Zinc (Zn)-Dissolved (mg/L)	0.0051	<0.0050	<0.0050	<0.0050	<0.0050
	Zirconium (Zr)-Dissolved (mg/L)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0	<2.0	<2.0	<2.0	<2.0

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1386380-16				
	Description	WATER				
	Sampled Date	30-OCT-13				
	Sampled Time	12:00				
	Client ID	DUPLICATE				
Grouping	**Analyte**					
WATER						
Dissolved Metals	Selenium (Se)-Dissolved (mg/L)	0.00010				
	Silicon (Si)-Dissolved (mg/L)	2.44				
	Silver (Ag)-Dissolved (mg/L)	<0.000010				
	Sodium (Na)-Dissolved (mg/L)	5.79				
	Strontium (Sr)-Dissolved (mg/L)	0.0357				
	Tellurium (Te)-Dissolved (mg/L)	<0.00060				
	Thallium (Tl)-Dissolved (mg/L)	<0.000050				
	Tin (Sn)-Dissolved (mg/L)	0.00016				
	Titanium (Ti)-Dissolved (mg/L)	0.00075				
	Uranium (U)-Dissolved (mg/L)	0.000093				
	Vanadium (V)-Dissolved (mg/L)	0.00028				
	Zinc (Zn)-Dissolved (mg/L)	<0.0050				
	Zirconium (Zr)-Dissolved (mg/L)	<0.0050				
Aggregate Organics	Oil and Grease, Total (mg/L)	<2.0				

* 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	Ammonia, Total (as N)	DLM	L1386380-13
Matrix Spike	Ammonia, Total (as N)	MS-B	L1386380-1, -10, -11, -12, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9
Matrix Spike	Ammonia, Total (as N)	MS-B	L1386380-1, -10, -11, -12, -14, -15, -16, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACIDITY-TB	Water	Acidity (as CaCO3)	APHA 2310 B-POTENTIOMETRIC TITRATION
Aqueous matrices are analyzed by potentiometry. Acidity reported includes acidity caused by hydrolyzable metals present in the sample.			
ALK-TOT-CL	Water	Alkalinity, Total	APHA 2320 B-Auto-Pot. Titration
CL-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
CN-FREE-CFA-TB	Water	Free Cyanide by Continuous Flow Analyzer	ASTM D7237-10 (modified)
This analysis is carried out using procedures adapted from ASTM Method 7237 "Free Cyanide with Flow Injection Analysis (FIA) Utilizing Gas Diffusion Separation and Amperometric Detection". Free cyanide is determined by in-line gas diffusion at pH 6 with final determination by colourimetric analysis.			
CN-T-CFA-TB	Water	Total Cyanide by CFA	ISO 14403:2002 (modified)
This analysis is carried out using procedures adapted from ISO Method 14403:2002 "Determination of Total Cyanide using Flow Analysis (FIA and CFA)". Total or strong acid dissociable (SAD) cyanide is determined by in-line UV digestion along with sample distillation and final determination by colourimetric analysis. Method Limitation: This method is susceptible to interference from thiocyanate (SCN). If SCN is present in the sample, there could be a positive interference with this method, but it would be less than 1% and could be as low as zero.			
CN-WAD-CFA-TB	Water	Weak Acid Dissociable Cyanide by CFA	APHA 4500-CN CYANIDE (modified)
This analysis is carried out using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.			
EC-CAP-TB	Water	Conductivity (EC)	APHA 2510 B-ELECTRODE
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using a conductivity electrode.			
HARDNESS-CALC-CL	Water	Hardness	CALCULATION
HG-D-CVAF-TB	Water	Dissolved Mercury in Water by CVAFS	Modified from EPA1631 E
HG-T-CVAF-TB	Water	Total Mercury in Water by CVAFS	Modified from EPA1631 E
MET-D-CCMS-CL	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
MET-T-CCMS-CL	Water	Total Metals in Water by CRC ICPMS	APHA 3030 B&E / EPA SW-846 6020A
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
NH3-COL-TB	Water	Ammonia by Discrete Analyzer	APHA 4500-NH3 G. (modified)
Ammonia in aqueous matrices is analyzed using discrete analyzer with colourimetric detection.			
NO2-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)
Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.			
NO3-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Reference Information

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

OGG-TOT-WT	Water	Oil and Grease, Total	APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-TB	Water	Total Phosphorus by Discrete Analyzer	APHA 4500-P B, F, G (modified)

Phosphorus in aqueous matrices is analyzed using discrete Analyzer with colourimetric detection.

PH-CAP-TB	Water	pH	APHA 4500-H-ELECTRODE
SO4-IC-TB	Water	Anions by Ion Chromatography	EPA 300.1 (modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

SOLIDS-TOTSUS-TB	Water	Total Suspended Solids	APHA 2540 D (modified)

Aqueous matrices are analyzed using gravimetry

** 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
TB	ALS ENVIRONMENTAL - THUNDER BAY, ONTARIO, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
CL	ALS ENVIRONMENTAL - CALGARY, ALBERTA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACIDITY-TB	**Water**							
Batch R2732803								
WG1781494-3 DUP		**L1386380-2**						
Acidity (as CaCO3)		5.0	5.0		mg/L	0.0	20	04-NOV-13
WG1781494-6 DUP		**L1386380-9**						
Acidity (as CaCO3)		4.0	4.0		mg/L	0.0	20	04-NOV-13
WG1781494-2 LCS								
Acidity (as CaCO3)			104.0		%		85-115	04-NOV-13
WG1781494-5 LCS								
Acidity (as CaCO3)			106.0		%		85-115	04-NOV-13
WG1781494-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-NOV-13
WG1781494-4 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	04-NOV-13
Batch R2734882								
WG1783324-2 LCS								
Acidity (as CaCO3)			106.0		%		85-115	06-NOV-13
WG1783324-1 MB								
Acidity (as CaCO3)			<2.0		mg/L		2	06-NOV-13
ALK-TOT-CL	**Water**							
Batch R2739060								
WG1786583-6 DUP		**L1386380-12**						
Alkalinity, Total (as CaCO3)		<5.0	<5.0	RPD-NA	mg/L	N/A	20	11-NOV-13
WG1786583-1 LCS								
Alkalinity, Total (as CaCO3)			96.2		%		85-115	11-NOV-13
WG1786583-2 LCS								
Alkalinity, Total (as CaCO3)			93.1		%		85-115	11-NOV-13
WG1786583-3 LCS								
Alkalinity, Total (as CaCO3)			95.0		%		85-115	11-NOV-13
WG1786583-4 LCS								
Alkalinity, Total (as CaCO3)			94.5		%		85-115	11-NOV-13
WG1786583-5 LCS								
Alkalinity, Total (as CaCO3)			97.8		%		85-115	11-NOV-13
CL-IC-TB	**Water**							
Batch R2732911								
WG1780275-3 DUP		**L1386380-3**						
Chloride (Cl)		9.41	9.04		mg/L	4.0	20	01-NOV-13
WG1780275-10 LCS								
Chloride (Cl)			102.0		%		90-110	01-NOV-13
WG1780275-14 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-TB	**Water**							
Batch R2732911								
WG1780275-14 LCS								
Chloride (Cl)			101.1		%		90-110	01-NOV-13
WG1780275-2 LCS								
Chloride (Cl)			102.6		%		90-110	01-NOV-13
WG1780275-6 LCS								
Chloride (Cl)			102.3		%		90-110	01-NOV-13
WG1780275-1 MB								
Chloride (Cl)			<0.10		mg/L		0.1	01-NOV-13
WG1780275-5 MB								
Chloride (Cl)			<0.10		mg/L		0.1	01-NOV-13
WG1780275-9 MB								
Chloride (Cl)			<0.10		mg/L		0.1	01-NOV-13
WG1780275-4 MS		**L1386380-3**						
Chloride (Cl)			99.1		%		75-125	01-NOV-13
WG1780275-8 MS		**L1386047-1**						
Chloride (Cl)			99.8		%		75-125	01-NOV-13
CN-FREE-CFA-TB	**Water**							
Batch R2736121								
WG1783674-7 DUP		**L1386380-1**						
Cyanide, Free		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	06-NOV-13
WG1783674-2 LCS								
Cyanide, Free			100.4		%		80-120	06-NOV-13
WG1783674-6 LCS								
Cyanide, Free			101.5		%		80-120	06-NOV-13
WG1783674-1 MB								
Cyanide, Free			<0.0050		mg/L		0.005	06-NOV-13
WG1783674-5 MB								
Cyanide, Free			<0.0050		mg/L		0.005	06-NOV-13
WG1783674-4 MS		**L1385023-1**						
Cyanide, Free			100.3		%		70-130	06-NOV-13
WG1783674-8 MS		**L1386380-1**						
Cyanide, Free			100.8		%		70-130	06-NOV-13
CN-T-CFA-TB	**Water**							
Batch R2736061								
WG1783632-7 DUP		**L1386380-1**						
Cyanide, Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	06-NOV-13
WG1783632-2 LCS								
Cyanide, Total			97.4		%		80-120	06-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-TB	**Water**							
Batch R2736061								
WG1783632-6 LCS								
Cyanide, Total			99.9		%		80-120	06-NOV-13
WG1783632-1 MB								
Cyanide, Total			<0.0020		mg/L		0.002	06-NOV-13
WG1783632-5 MB								
Cyanide, Total			<0.0020		mg/L		0.002	06-NOV-13
WG1783632-4 MS		**L1385023-1**						
Cyanide, Total			98.7		%		70-130	06-NOV-13
WG1783632-8 MS		**L1386380-1**						
Cyanide, Total			97.2		%		70-130	06-NOV-13
CN-WAD-CFA-TB	**Water**							
Batch R2736074								
WG1783665-7 DUP		**L1386380-1**						
Cyanide, Weak Acid Diss		<0.0020	<0.0020	RPD-NA	mg/L	N/A	20	06-NOV-13
WG1783665-2 LCS								
Cyanide, Weak Acid Diss			98.4		%		80-120	06-NOV-13
WG1783665-6 LCS								
Cyanide, Weak Acid Diss			97.0		%		80-120	06-NOV-13
WG1783665-1 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	06-NOV-13
WG1783665-5 MB								
Cyanide, Weak Acid Diss			<0.0020		mg/L		0.002	06-NOV-13
WG1783665-4 MS		**L1385023-1**						
Cyanide, Weak Acid Diss			96.9		%		70-130	06-NOV-13
WG1783665-8 MS		**L1386380-1**						
Cyanide, Weak Acid Diss			95.0		%		70-130	06-NOV-13
EC-CAP-TB	**Water**							
Batch R2731839								
WG1780562-6 DUP		**L1386380-5**						
Conductivity (EC)		96.8	99.8		uS/cm	3.1	10	02-NOV-13
WG1780562-11 LCS								
Conductivity (EC)			98.0		%		90-110	02-NOV-13
WG1780562-14 LCS								
Conductivity (EC)			98.0		%		90-110	02-NOV-13
WG1780562-2 LCS								
Conductivity (EC)			95.7		%		90-110	02-NOV-13
WG1780562-5 LCS								
Conductivity (EC)			97.8		%		90-110	02-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-CAP-TB	**Water**							
Batch R2731839								
WG1780562-8 LCS								
Conductivity (EC)			98.0		%		90-110	02-NOV-13
WG1780562-1 MB								
Conductivity (EC)			<3.0		uS/cm		3	02-NOV-13
WG1780562-10 MB								
Conductivity (EC)			<3.0		uS/cm		3	02-NOV-13
WG1780562-13 MB								
Conductivity (EC)			<3.0		uS/cm		3	02-NOV-13
WG1780562-4 MB								
Conductivity (EC)			<3.0		uS/cm		3	02-NOV-13
WG1780562-7 MB								
Conductivity (EC)			<3.0		uS/cm		3	02-NOV-13
HG-D-CVAF-TB	**Water**							
Batch R2735688								
WG1783457-11 DUP		**L1386380-9**						
Mercury (Hg)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-NOV-13
WG1783457-10 LCS								
Mercury (Hg)-Dissolved			105.3		%		80-120	06-NOV-13
WG1783457-2 LCS								
Mercury (Hg)-Dissolved			102.4		%		80-120	06-NOV-13
WG1783457-6 LCS								
Mercury (Hg)-Dissolved			102.4		%		80-120	06-NOV-13
WG1783457-1 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	06-NOV-13
WG1783457-5 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	06-NOV-13
WG1783457-9 MB								
Mercury (Hg)-Dissolved			<0.000010		mg/L		0.00001	06-NOV-13
WG1783457-12 MS		**L1386380-9**						
Mercury (Hg)-Dissolved			91.0		%		70-130	06-NOV-13
WG1783457-4 MS		**L1385861-18**						
Mercury (Hg)-Dissolved			70.4		%		70-130	06-NOV-13
WG1783457-8 MS		**L1386299-16**						
Mercury (Hg)-Dissolved			84.8		%		70-130	06-NOV-13
HG-T-CVAF-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-TB	**Water**							
Batch R2735006								
WG1782004-15 DUP		**L1386380-14**						
Mercury (Hg)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-NOV-13
WG1782004-14 LCS								
Mercury (Hg)-Total			100.3		%		80-120	06-NOV-13
WG1782004-13 MB								
Mercury (Hg)-Total			<0.000010		mg/L		0.00001	06-NOV-13
WG1782004-12 MS		**L1385063-2**						
Mercury (Hg)-Total			80.9		%		70-130	06-NOV-13
WG1782004-16 MS		**L1386380-14**						
Mercury (Hg)-Total			95.4		%		70-130	06-NOV-13
MET-D-CCMS-CL	**Water**							
Batch R2740508								
WG1787714-2 CRM		**CVS**						
Aluminum (Al)-Dissolved			105.8		%		85-115	13-NOV-13
Antimony (Sb)-Dissolved			99.4		%		85-115	13-NOV-13
Arsenic (As)-Dissolved			107.2		%		85-115	13-NOV-13
Barium (Ba)-Dissolved			108.4		%		85-115	13-NOV-13
Beryllium (Be)-Dissolved			106.5		%		85-115	13-NOV-13
Bismuth (Bi)-Dissolved			95.1		%		85-115	13-NOV-13
Boron (B)-Dissolved			105.1		%		85-115	13-NOV-13
Cadmium (Cd)-Dissolved			97.3		%		85-115	13-NOV-13
Calcium (Ca)-Dissolved			105.6		%		85-115	13-NOV-13
Chromium (Cr)-Dissolved			101.4		%		85-115	13-NOV-13
Cobalt (Co)-Dissolved			104.2		%		85-115	13-NOV-13
Copper (Cu)-Dissolved			102.2		%		85-115	13-NOV-13
Lead (Pb)-Dissolved			102.4		%		85-115	13-NOV-13
Lithium (Li)-Dissolved			103.6		%		85-115	13-NOV-13
Magnesium (Mg)-Dissolved			103.0		%		85-115	13-NOV-13
Manganese (Mn)-Dissolved			103.0		%		85-115	13-NOV-13
Molybdenum (Mo)-Dissolved			106.7		%		85-115	13-NOV-13
Nickel (Ni)-Dissolved			105.8		%		85-115	13-NOV-13
Potassium (K)-Dissolved			99.5		%		85-115	13-NOV-13
Selenium (Se)-Dissolved			101.5		%		85-115	13-NOV-13
Silver (Ag)-Dissolved			101.3		%		85-115	13-NOV-13
Sodium (Na)-Dissolved			100.0		%		85-115	13-NOV-13
Strontium (Sr)-Dissolved			110.1		%		85-115	13-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-CL	**Water**							
Batch R2740508								
WG1787714-2 CRM		**CVS**						
Thallium (Tl)-Dissolved			96.6		%		85-115	13-NOV-13
Titanium (Ti)-Dissolved			103.5		%		85-115	13-NOV-13
Tin (Sn)-Dissolved			97.3		%		85-115	13-NOV-13
Uranium (U)-Dissolved			92.7		%		85-115	13-NOV-13
Vanadium (V)-Dissolved			102.7		%		85-115	13-NOV-13
Zinc (Zn)-Dissolved			101.2		%		85-115	13-NOV-13
WG1787714-6 DUP		**L1386380-13**						
Aluminum (Al)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	25	13-NOV-13
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Arsenic (As)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Barium (Ba)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Beryllium (Be)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	25	13-NOV-13
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	25	13-NOV-13
Cadmium (Cd)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	25	13-NOV-13
Calcium (Ca)-Dissolved		<0.020	<0.020	RPD-NA	mg/L	N/A	25	13-NOV-13
Cesium (Cs)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Chromium (Cr)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Copper (Cu)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Iron (Fe)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	25	13-NOV-13
Lead (Pb)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Lithium (Li)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
Magnesium (Mg)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
Manganese (Mn)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Molybdenum (Mo)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Nickel (Ni)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Potassium (K)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	25	13-NOV-13
Rubidium (Rb)-Dissolved		<0.0010	<0.0010	RPD-NA	mg/L	N/A	25	13-NOV-13
Selenium (Se)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Silicon (Si)-Dissolved		<0.050	<0.050	RPD-NA	mg/L	N/A	25	13-NOV-13
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	25	13-NOV-13
Sodium (Na)-Dissolved		0.090	0.083		mg/L	8.1	25	13-NOV-13
Strontium (Sr)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-CL	**Water**							
Batch R2740508								
WG1787714-6 DUP		**L1386380-13**						
Tellurium (Te)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	25	13-NOV-13
Thallium (Tl)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Titanium (Ti)-Dissolved		<0.00030	<0.00030	RPD-NA	mg/L	N/A	25	13-NOV-13
Tin (Sn)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Uranium (U)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	25	13-NOV-13
Vanadium (V)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Zinc (Zn)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
Zirconium (Zr)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
WG1787714-7 DUP		**L1386380-16**						
Aluminum (Al)-Dissolved		0.0415	0.0431		mg/L	3.6	25	13-NOV-13
Antimony (Sb)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Arsenic (As)-Dissolved		0.00041	0.00041		mg/L	0.5	25	13-NOV-13
Barium (Ba)-Dissolved		0.00938	0.00922		mg/L	1.8	25	13-NOV-13
Beryllium (Be)-Dissolved		<0.00050	<0.00050	RPD-NA	mg/L	N/A	25	13-NOV-13
Bismuth (Bi)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Boron (B)-Dissolved		<0.010	<0.010	RPD-NA	mg/L	N/A	25	13-NOV-13
Cadmium (Cd)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	25	13-NOV-13
Calcium (Ca)-Dissolved		14.1	14.2		mg/L	0.5	25	13-NOV-13
Cesium (Cs)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Chromium (Cr)-Dissolved		0.00028	0.00027		mg/L	3.1	25	13-NOV-13
Cobalt (Co)-Dissolved		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Copper (Cu)-Dissolved		0.00061	0.00062		mg/L	1.9	25	13-NOV-13
Iron (Fe)-Dissolved		0.160	0.159		mg/L	0.6	25	13-NOV-13
Lead (Pb)-Dissolved		0.000055	0.000054		mg/L	3.0	25	13-NOV-13
Lithium (Li)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
Magnesium (Mg)-Dissolved		3.15	3.21		mg/L	1.9	25	13-NOV-13
Manganese (Mn)-Dissolved		0.0106	0.0106		mg/L	0.4	25	13-NOV-13
Molybdenum (Mo)-Dissolved		0.000143	0.000145		mg/L	1.3	25	13-NOV-13
Nickel (Ni)-Dissolved		0.00046	0.00049		mg/L	5.8	25	13-NOV-13
Potassium (K)-Dissolved		1.06	1.06		mg/L	0.4	25	13-NOV-13
Rubidium (Rb)-Dissolved		0.0017	0.0018		mg/L	3.3	25	13-NOV-13
Selenium (Se)-Dissolved		0.00010	<0.00010	RPD-NA	mg/L	N/A	25	13-NOV-13
Silicon (Si)-Dissolved		2.44	2.42		mg/L	0.8	25	13-NOV-13
Silver (Ag)-Dissolved		<0.000010	<0.000010	RPD-NA	mg/L	N/A	25	13-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-CL	**Water**							
Batch R2740508								
WG1787714-7 DUP		**L1386380-16**						
Sodium (Na)-Dissolved		5.79	5.79		mg/L	0.1	25	13-NOV-13
Strontium (Sr)-Dissolved		0.0357	0.0352		mg/L	1.2	25	13-NOV-13
Tellurium (Te)-Dissolved		<0.00060	<0.00060	RPD-NA	mg/L	N/A	25	13-NOV-13
Thallium (Tl)-Dissolved		<0.000050	<0.000050	RPD-NA	mg/L	N/A	25	13-NOV-13
Titanium (Ti)-Dissolved		0.00075	0.00076		mg/L	1.3	25	13-NOV-13
Tin (Sn)-Dissolved		0.00016	0.00015		mg/L	2.3	25	13-NOV-13
Uranium (U)-Dissolved		0.000093	0.000087		mg/L	6.3	25	13-NOV-13
Vanadium (V)-Dissolved		0.00028	0.00031		mg/L	9.1	25	13-NOV-13
Zinc (Zn)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
Zirconium (Zr)-Dissolved		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	13-NOV-13
WG1787714-1 MB								
Aluminum (Al)-Dissolved			<0.0010		mg/L		0.001	13-NOV-13
Antimony (Sb)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Arsenic (As)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Barium (Ba)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Beryllium (Be)-Dissolved			<0.00050		mg/L		0.0005	13-NOV-13
Bismuth (Bi)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Boron (B)-Dissolved			<0.010		mg/L		0.01	13-NOV-13
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.00001	13-NOV-13
Calcium (Ca)-Dissolved			<0.020		mg/L		0.02	13-NOV-13
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Chromium (Cr)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Cobalt (Co)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Copper (Cu)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Iron (Fe)-Dissolved			<0.010		mg/L		0.01	13-NOV-13
Lead (Pb)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Lithium (Li)-Dissolved			<0.0050		mg/L		0.005	13-NOV-13
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	13-NOV-13
Manganese (Mn)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Molybdenum (Mo)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Nickel (Ni)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Potassium (K)-Dissolved			<0.050		mg/L		0.05	13-NOV-13
Rubidium (Rb)-Dissolved			<0.0010		mg/L		0.001	13-NOV-13
Selenium (Se)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-CL	**Water**							
Batch R2740508								
WG1787714-1 MB								
Silicon (Si)-Dissolved			<0.050		mg/L		0.05	13-NOV-13
Silver (Ag)-Dissolved			<0.000010		mg/L		0.00001	13-NOV-13
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	13-NOV-13
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Tellurium (Te)-Dissolved			<0.00060		mg/L		0.0006	13-NOV-13
Thallium (Tl)-Dissolved			<0.000050		mg/L		0.00005	13-NOV-13
Titanium (Ti)-Dissolved			<0.00030		mg/L		0.0003	13-NOV-13
Tin (Sn)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Uranium (U)-Dissolved			<0.000010		mg/L		0.00001	13-NOV-13
Vanadium (V)-Dissolved			<0.00010		mg/L		0.0001	13-NOV-13
Zinc (Zn)-Dissolved			<0.0050		mg/L		0.005	13-NOV-13
Zirconium (Zr)-Dissolved			<0.0050		mg/L		0.005	13-NOV-13
MET-T-CCMS-CL	**Water**							
Batch R2741667								
WG1787693-2 CRM		**TMRM**						
Aluminum (Al)-Total			101.8		%		80-120	14-NOV-13
Antimony (Sb)-Total			113.2		%		80-120	14-NOV-13
Arsenic (As)-Total			113.8		%		80-120	14-NOV-13
Barium (Ba)-Total			116.1		%		80-120	14-NOV-13
Beryllium (Be)-Total			99.2		%		80-120	14-NOV-13
Bismuth (Bi)-Total			98.8		%		80-120	14-NOV-13
Boron (B)-Total			82.9		%		80-120	14-NOV-13
Cadmium (Cd)-Total			101.1		%		80-120	14-NOV-13
Calcium (Ca)-Total			105.5		%		80-120	14-NOV-13
Chromium (Cr)-Total			106.5		%		80-120	14-NOV-13
Cobalt (Co)-Total			103.0		%		80-120	14-NOV-13
Copper (Cu)-Total			101.5		%		80-120	14-NOV-13
Iron (Fe)-Total			102.5		%		80-120	14-NOV-13
Lead (Pb)-Total			101.7		%		80-120	14-NOV-13
Lithium (Li)-Total			92.4		%		80-120	14-NOV-13
Magnesium (Mg)-Total			89.4		%		80-120	14-NOV-13
Manganese (Mn)-Total			105.1		%		80-120	14-NOV-13
Molybdenum (Mo)-Total			106.4		%		80-120	14-NOV-13
Nickel (Ni)-Total			105.1		%		80-120	14-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL	**Water**							
Batch R2741667								
WG1787693-2 CRM		**TMRM**						
Potassium (K)-Total			106.6		%		80-120	14-NOV-13
Selenium (Se)-Total			97.7		%		80-120	14-NOV-13
Silicon (Si)-Total			114.9		%		80-120	14-NOV-13
Silver (Ag)-Total			106.6		%		80-120	14-NOV-13
Sodium (Na)-Total			98.8		%		80-120	14-NOV-13
Strontium (Sr)-Total			98.4		%		80-120	14-NOV-13
Thallium (Tl)-Total			99.8		%		80-120	14-NOV-13
Tin (Sn)-Total			105.6		%		80-120	14-NOV-13
Titanium (Ti)-Total			103.8		%		80-120	14-NOV-13
Uranium (U)-Total			95.0		%		80-120	14-NOV-13
Vanadium (V)-Total			110.5		%		80-120	14-NOV-13
Zinc (Zn)-Total			100.7		%		80-120	14-NOV-13
WG1787693-4 DUP		**L1386380-8**						
Aluminum (Al)-Total		0.0995	0.0998		mg/L	0.2	20	14-NOV-13
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-NOV-13
Arsenic (As)-Total		0.00078	0.00082		mg/L	4.4	20	14-NOV-13
Barium (Ba)-Total		0.00927	0.00947		mg/L	2.1	20	14-NOV-13
Beryllium (Be)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	14-NOV-13
Bismuth (Bi)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-NOV-13
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	14-NOV-13
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-NOV-13
Calcium (Ca)-Total		15.2	15.0		mg/L	1.4	20	14-NOV-13
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	14-NOV-13
Chromium (Cr)-Total		0.00055	0.00053		mg/L	3.3	20	14-NOV-13
Cobalt (Co)-Total		0.00016	0.00017		mg/L	8.4	20	14-NOV-13
Copper (Cu)-Total		0.00075	0.00076		mg/L	1.2	20	14-NOV-13
Iron (Fe)-Total		1.03	1.03		mg/L	0.1	25	14-NOV-13
Lead (Pb)-Total		0.000085	0.000093		mg/L	9.4	20	14-NOV-13
Lithium (Li)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	14-NOV-13
Magnesium (Mg)-Total		2.56	2.55		mg/L	0.6	20	14-NOV-13
Manganese (Mn)-Total		0.0350	0.0342		mg/L	2.2	20	14-NOV-13
Molybdenum (Mo)-Total		0.000208	0.000213		mg/L	2.3	20	14-NOV-13
Nickel (Ni)-Total		0.00063	0.00059		mg/L	7.8	20	14-NOV-13
Potassium (K)-Total		0.679	0.662		mg/L	2.5	20	14-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL	**Water**							
Batch R2741667								
WG1787693-4 DUP		**L1386380-8**						
Rubidium (Rb)-Total		0.0016	0.0015		mg/L	3.7	25	14-NOV-13
Selenium (Se)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-NOV-13
Silicon (Si)-Total		5.91	5.84		mg/L	1.3	25	14-NOV-13
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	14-NOV-13
Sodium (Na)-Total		1.39	1.37		mg/L	1.5	20	14-NOV-13
Strontium (Sr)-Total		0.0290	0.0295		mg/L	1.6	20	14-NOV-13
Tellurium (Te)-Total		<0.00060	<0.00060	RPD-NA	mg/L	N/A	25	14-NOV-13
Thallium (Tl)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	14-NOV-13
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	14-NOV-13
Titanium (Ti)-Total		0.00292	0.00283		mg/L	2.8	20	14-NOV-13
Uranium (U)-Total		0.000058	0.000061		mg/L	5.1	20	14-NOV-13
Vanadium (V)-Total		0.00090	0.00089		mg/L	1.3	20	14-NOV-13
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	14-NOV-13
Zirconium (Zr)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	25	14-NOV-13
Batch R2744610								
WG1790419-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	18-NOV-13
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Arsenic (As)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Barium (Ba)-Total			<0.000050		mg/L		0.00005	18-NOV-13
Beryllium (Be)-Total			<0.00050		mg/L		0.0005	18-NOV-13
Bismuth (Bi)-Total			<0.000050		mg/L		0.00005	18-NOV-13
Boron (B)-Total			<0.010		mg/L		0.01	18-NOV-13
Cadmium (Cd)-Total			<0.000010		mg/L		0.00001	18-NOV-13
Calcium (Ca)-Total			<0.020		mg/L		0.02	18-NOV-13
Cesium (Cs)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Copper (Cu)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Iron (Fe)-Total			<0.010		mg/L		0.01	18-NOV-13
Lead (Pb)-Total			<0.000050		mg/L		0.00005	18-NOV-13
Lithium (Li)-Total			<0.0050		mg/L		0.005	18-NOV-13
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	18-NOV-13
Manganese (Mn)-Total			<0.000050		mg/L		0.00005	18-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-CL	**Water**							
Batch R2744610								
WG1790419-1 MB								
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	18-NOV-13
Nickel (Ni)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Potassium (K)-Total			<0.050		mg/L		0.05	18-NOV-13
Rubidium (Rb)-Total			<0.0010		mg/L		0.001	18-NOV-13
Selenium (Se)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Silicon (Si)-Total			<0.050		mg/L		0.05	18-NOV-13
Silver (Ag)-Total			<0.000010		mg/L		0.00001	18-NOV-13
Sodium (Na)-Total			<0.050		mg/L		0.05	18-NOV-13
Strontium (Sr)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Tellurium (Te)-Total			<0.00060		mg/L		0.0006	18-NOV-13
Thallium (Tl)-Total			<0.000050		mg/L		0.00005	18-NOV-13
Tin (Sn)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	18-NOV-13
Uranium (U)-Total			<0.000010		mg/L		0.00001	18-NOV-13
Vanadium (V)-Total			<0.00010		mg/L		0.0001	18-NOV-13
Zinc (Zn)-Total			<0.0050		mg/L		0.005	18-NOV-13
Zirconium (Zr)-Total			<0.0050		mg/L		0.005	18-NOV-13
NH3-COL-TB	**Water**							
Batch R2737972								
WG1784768-16 DUP		**L1386380-2**						
Ammonia, Total (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	08-NOV-13
WG1784768-10 LCS								
Ammonia, Total (as N)			102.5		%		85-115	08-NOV-13
WG1784768-14 LCS								
Ammonia, Total (as N)			101.5		%		85-115	08-NOV-13
WG1784768-18 LCS								
Ammonia, Total (as N)			103.0		%		85-115	08-NOV-13
WG1784768-2 LCS								
Ammonia, Total (as N)			101.3		%		85-115	08-NOV-13
WG1784768-26 LCS								
Ammonia, Total (as N)			102.7		%		85-115	08-NOV-13
WG1784768-6 LCS								
Ammonia, Total (as N)			102.1		%		85-115	08-NOV-13
WG1784768-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-13 MB								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2737972								
WG1784768-13 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-17 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-25 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	08-NOV-13
WG1784768-12 MS		**L1386299-33**						
Ammonia, Total (as N)			N/A	MS-B	%		-	08-NOV-13
WG1784768-15 MS		**L1386380-2**						
Ammonia, Total (as N)			86.2		%		75-125	08-NOV-13
WG1784768-19 MS		**L1386428-2**						
Ammonia, Total (as N)			102.0		%		75-125	08-NOV-13
WG1784768-27 MS		**L1387313-1**						
Ammonia, Total (as N)			N/A	MS-B	%		-	08-NOV-13
WG1784768-4 MS		**L1385684-5**						
Ammonia, Total (as N)			89.1		%		75-125	08-NOV-13
WG1784768-8 MS		**L1386299-16**						
Ammonia, Total (as N)			96.6		%		75-125	08-NOV-13
Batch R2739997								
WG1786515-10 LCS								
Ammonia, Total (as N)			108.8		%		85-115	12-NOV-13
WG1786515-14 LCS								
Ammonia, Total (as N)			111.3		%		85-115	12-NOV-13
WG1786515-18 LCS								
Ammonia, Total (as N)			104.3		%		85-115	12-NOV-13
WG1786515-2 LCS								
Ammonia, Total (as N)			104.3		%		85-115	12-NOV-13
WG1786515-6 LCS								
Ammonia, Total (as N)			105.4		%		85-115	12-NOV-13
WG1786515-1 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-NOV-13
WG1786515-13 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-NOV-13
WG1786515-17 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-TB	**Water**							
Batch R2739997								
WG1786515-5 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-NOV-13
WG1786515-9 MB								
Ammonia, Total (as N)			<0.020		mg/L		0.02	12-NOV-13
WG1786515-12 MS		**L1387750-2**						
Ammonia, Total (as N)			94.6		%		75-125	12-NOV-13
WG1786515-16 MS		**L1388079-3**						
Ammonia, Total (as N)			88.6		%		75-125	12-NOV-13
WG1786515-20 MS		**L1389014-2**						
Ammonia, Total (as N)			82.6		%		75-125	12-NOV-13
WG1786515-4 MS		**L1387732-2**						
Ammonia, Total (as N)			84.5		%		75-125	12-NOV-13
WG1786515-8 MS		**L1387750-3**						
Ammonia, Total (as N)			81.0		%		75-125	12-NOV-13
NO2-IC-TB	**Water**							
Batch R2732911								
WG1780275-3 DUP		**L1386380-3**						
Nitrite (as N)		<0.020	<0.020	RPD-NA	mg/L	N/A	20	01-NOV-13
WG1780275-10 LCS								
Nitrite (as N)			100.8		%		90-110	01-NOV-13
WG1780275-14 LCS								
Nitrite (as N)			99.4		%		90-110	01-NOV-13
WG1780275-2 LCS								
Nitrite (as N)			98.9		%		90-110	01-NOV-13
WG1780275-6 LCS								
Nitrite (as N)			101.0		%		90-110	01-NOV-13
WG1780275-1 MB								
Nitrite (as N)			<0.020		mg/L		0.02	01-NOV-13
WG1780275-5 MB								
Nitrite (as N)			<0.020		mg/L		0.02	01-NOV-13
WG1780275-9 MB								
Nitrite (as N)			<0.020		mg/L		0.02	01-NOV-13
WG1780275-4 MS		**L1386380-3**						
Nitrite (as N)			98.6		%		75-115	01-NOV-13
WG1780275-8 MS		**L1386047-1**						
Nitrite (as N)			97.5		%		75-115	01-NOV-13
NO3-IC-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-TB	**Water**							
Batch R2732911								
WG1780275-3 DUP		**L1386380-3**						
Nitrate (as N)		0.045	0.037		mg/L	20	20	01-NOV-13
WG1780275-10 LCS								
Nitrate (as N)			101.4		%		90-110	01-NOV-13
WG1780275-14 LCS								
Nitrate (as N)			100.8		%		90-110	01-NOV-13
WG1780275-2 LCS								
Nitrate (as N)			101.9		%		90-110	01-NOV-13
WG1780275-6 LCS								
Nitrate (as N)			101.5		%		90-110	01-NOV-13
WG1780275-1 MB								
Nitrate (as N)			<0.030		mg/L		0.03	01-NOV-13
WG1780275-5 MB								
Nitrate (as N)			<0.030		mg/L		0.03	01-NOV-13
WG1780275-9 MB								
Nitrate (as N)			<0.030		mg/L		0.03	01-NOV-13
WG1780275-4 MS		**L1386380-3**						
Nitrate (as N)			98.6		%		75-125	01-NOV-13
WG1780275-8 MS		**L1386047-1**						
Nitrate (as N)			99.6		%		75-125	01-NOV-13
OGG-TOT-WT	**Water**							
Batch R2737001								
WG1783910-2 LCS								
Oil and Grease, Total			94.7		%		70-130	07-NOV-13
WG1783910-3 LCSD		**WG1783910-2**						
Oil and Grease, Total		94.7	91		%	4.4	40	07-NOV-13
WG1783910-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	07-NOV-13
Batch R2740392								
WG1784318-2 LCS								
Oil and Grease, Total			87.4		%		70-130	07-NOV-13
WG1784318-3 LCSD		**WG1784318-2**						
Oil and Grease, Total		87.4	90		%	2.5	40	07-NOV-13
WG1784318-1 MB								
Oil and Grease, Total			<2.0		mg/L		2	07-NOV-13
P-T-COL-TB	**Water**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-TB	**Water**							
Batch R2735105								
WG1781649-15 DUP		**L1386380-11**						
Phosphorus (P)-Total		0.0245	0.0237		mg/L	3.5	20	06-NOV-13
WG1781649-10 LCS								
Phosphorus (P)-Total			101.0		%		80-120	06-NOV-13
WG1781649-14 LCS								
Phosphorus (P)-Total			100.5		%		80-120	06-NOV-13
WG1781649-2 LCS								
Phosphorus (P)-Total			104.4		%		80-120	06-NOV-13
WG1781649-6 LCS								
Phosphorus (P)-Total			100.5		%		80-120	06-NOV-13
WG1781649-1 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	06-NOV-13
WG1781649-13 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	06-NOV-13
WG1781649-5 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	06-NOV-13
WG1781649-9 MB								
Phosphorus (P)-Total			<0.0050		mg/L		0.005	06-NOV-13
WG1781649-16 MS		**L1386380-11**						
Phosphorus (P)-Total			104.1		%		70-130	06-NOV-13
WG1781649-4 MS		**L1385856-1**						
Phosphorus (P)-Total			96.8		%		70-130	06-NOV-13
WG1781649-8 MS		**L1386047-1**						
Phosphorus (P)-Total			99.4		%		70-130	06-NOV-13
PH-CAP-TB	**Water**							
Batch R2731839								
WG1780562-6 DUP		**L1386380-5**						
pH		7.49	7.47	J	pH	0.02	0.2	02-NOV-13
WG1780562-11 LCS								
pH			6.02		pH		5.9-6.1	02-NOV-13
WG1780562-14 LCS								
pH			6.02		pH		5.9-6.1	02-NOV-13
WG1780562-2 LCS								
pH			6.01		pH		5.9-6.1	02-NOV-13
WG1780562-5 LCS								
pH			6.02		pH		5.9-6.1	02-NOV-13
WG1780562-8 LCS								
pH			6.01		pH		5.9-6.1	02-NOV-13

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-TB	**Water**							
Batch R2732911								
WG1780275-3 DUP		**L1386380-3**						
Sulfate (SO4)		2.08	1.93		mg/L	7.2	20	01-NOV-13
WG1780275-10 LCS								
Sulfate (SO4)			102.9		%		90-110	01-NOV-13
WG1780275-14 LCS								
Sulfate (SO4)			102.4		%		90-110	01-NOV-13
WG1780275-2 LCS								
Sulfate (SO4)			103.5		%		90-110	01-NOV-13
WG1780275-6 LCS								
Sulfate (SO4)			103.4		%		90-110	01-NOV-13
WG1780275-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	01-NOV-13
WG1780275-5 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	01-NOV-13
WG1780275-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	01-NOV-13
WG1780275-4 MS		**L1386380-3**						
Sulfate (SO4)			100.2		%		75-125	01-NOV-13
WG1780275-8 MS		**L1386047-1**						
Sulfate (SO4)			100.7		%		75-125	01-NOV-13
SOLIDS-TOTSUS-TB	**Water**							
Batch R2733603								
WG1781450-3 DUP		**L1386380-11**						
Total Suspended Solids		<2.0	<2.0	RPD-NA	mg/L	N/A	20	04-NOV-13
WG1781450-2 LCS								
Total Suspended Solids			102.7		%		85-115	04-NOV-13
WG1781450-1 MB								
Total Suspended Solids			<2.0		mg/L		2	04-NOV-13
Batch R2733968								
WG1781617-3 DUP		**L1386380-16**						
Total Suspended Solids		<2.0	<2.0	RPD-NA	mg/L	N/A	20	04-NOV-13
WG1781617-2 LCS								
Total Suspended Solids			95.6		%		85-115	04-NOV-13
WG1781617-1 MB								
Total Suspended Solids			<2.0		mg/L		2	04-NOV-13

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Ammonia by Discrete Analyzer							
	13	30-OCT-13 12:00	12-NOV-13 12:46	10	13	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 L1386380 were received on 01-NOV-13 10:30.

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.

ALS Environmental
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ALS CANADA LIMITED Part of the ALS Group A Campbell Brothers Limited Company www.alsglobal.com

L1386380

Company:	Treasury Metals	Regulatory Information	Both questions below must answered for water samples
Contact:	Mac Potter	☑ O. Reg 153 (O. Reg 511 Amend) Table ___	Are any samples taken from a regulated DW System? ☐ Yes ☑ No
Address:	899 Tree Nursery Rd	Record of Site Condition ☐ Yes ☐ No	If yes, an authorized DW COC must be used.
	Wabigoon ON P0V 2W0	PWQO ☑ MISA ☐ MMER ☐ CCME ☐	Is the water sampled intended for human consumption? ☐ Yes ☑ No
Phone:	807-938-6961 Fax:	Guideline Required:	
Email:	mac@treasurymetals.com	TCLP Regulation 558 ☐ Other	
Project:	PO:	Service Requested	Analysis Request
Quote #		☑ Regular TAT (7 Days)	Please indicate below Filtered, Preserved or both (F, P, F/P)
Invoice To:	Same as Report: ☑ Yes ☐ No	☐ Priority TAT 50% Surcharge (3-5 Days)	
Company:		☐ Emergency TAT 100% Surcharge (1-2 Days)	
Contact:		Specify Date Required:	
Address:		All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.	
Email:			
Account Manager	Bobbie	Sampler: M.P / A.T	

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total, WAD, Free Cyanide	WAD Cyanide	Ammonia, Total Phosphorus	OGG	Total Metals +Hg	Dissolved Metals + Hg	Hardness			Number of Containers
					P	P	P	P	P	F/P							
1	SW1	30/10/13	1200	WATER	X	X	X	X	X	X	X	X	X	X			8
2	SW2				X	X	X	X	X	X	X	X	X	X			
3	SW8				X	X	X	X	X	X	X	X	X	X			
4	TL3				X	X	X	X	X	X	X	X	X	X			
5	TCTa				X	X	X	X	X	X	X	X	X	X			
6	TL1a				X	X	X	X	X	X	X	X	X	X			
7	SW10				X	X	X	X	X	X	X	X	X	X			
8	SW7				X	X	X	X	X	X	X	X	X	X			
9	SW8				X	X	X	X	X	X	X	X	X	X			
10	SW9				X	X	X	X	X	X	X	X	X	X			
11	SW11	↓	↓	↓	X	X	X	X	X	X	X	X	X	X			✓

L1386380-COFC

Special Instructions / Comments

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: <Original signed by>	Date & Time 12:00 PM CST 31/10/13	Received by: <Original signed by>	Date & Time Nov 1/13 10:30	Temp 10.9	Cooling Initiated ☑ Yes ☐ No	Verified by: <Original signed by>	Date & Time NOV 1/13 10:30	Observations: Yes / No If Yes add SIF

**Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analy
Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain
orkload at time of submission.
n the comments section. By

ALS Environmental
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Company:	Treasury Metals
Contact:	Mac Potter
Address:	899 Tree Nursery Rd
	Wabigoon ON P0V 2W0
Phone:	807-938-6961 Fax:
Email:	mac@treasurymetals.com
Project:	PO:
Quote #	
Invoice To:	Same as Report: ☑ Yes ☐ No
Company:	
Contact:	
Address:	
Email:	
Account Manager	Bobbie
Sampler:	M.P A.T

Regulatory Information

- ☐ Reg 153 (O. Reg 511 Amend) Table
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☑ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☑ No
If yes, an authorized DW COC must be used
Is the water sampled intended for human consumption? ☐ Yes ☑ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	Alk, pH Conductivity	Cl, NO2, NO3, SO4	Acidity, TSS	Total, WAD, Free Cyanide (P)	WAD Cyanide (P)	Ammonia, Total Phosphorus (P)	OGG (P)	Total Metals +Hg (P)	Dissolved Metals + Hg (F/P)	Hardness			Number of Containers
12	Field Blank	30/10/13	12:00	WATER	X	X	X	X	X	X	X	X	X	X			08
13	Travel Blank	1			X	X	X	X	X	X	X	X	X	X			
14	SW5	31/10/13			X	X	X	X	X	X	X	X	X	X			
15	SW6	1			X	X	X	X	X	X	X	X	X	X			
16	Duplicate	30/10/13			X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			
					X	X	X	X	X	X	X	X	X	X			

L1386380-COFC

Instructions / Comments

SHIPMENT RELEASE (client use)

Released by: <Original signed by>
Date & Time: 12:00 PM CST 31/10/13

SHIPMENT RECEPTION (lab use only)

Received by: <Original signed by>
Date & Time: NOV 1/13 10:30
Temp: 10.9
Cooling Initiated: ☑ Yes ☐ No

SHIPMENT VERIFICATION (lab use only)

Verified by: <Original signed by>
Date & Time: NOV 1/13 10:30
Observations: Yes / No? If Yes add SIF

Failure to complete all portions of this form may delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By

TREASURY METALS INC.
ATTN: Mac Potter
P.O. Box 789
Dryden ON P8N 2Z4

Date Received: 25-OCT-12
Report Date: 28-MAR-13 13:48 (MT)
Version: FINAL

Client Phone: 807-938-6961

Certificate of Analysis

Lab Work Order #: L1228910

Project P.O. #: NOT SUBMITTED
Job Reference: GOLIATH GOLD PROJECT
C of C Numbers:
Legal Site Desc:

<Original signed by>

Tricia Sampson
Account Manager Supervisor

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1228910-1 soil 22-OCT-12 SB12-4A	L1228910-2 soil 22-OCT-12 SB12-5A	L1228910-3 soil 22-OCT-12 SB12-2A	L1228910-4 soil 22-OCT-12 SB12-22	L1228910-5 soil 22-OCT-12 SB12-23
Sample ID						
Description						
Sampled Date						
Sampled Time						
Client ID						
SOIL						
Physical Tests	% Moisture (%)	22.8	22.1	17.5	57.5	67.2
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	3.53	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	84.3	91.6	72.2	9.92	5.56
	% Silt (0.063mm - 4um) (%)	12.8	6.65	22.1	62.8	63.6
	% Clay (<4um) (%)	2.91	1.78	2.20	27.2	30.8
	Texture	Sand	Sand	Loamy sand	Silt loam	Silt loam
Leachable Anions & Nutrients	Ammonia as N (mg/kg)	14.3	10.8	79.3	304	380
	Bromide (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Chloride (mg/kg)	<20	<20	<20	<20	<20
	Fluoride (mg/kg)	<1.0	<1.0	<1.0	1.3	2.8
	Nitrate-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Nitrite-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Total Kjeldahl Nitrogen (mg/kg)	210	<200	940	4010	4740
	Sulphate (mg/kg)	21	<20	<20	189	55
Anions and Nutrients	Phosphorus, Total (mg/kg)	154	114	240	388	504
Saturated Paste Extractables	Nitrate+Nitrite-N (mg/L)	<1.0	<1.0	<1.0	<1.0	1.3
Taxonomy	Benthic Invertebrates	See attached.	See attached.	See attached.	See attached.	See attached.
Metals	Mercury (Hg) (mg/kg)	<0.010	<0.010	<0.010	0.050	0.034
	Zirconium (Zr) (mg/kg)	<5.0	<5.0	<5.0	6.0	9.3

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	L1228910-6 soil 22-OCT-12 SB12-24	L1228910-7 soil 22-OCT-12 SB12-25	L1228910-8 soil 22-OCT-12 SB12-26	L1228910-9 soil 23-OCT-12 SB12-17	L1228910-10 soil 23-OCT-12 SB12-18
Sample ID / **Description** / **Sampled Date** / **Sampled Time** / **Client ID**						
SOIL						
Physical Tests	% Moisture (%)	53.0	54.9	62.0	47.7	23.4
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	<0.10
	% Sand (2.0mm - 0.063mm) (%)	21.8	25.0	11.9	59.1	82.5
	% Silt (0.063mm - 4um) (%)	57.9	30.3	33.5	38.7	16.7
	% Clay (<4um) (%)	20.3	44.8	54.7	2.17	0.81
	Texture	Silt loam	Clay loam	Silty clay / Clay	Sandy loam	Sand
Leachable Anions & Nutrients	Ammonia as N (mg/kg)	96.9	81.3	106	104	28.2
	Bromide (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Chloride (mg/kg)	<20	<20	<20	<20	<20
	Fluoride (mg/kg)	<1.0	<1.0	1.1	<1.0	<1.0
	Nitrate-N (mg/kg)	<1.0	1.9	2.2	<1.0	<1.0
	Nitrite-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Total Kjeldahl Nitrogen (mg/kg)	2140	1420	1480	1570	270
	Sulphate (mg/kg)	29	22	37	49	<20
Anions and Nutrients	Phosphorus, Total (mg/kg)	644	853	793	403	192
Saturated Paste Extractables	Nitrate+Nitrite-N (mg/L)	<1.0	1.0	<1.0	<1.0	<1.0
Taxonomy	Benthic Invertebrates	See attached.	See attached.	See attached.	See attached.	See attached.
Metals	Mercury (Hg) (mg/kg)	0.033	0.039	0.044	0.011	<0.010
	Zirconium (Zr) (mg/kg)	6.2	8.3	11.7	<5.0	<5.0

ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID	L1228910-11	L1228910-12	L1228910-13	L1228910-14	L1228910-15
	Description	soil	soil	soil	soil	soil
	Sampled Date	23-OCT-12	23-OCT-12	22-OCT-12	22-OCT-12	22-OCT-12
	Sampled Time					
	Client ID	SB12-19	SB12-20	SB12-15A	SB12-16	SB12-14
Grouping	**Analyte**					
SOIL						
Physical Tests	% Moisture (%)	24.0	26.0	30.0	36.0	20.2
Particle Size	% Gravel (>2mm) (%)	<0.10	<0.10	<0.10	<0.10	2.32
	% Sand (2.0mm - 0.063mm) (%)	97.0	95.7	47.9	39.8	78.7
	% Silt (0.063mm - 4um) (%)	2.20	3.63	34.6	32.6	14.5
	% Clay (<4um) (%)	0.80	0.66	17.5	27.7	4.44
	Texture	Sand	Sand	Loam	Loam	Loamy sand
Leachable Anions & Nutrients	Ammonia as N (mg/kg)	14.3	25.6	105	107	39.9
	Bromide (mg/kg)	<1.0	<1.0	1.2	<1.0	<1.0
	Chloride (mg/kg)	<20	<20	<20	<20	<20
	Fluoride (mg/kg)	<1.0	<1.0	<1.0	1.0	<1.0
	Nitrate-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Nitrite-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	<1.0
	Total Kjeldahl Nitrogen (mg/kg)	260	440	1300	1340	650
	Sulphate (mg/kg)	<20	<20	44	<20	<20
Anions and Nutrients	Phosphorus, Total (mg/kg)	341	155	391	438	255
Saturated Paste Extractables	Nitrate+Nitrite-N (mg/L)	<1.0	<1.0	<1.0	<1.0	<1.0
Taxonomy	Benthic Invertebrates	See attached.	See attached.	See attached.	See attached.	See attached.
Metals	Mercury (Hg) (mg/kg)	<0.010	<0.010	0.020	0.025	0.011
	Zirconium (Zr) (mg/kg)	<5.0	<5.0	<5.0	8.5	<5.0

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID: L1228910-16 Description: soil Sampled Date: 22-OCT-12 Sampled Time: Client ID: SB12-13	Sample ID: L1228910-17 Description: soil Sampled Date: 22-OCT-12 Sampled Time: Client ID: SB12-11A	Sample ID: L1228910-18 Description: soil Sampled Date: 22-OCT-12 Sampled Time: Client ID: SB12-12	Sample ID: L1228910-19 Description: soil Sampled Date: 22-OCT-12 Sampled Time: Client ID: SB12-3	
SOIL						
Physical Tests	% Moisture (%)	18.6	36.8	68.5	19.0	
Particle Size	% Gravel (>2mm) (%)	4.85	0.61	29.9	77.8	
	% Sand (2.0mm - 0.063mm) (%)	78.4	26.2	12.7	21.8	
	% Silt (0.063mm - 4um) (%)	12.4	48.5	37.9	0.23	
	% Clay (<4um) (%)	4.28	24.8	19.5	0.16	
	Texture	Loamy sand	Silt loam	Silt loam	Sand	
Leachable Anions & Nutrients	Ammonia as N (mg/kg)	47.7	70.1	384	20.7	
	Bromide (mg/kg)	<1.0	<1.0	3.6	<1.0	
	Chloride (mg/kg)	<20	<20	<20	<20	
	Fluoride (mg/kg)	<1.0	1.4	4.3	<1.0	
	Nitrate-N (mg/kg)	<1.0	<1.0	4.6	<1.0	
	Nitrite-N (mg/kg)	<1.0	<1.0	<1.0	<1.0	
	Total Kjeldahl Nitrogen (mg/kg)	410	810	4470	320	
	Sulphate (mg/kg)	<20	<20	406	<20	
Anions and Nutrients	Phosphorus, Total (mg/kg)	270	459	575	680	
Saturated Paste Extractables	Nitrate+Nitrite-N (mg/L)	<1.0	<1.0	<1.0	2.8	
Taxonomy	Benthic Invertebrates	See attached.	See attached.	See attached.	See attached.	
Metals	Mercury (Hg) (mg/kg)	<0.010	0.031	0.042	<0.010	
	Zirconium (Zr) (mg/kg)	<5.0	<5.0	7.1	<5.0	

Reference Information

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments
L1228910-1	Soil	Note: Entire sample sorted.	
L1228910-10	Soil	Note: Entire sample sorted.	
L1228910-11	Soil	Note: Entire sample sorted.	
L1228910-12	Soil	Note: Entire sample sorted.	
L1228910-13	Soil	Note: Entire sample sorted.	
L1228910-14	Soil	Note: Entire sample sorted.	
L1228910-15	Soil	Note: Entire sample sorted.	
L1228910-16	Soil	Note: Entire sample sorted.	
L1228910-17	Soil	Note: Entire sample sorted.	
L1228910-18	Soil	Note: Entire sample sorted.	
L1228910-19	Soil	Note: 1/2 sample sorted. Results adjusted.	
L1228910-2	Soil	Note: Entire sample sorted.	
L1228910-3	Soil	Note: Entire sample sorted.	
L1228910-4	Soil	Note: 1/2 sample sorted. Results adjusted.	
L1228910-5	Soil	Note: Entire sample sorted.	
L1228910-6	Soil	Note: Entire sample sorted.	
L1228910-7	Soil	Note: Entire sample sorted.	
L1228910-8	Soil	Note: Entire sample sorted.	
L1228910-9	Soil	Note: Entire sample sorted.	

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

HG-WT	Soil	Mercury by CVAA	EPA 7471
MOISTURE-WT	Soil	% Moisture	Gravimetric: Oven Dried
N2N3-SAR-SK	Soil	Nitrate-N & Nitrite-N in saturated soil	APHA 4500 NO3H-Colorimetry
NH3-WT	Soil	Ammonia as N	EPA 350.1

Sample is distilled into a solution of boric acid and measured colorimetrically.

P-TOTAL-WT	Soil	Phosphorous, Total	APHA 4500-P B E

A homogenized soil sample is digested to convert the total phosphorus to orthophosphate. The orthophosphate reacts with ammonium molybdate and potassium antimonyl tartrate to form a antimonyl-phosphomolybdate complex. This complex is measured colorimetrically and reported as phosphorus.

PSA-PIPET+GRAVEL-SK	Soil	Particle size - Sieve and Pipette	SSIR-51 METHOD 3.2.1

Particle size distribution is determined by a combination of techniques. Dry sieving is performed for coarse particles, wet sieving for sand particles and the pipette sedimentation method for clay particles.

Reference:

Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

TKN-WT	Soil	Total Kjeldahl Nitrogen	APHA 4500-N

A homogenized soil sample is digested to convert the TKN to ammonium sulphate. The ammonia ions are heated to produce a colour complex. The absorbance measured by the instrument is proportional to the concentration of ammonium sulphate in the sample and is reported as TKN.

ZR-200.2-MS-ED	Soil	Zirconium in Soil by ICPMS	EPA 200.2/6020A

Zirconium is not typically present in most natural soils in a strong-acid leachable form. Therefore recovery in terms of total zirconium is generally low, sometimes less than 1%.

** 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
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Reference Information

WT	SK	
		ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP		ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

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

Client: TREASURY METALS INC.
P.O. Box 789
Dryden ON P8N 2Z4
Contact: Mac Potter

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ANIONS-WT	**Soil**							
Batch R2465661								
WG1574987-3 DUP		**L1228910-1**						
Chloride		<20	<20	RPD-NA	mg/kg	N/A	30	29-OCT-12
Bromide		<1.0	<1.0	RPD-NA	mg/kg	N/A	35	29-OCT-12
Fluoride		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	29-OCT-12
Nitrite-N		<1.0	<1.0	RPD-NA	mg/kg	N/A	30	29-OCT-12
Nitrate-N		<1.0	1.2	RPD-NA	mg/kg	N/A	30	29-OCT-12
Sulphate		21	<20	RPD-NA	mg/kg	N/A	30	29-OCT-12
WG1574987-2 LCS								
Chloride			100.9		%		70-130	29-OCT-12
Bromide			92.4		%		75-125	29-OCT-12
Fluoride			96.4		%		60-140	29-OCT-12
Nitrite-N			91.7		%		60-140	29-OCT-12
Nitrate-N			99.1		%		60-140	29-OCT-12
Sulphate			103.1		%		70-130	29-OCT-12
WG1574987-1 MB								
Chloride			<20		mg/kg		20	29-OCT-12
Bromide			<1.0		mg/kg		1	29-OCT-12
Fluoride			<1.0		mg/kg		1	29-OCT-12
Nitrite-N			<1.0		mg/kg		1	29-OCT-12
Nitrate-N			<1.0		mg/kg		1	29-OCT-12
Sulphate			<20		mg/kg		20	29-OCT-12
HG-WT	**Soil**							
Batch R2464565								
WG1575410-2 CRM		**WT-SS-1**						
Mercury (Hg)			108.8		%		70-130	29-OCT-12
WG1575410-7 LCS								
Mercury (Hg)			97.5		%		70-130	29-OCT-12
WG1575410-1 MB								
Mercury (Hg)			<0.010		mg/kg		0.01	29-OCT-12
WG1575410-5 MS		**WG1575410-3**						
Mercury (Hg)			77.3		%		70-130	29-OCT-12
MOISTURE-WT	**Soil**							
Batch R2463624								
WG1574734-3 DUP		**L1228910-7**						
% Moisture		54.9	53.3		%	2.9	30	26-OCT-12
WG1574734-2 LCS								
% Moisture			95.3		%		70-130	26-OCT-12

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	**Soil**							
Batch R2463624								
WG1574734-1 MB								
% Moisture			<0.10		%		0.1	26-OCT-12
Batch R2464736								
WG1575571-2 LCS								
% Moisture			94.9		%		70-130	29-OCT-12
WG1575571-1 MB								
% Moisture			<0.10		%		0.1	29-OCT-12
N2N3-SAR-SK	**Soil**							
Batch R2467960								
WG1579451-1 MB								
Nitrate+Nitrite-N			<1.0		mg/L		1	02-NOV-12
NH3-WT	**Soil**							
Batch R2464744								
WG1575744-2 CVS								
Ammonia as N			100.1		%		80-120	29-OCT-12
WG1575412-3 DUP		**L1228910-1**						
Ammonia as N		14.3	12.6		mg/kg	12	20	29-OCT-12
WG1575412-2 LCS								
Ammonia as N			112.0		%		70-130	29-OCT-12
WG1575412-1 MB								
Ammonia as N			<5.0		mg/kg		5	29-OCT-12
Batch R2465151								
WG1576340-2 CVS								
Ammonia as N			104.5		%		80-120	30-OCT-12
WG1576164-3 DUP		**L1228910-10**						
Ammonia as N		28.2	27.1		mg/kg	3.8	20	30-OCT-12
WG1576164-2 LCS								
Ammonia as N			111.1		%		70-130	30-OCT-12
WG1576164-1 MB								
Ammonia as N			<5.0		mg/kg		5	30-OCT-12
Batch R2465711								
WG1577229-2 CVS								
Ammonia as N			98.4		%		80-120	31-OCT-12
WG1577090-3 DUP		**L1228910-14**						
Ammonia as N		107	111		mg/kg	3.0	20	31-OCT-12
WG1577090-2 LCS								

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-WT	**Soil**							
Batch R2465711								
WG1577090-2 LCS								
Ammonia as N			109.4		%		70-130	31-OCT-12
WG1577090-1 MB								
Ammonia as N			<5.0		mg/kg		5	31-OCT-12
P-TOTAL-WT	**Soil**							
Batch R2467226								
WG1578007-3 CRM		**ERA542**						
Phosphorus, Total			107		%		80-120	01-NOV-12
WG1578171-1 CVS								
Phosphorus, Total			102.8		%		80-120	01-NOV-12
WG1578007-2 DUP		**L1228910-1**						
Phosphorus, Total		154	177		mg/kg	14	20	01-NOV-12
WG1578007-1 MB								
Phosphorus, Total			<50		mg/kg		50	01-NOV-12
Batch R2467534								
WG1578801-3 CRM		**ERA542**						
Phosphorus, Total			111		%		80-120	02-NOV-12
WG1578847-1 CVS								
Phosphorus, Total			97.0		%		80-120	02-NOV-12
WG1578801-2 DUP		**L1228910-19**						
Phosphorus, Total		680	565		mg/kg	18	20	02-NOV-12
WG1578801-1 MB								
Phosphorus, Total			<50		mg/kg		50	02-NOV-12
PSA-PIPET+GRAVEL-SK	**Soil**							
Batch R2465323								
WG1574769-1 DUP		**L1228910-6**						
% Gravel (>2mm)		<0.10	<0.10	RPD-NA	%	N/A	25	30-OCT-12
% Sand (2.0mm - 0.063mm)		21.8	19.9	J	%	1.93	5	30-OCT-12
% Silt (0.063mm - 4um)		57.9	59.0	J	%	1.15	5	30-OCT-12
% Clay (<4um)		20.3	21.1	J	%	0.78	5	30-OCT-12
WG1574769-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.063mm)			43.6		%		40-50	30-OCT-12
% Silt (0.063mm - 4um)			37.1		%		30-40	30-OCT-12
% Clay (<4um)			19.2		%		13-23	30-OCT-12
TKN-WT	**Soil**							

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TKN-WT	**Soil**							
Batch R2466680								
WG1578007-3 CRM		**ERA542**						
Total Kjeldahl Nitrogen			98		%		80-120	01-NOV-12
WG1578170-1 CVS								
Total Kjeldahl Nitrogen			99.4		%		80-120	01-NOV-12
WG1578007-2 DUP		**L1228910-1**						
Total Kjeldahl Nitrogen		210	220		mg/kg	3.2	20	01-NOV-12
WG1578007-1 MB								
Total Kjeldahl Nitrogen			<200		mg/kg		200	01-NOV-12
Batch R2467455								
WG1578801-3 CRM		**ERA542**						
Total Kjeldahl Nitrogen			97		%		80-120	02-NOV-12
WG1578846-1 CVS								
Total Kjeldahl Nitrogen			102.0		%		80-120	02-NOV-12
WG1578801-2 DUP		**L1228910-19**						
Total Kjeldahl Nitrogen		320	270		mg/kg	19	20	02-NOV-12
WG1578801-1 MB								
Total Kjeldahl Nitrogen			<200		mg/kg		200	02-NOV-12
ZR-200.2-MS-ED	**Soil**							
Batch R2465363								
WG1576038-6 DUP		**L1228910-13**						
Zirconium (Zr)		<5.0	<5.0	RPD-NA	mg/kg	N/A	25	30-OCT-12
WG1576038-1 MB								
Zirconium (Zr)			<5.0		mg/kg		5	30-OCT-12
WG1576038-2 MB								
Zirconium (Zr)			<5.0		mg/kg		5	30-OCT-12

Quality Control Report

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.

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Benthic Sample Results

Lab Number: L1228910-1 **Work Order:** L1228910

Date Sampled October 22, 2012 **Submitter** MP/JP **Sample Type** soil **Station No**
Source: GOLIATH GOLD PROJECT **WQ Site #:** SB12-4A **Sample ID**

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*			0	0	0	3
ANNELIDA	*OLIGOCHAETA*	*LUMBRICULIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	30
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	1
INSECTA	*COLEOPTERA*	*ELMIDAE*			2	0	0	2
INSECTA	*COLEOPTERA*	*HALIPLIDAE*			0	1	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			61	0	0	61
INSECTA	*DIPTERA*	*SIMULIDAE*			6	0	0	6
INSECTA	*DIPTERA*	*TABANIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*TIPULIDAE*			6	0	0	6
INSECTA	*EPHEMEROPTERA*	*BAETIDAE*			6	0	0	6
INSECTA	*EPHEMEROPTERA*	*HEPTAGENIIDAE*			23	0	0	23
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			1	0	0	1
INSECTA	*HOMOPTERA*		*unidentified*	*terrestrial*	1	0	0	1
INSECTA	*LEPIDOPTERA*	*NOCTUIDAE*			1	0	0	1
INSECTA	*ODONATA-ANISOP*	*AESHNIDAE*			4	0	0	4
INSECTA	*ODONATA-ANISOP*	*GOMPHIDAE*			3	0	0	3
INSECTA	*PLECOPTERA*		*unidentified nymph*	*too young to ID*	8	0	0	8
INSECTA	*PLECOPTERA*	*CAPNIIDAE*			17	0	0	17

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Benthic Sample Results

Lab Number: L1228910-1 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-4A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*PLECOPTERA*	*LEUCTRIDAE*			14	0	0	14
INSECTA	*PLECOPTERA*	*PERLODIDAE*			7	0	0	7
INSECTA	*PLECOPTERA*	*TAENIOPTERYGIDAE*			3	0	0	3
INSECTA	*TRICHOPTERA*	*GLOSSOSOMATIDAE*			16	0	0	16
INSECTA	*TRICHOPTERA*	*HYDROPTILIDAE*			4	0	0	4
INSECTA	*TRICHOPTERA*	*LEPIDOSTOMATIDAE*			7	0	0	7
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			4	0	0	4
INSECTA	*TRICHOPTERA*	*PHILOPOTAMIDAE*			2	0	0	2
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*POLYCENTROPODIDA*			3	0	0	3
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	8

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Benthic Sample Results

Lab Number: L1228910-10 **Work Order:** L1228910

Date Sampled October 23, 2012 **Submitter** MP/JP **Sample Type** soil **Station No**
Source: GOLIATH GOLD PROJECT **WQ Site #:** SB12-18 **Sample ID**

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	3
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	2
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	28
ARACHNOIDEA	*ARANEAE*		*unidentified spider*		0	0	0	9
ARACHNOIDEA	*TROMBIDIFORMES*				0	0	0	2
ARACHNOIDEA	*TROMBIDIFORMES*	*LEBERTIIDAE*			0	0	0	6
CRUSTACEA	*CLADOCERA*				0	0	0	2
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	15
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	5
CRUSTACEA	*OSTRACODA*				0	0	0	10
GASTROPODA	*BASOMMATOPHOR*	*PHYSIDAE*			0	0	0	2
INSECTA	*COLEOPTERA*		*unidentified*		0	1	0	1
INSECTA	*COLEOPTERA*	*HALIPLIDAE*			1	0	0	1
INSECTA	*COLLEMBOLA*	*ISOTOMIDAE*			0	0	0	5
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			24	0	0	24
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			228	0	0	228
INSECTA	*DIPTERA*	*EMPIDIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*SIMULIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*TIPULIDAE*			4	0	0	4
INSECTA	*HOMOPTERA*		*unidentified*	*terrestrial*	5	0	0	5

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Benthic Sample Results

Lab Number: L1228910-10 **Work Order:** L1228910

Date Sampled	October 23, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-18	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	90

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Benthic Sample Results

Lab Number: L1228910-11 **Work Order:** L1228910

Date Sampled	October 23, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-19	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	8
ANNELIDA	*HIRUDINEA*	*ERPOBDELLIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	3
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*	*nymph*	1	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	29
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*LYMNAEIDAE*			0	0	0	6
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*			0	0	0	2
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*			0	0	0	7
INSECTA	*COLEOPTERA*	*ELMIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			63	0	0	63
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			4	0	0	4
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*DIPSEUDOPSIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			7	0	0	7
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	18

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Benthic Sample Results

Lab Number: L1228910-12 **Work Order:** L1228910

Date Sampled	October 23, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-20	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	5
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	7
ARACHNOIDEA	*TROMBIDIFORMES*	*LEBERTIIDAE*			0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	9
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	22
GASTROPODA	*BASOMMATOPHOR*	*LYMNAEIDAE*			0	0	0	15
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*			0	0	0	3
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*			0	0	0	5
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			38	0	0	38
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			9	0	0	9
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			4	0	0	4
INSECTA	*TRICHOPTERA*	*MOLANNIDAE*			5	0	0	5
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	47
TURBELLARIA	*TRICLADIDA*				0	0	0	1

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Benthic Sample Results

Lab Number: L1228910-13 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-15A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	4
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	25
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*			0	0	0	5
ARACHNOIDEA	*TROMBIDIFORMES*	*LEBERTIIDAE*			0	0	0	1
COELENTERATA		*HYDRIDAE*			0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	10
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	9
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*			0	0	0	1
INSECTA	*COLEOPTERA*	*ELMIDAE*			47	0	0	47
INSECTA	*DIPTERA*		*unidentified pupa*		0	0	1	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			72	0	0	72
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			358	0	0	358
INSECTA	*DIPTERA*	*TABANIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*TIPULIDAE*			3	0	0	3
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			2	0	0	2
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			24	0	0	24
INSECTA	*HEMIPTERA*	*SALDIDAE*			1	0	0	1
INSECTA	*LEPIDOPTERA*	*PYRALIDAE*			1	0	0	1
INSECTA	*ODONATA - ZYGOP*	*CALOPTERYGIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*HYDROPTILIDAE*			1	0	0	1

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Benthic Sample Results

Lab Number: L1228910-13 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-15A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*			2	0	0	2
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	4

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Benthic Sample Results

Lab Number: L1228910-14 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-16	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*LUMBRICULIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	4
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	5
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*			0	0	0	5
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	8
CRUSTACEA	*CLADOCERA*				0	0	0	2
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	18
CRUSTACEA	*OSTRACODA*				0	0	0	5
INSECTA	*COLEOPTERA*	*ELMIDAE*			24	0	0	24
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			6	0	0	6
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			43	0	0	43
INSECTA	*DIPTERA*	*TIPULIDAE*			4	0	0	4
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			21	0	0	21
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			26	0	0	26
INSECTA	*HOMOPTERA*		*unidentified*	*terrestrial*	1	0	0	1
INSECTA	*TRICHOPTERA*	*HYDROPSYCHIDAE*			56	0	0	56
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	2

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Benthic Sample Results

Lab Number: L1228910-15 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-14	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*ERPOBDELLIDAE*			0	0	0	1
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	26
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*			0	0	0	13
CRUSTACEA	*CLADOCERA*				0	0	0	3
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	4
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	42
CRUSTACEA	*OSTRACODA*				0	0	0	3
INSECTA	*COLEOPTERA*	*ELMIDAE*			1	0	0	1
INSECTA	*DIPTERA*		*unidentified pupa*		0	0	1	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			60	0	0	60
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			153	0	0	153
INSECTA	*DIPTERA*	*EMPIDIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*PSYCHODIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*PTYCHOPTERIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*TABANIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*TIPULIDAE*			8	0	0	8
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			3	0	0	3
INSECTA	*ODONATA-ANISOP*	*CORDULIIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	2

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Benthic Sample Results

Lab Number: L1228910-16 **Work Order:** L1228910

Date Sampled October 22, 2012 **Submitter** MP/JP **Sample Type** soil **Station No**
Source: GOLIATH GOLD PROJECT **WQ Site #:** SB12-13 **Sample ID**

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*ERPOBDELLIDAE*			0	0	0	4
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	15
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*	*nymph*	1	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*ARRENURIDAE*			0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*			0	0	0	12
ARACHNOIDEA	*TROMBIDIFORMES*	*LEBERTIIDAE*			0	0	0	1
CRUSTACEA	*CLADOCERA*				0	0	0	2
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	50
CRUSTACEA	*OSTRACODA*				0	0	0	3
INSECTA	*DIPTERA*		*unidentified pupa*		0	0	1	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			74	0	0	74
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			186	0	0	186
INSECTA	*DIPTERA*	*PTYCHOPTERIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*SIMULIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*TABANIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*TIPULIDAE*			12	0	0	12
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			9	0	0	9
INSECTA	*HOMOPTERA*		*unidentified*	*terrestrial*	2	0	0	2
INSECTA	*LEPIDOPTERA*		*unidentified*		1	0	0	1

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Benthic Sample Results

Lab Number: L1228910-16 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-13	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*TRICHOPTERA*	*LEPIDOSTOMATIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	2

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Lab Number: L1228910-17 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-11A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	41
ARACHNOIDEA	*ORBATIDA*		*unidentified*		0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*			0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*SPERCHONIDAE*			0	0	0	2
ARACHNOIDEA	*TROMBIDIFORMES*	*UNIONICOLIDAE*			0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	5
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	5
CRUSTACEA	*OSTRACODA*				0	0	0	44
INSECTA	*COLEOPTERA*	*HALIPLIDAE*			1	0	0	1
INSECTA	*COLLEMBOLA*	*HYPOGASTRURIDAE*			0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			125	0	0	125
INSECTA	*DIPTERA*	*TIPULIDAE*			1	0	0	1
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			2	0	0	2
INSECTA	*HEMIPTERA*	*CORIXIDAE*			0	1	0	1
INSECTA	*ODONATA-ANISOP*	*AESHNIDAE*			1	0	0	1
INSECTA	*ODONATA-ANISOP*	*CORDULIIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	14

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Benthic Sample Results

Lab Number: L1228910-18 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-12	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	4
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	4
CRUSTACEA	*OSTRACODA*				0	0	0	2
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			10	0	0	10
INSECTA	*DIPTERA*	*TIPULIDAE*			4	0	0	4
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	121

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Benthic Sample Results

Lab Number: L1228910-19 **Work Order:** L1228910

Date Sampled October 22, 2012 **Submitter** MP/JP **Sample Type** soil **Station No**
Source: GOLIATH GOLD PROJECT **WQ Site #:** SB12-3 **Sample ID**

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*ERPOBDELLIDAE*			0	0	0	10
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	2
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	4
INSECTA	*COLEOPTERA*	*ELMIDAE*			84	0	0	84
INSECTA	*COLLEMBOLA*	*ISOTOMIDAE*			0	0	0	2
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			40	0	0	40
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			1288	0	0	1288
INSECTA	*DIPTERA*	*EMPIDIDAE*			48	0	0	48
INSECTA	*DIPTERA*	*SIMULIDAE*			8	0	0	8
INSECTA	*EPHEMEROPTERA*	*BAETIDAE*			44	0	0	44
INSECTA	*EPHEMEROPTERA*	*HEPTAGENIIDAE*			10	0	0	10
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			4	0	0	4
INSECTA	*HEMIPTERA*	*SALDIDAE*			0	2	0	2
INSECTA	*ODONATA-ANISOP*	*GOMPHIDAE*			2	0	0	2
INSECTA	*PLECOPTERA*	*CAPNIIDAE*			44	0	0	44
INSECTA	*PLECOPTERA*	*LEUCTRIDAE*			8	0	0	8
INSECTA	*PLECOPTERA*	*PERLODIDAE*			14	0	0	14
INSECTA	*TRICHOPTERA*	*HYDROPSYCHIDAE*			602	0	0	602
INSECTA	*TRICHOPTERA*	*LEPIDOSTOMATIDAE*			16	0	0	16
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			4	0	0	4
INSECTA	*TRICHOPTERA*	*PHILOPOTAMIDAE*			144	0	0	144

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Benthic Sample Results

Lab Number: L1228910-19 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-3	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	364

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Benthic Sample Results

Lab Number: L1228910-2 **Work Order:** L1228910

Date Sampled October 22, 2012 **Submitter** MP/JP **Sample Type** soil **Station No**
Source: GOLIATH GOLD PROJECT **WQ Site #:** SB12-5A **Sample ID**

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ARACHNOIDEA	*ARANEAE*		*unidentified spider*		0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*SPERCHONIDAE*			0	0	0	3
INSECTA	*COLEOPTERA*	*ELMIDAE*			1	0	0	1
INSECTA	*COLLEMBOLA*	*ISOTOMIDAE*			0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			10	0	0	10
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			246	0	0	246
INSECTA	*DIPTERA*	*EMPIDIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*SIMULIDAE*			6	0	0	6
INSECTA	*DIPTERA*	*TABANIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*TIPULIDAE*			5	0	0	5
INSECTA	*EPHEMEROPTERA*	*BAETIDAE*			11	0	0	11
INSECTA	*EPHEMEROPTERA*	*HEPTAGENIIDAE*			1	0	0	1
INSECTA	*HYMENOPTERA*			*terrestrial*	0	1	0	1
INSECTA	*ODONATA-ANISOP*	*CORDULEGASTRIDAE*			2	0	0	2
INSECTA	*PLECOPTERA*		*unidentified nymph*	*too young to ID*	4	0	0	4
INSECTA	*PLECOPTERA*	*CAPNIIDAE*			12	0	0	12
INSECTA	*PLECOPTERA*	*PERLODIDAE*			4	0	0	4
INSECTA	*PLECOPTERA*	*TAENIOPTERYGIDAE*			7	0	0	7
INSECTA	*TRICHOPTERA*	*DIPSEUDOPSIDAE*			1	0	0	1

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Lab Number: L1228910-2 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-5A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*TRICHOPTERA*	*HYDROPSYCHIDAE*			4	0	0	4
INSECTA	*TRICHOPTERA*	*LEPIDOSTOMATIDAE*			16	0	0	16
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*PHILOPOTAMIDAE*			3	0	0	3
INSECTA	*TRICHOPTERA*	*POLYCENTROPODIDA*			4	0	0	4
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	8

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Benthic Sample Results

Lab Number: L1228910-3 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-2A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	5
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*	*nymph*	1	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*SPERCHONIDAE*			0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	4
CRUSTACEA	*OSTRACODA*				0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*LYMNAEIDAE*			0	0	0	1
INSECTA	*COLEOPTERA*	*DYTISCIDAE*			1	1	0	2
INSECTA	*COLEOPTERA*	*ELMIDAE*			0	1	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			44	0	0	44
INSECTA	*DIPTERA*	*PSYCHODIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*TABANIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*TIPULIDAE*			8	0	0	8
INSECTA	*EPHEMEROPTERA*	*BAETIDAE*			7	0	0	7
INSECTA	*HOMOPTERA*		*unidentified*	*terrestrial*	0	0	0	1
INSECTA	*HYMENOPTERA*			*terrestrial*	0	0	0	3
INSECTA	*PLECOPTERA*		*unidentified nymph*	*too young to ID*	3	0	0	3
INSECTA	*PLECOPTERA*	*CAPNIIDAE*			25	0	0	25
INSECTA	*PLECOPTERA*	*LEUCTRIDAE*			3	0	0	3
INSECTA	*PLECOPTERA*	*PERLODIDAE*			4	0	0	4

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Lab Number: L1228910-3 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-2A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*PLECOPTERA*	*TAENIOPTERYGIDAE*			10	0	0	10
INSECTA	*TRICHOPTERA*	*LEPIDOSTOMATIDAE*			25	0	0	25
INSECTA	*TRICHOPTERA*	*LIMNEPHILIDAE*			2	0	0	2
INSECTA	*TRICHOPTERA*	*POLYCENTROPODIDA*			3	0	0	3

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Benthic Sample Results

Lab Number: L1228910-4 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-22	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	4
ANNELIDA	*OLIGOCHAETA*	*LUMBRICULIDAE*			0	0	0	2
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	62
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	36
ARACHNOIDEA	*TROMBIDIFORMES*				0	0	0	2
ARACHNOIDEA	*TROMBIDIFORMES*	*UNIONICOLIDAE*			0	0	0	4
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	44
CRUSTACEA	*CLADOCERA*				0	0	0	4
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	12
GASTROPODA	*BASOMMATOPHOR*	*ANCYLIDAE*			56	0	0	56
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			884	0	0	884
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			2	0	0	2
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			28	0	0	28
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	6

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Benthic Sample Results

Lab Number: L1228910-5 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-23	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	2
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	5
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	2
ARACHNOIDEA	*TROMBIDIFORMES*	*ARRENURIDAE*			0	0	0	1
CRUSTACEA	*CLADOCERA*				0	0	0	5
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	3
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*			0	0	0	3
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			58	0	0	58
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			19	0	0	19
INSECTA	*HEMIPTERA*	*CORIXIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	5

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Benthic Sample Results

Lab Number: L1228910-6 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-24	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	2
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*			0	0	0	1
INSECTA	*COLEOPTERA*	*ELMIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHAOBORIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			53	0	0	53
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			3	0	0	3
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			21	0	0	21
INSECTA	*MEGALOPTERA*	*SIALIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*HYDROPSYCHIDAE*			1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	5

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Benthic Sample Results

Lab Number: L1228910-7 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-25	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*UNIONICOLIDAE*			0	0	0	2
CRUSTACEA	*CLADOCERA*				0	0	0	7
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	14
INSECTA	*DIPTERA*	*CHAOBORIDAE*			70	0	0	70
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			28	0	0	28
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			210	0	0	210
INSECTA	*MEGALOPTERA*	*SIALIDAE*			6	0	0	6
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			4	0	0	4
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	2

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Benthic Sample Results

Lab Number: L1228910-8 **Work Order:** L1228910

Date Sampled	October 22, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-26	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	3
INSECTA	*DIPTERA*	*CHAOBORIDAE*			26	0	0	26
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			31	0	0	31
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			102	0	0	102
INSECTA	*MEGALOPTERA*	*SIALIDAE*			3	0	0	3
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			3	0	0	3
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	3

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Benthic Sample Results

Lab Number: L1228910-9 **Work Order:** L1228910

Date Sampled	October 23, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-17	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*			0	0	0	9
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*			0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*			0	0	0	3
ARACHNOIDEA	*TROMBIDIFORMES*	*ARRENURIDAE*			0	0	0	2
ARACHNOIDEA	*TROMBIDIFORMES*	*LIMNESIIDAE*			0	0	0	4
ARACHNOIDEA	*TROMBIDIFORMES*	*UNIONICOLIDAE*			0	0	0	2
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*			0	0	0	1
CRUSTACEA	*OSTRACODA*				0	0	0	6
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*			0	0	0	4
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*			0	0	0	3
INSECTA	*COLEOPTERA*	*ELMIDAE*			4	0	0	4
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			10	0	0	10
INSECTA	*DIPTERA*	*CHAOBORIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*			115	0	0	115
INSECTA	*DIPTERA*	*TIPULIDAE*			1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*			8	0	0	8
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*			25	0	0	25
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*			6	0	0	6
INSECTA	*MEGALOPTERA*	*SIALIDAE*			2	0	0	2
INSECTA	*ODONATA-ANISOP*	*GOMPHIDAE*			1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*			3	0	0	3

Date Printed: March 26, 2013

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1228910-9 **Work Order:** L1228910

Date Sampled	October 23, 2012	**Submitter**	MP/JP	**Sample Type**	soil	**Station No**	
Source:	GOLIATH GOLD PROJECT	**WQ Site #:**	SB12-17	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
PELECYPODA	*VENEROIDA*	*PISIIDAE*			0	0	0	46

Date Printed: March 26, 2013

ALS Environment

L1228910-COFC

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bell Brothers Limited Company www.alsglobal.com

L1228910

Company:	Treasury Metals Inc		
Contact:	Mac Potter		
Address:	PO Box 783		
Dryden, ON P8N2Z4			
Phone:	807-938-6961	Fax:	807-938-6499
Email:	mac@treasurymetals.com		
Project:	Goliath Gold Project	PO:	
Quote #	Q34478		
Invoice To:		Same as Report: ☐ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	KAREN R.	Sampler:	M.P. + J.B.

Regulatory Information

☐ O. Reg 153 (O. Reg 511 Amend) Table:
Record of Site Condition ☐ Yes ☐ No
PWQO: ☐ MISA ☐ MMER ☑ CCME ☐ Other
Guideline Required:
TCLP Regulation 558 ☐ Other:

Service Requested

☑ Regular TAT (7 Days)
☐ Priority TAT 50% Surcharge (3-5 Days)
☐ Emergency TAT 100% Surcharge (1-2 Days)
Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

Are any samples taken from a regulated DW System? ☐ Yes ☐ No
If yes, an authorized DW COC must be used.
Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	ANIONS-WT	HG-WT	NH3-WT	TKN,TP-P-WT	N2N3-SAR-SK	PSA-PIPET+Gravel-SK	ZR-200.2-MS-ED	Number of Containers
9	SB12-17	23/10/12	N/A		X	X	X	X	X	X	X	7
10	SB12-18											
11	SB12-19											
12	SB12-20											
13	SB12-15a	22/10/12										
14	SB12-16											
15	SB12-14											
16	SB12-13											
17	SB12-11a											
18	SB12-12											
19	SB12-3											

Special Instructions / Comments

FORMALIN ADDED TO ALL BENTHOS SAMPLES

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by: MACKENZIE POTTER <Original signed by>	Date & Time 24/10/12 8:30 PM	Received by: <Original signed>	Date & Time Oct 25/12 9:00	Temp 4.6	Cooling Initiated ☑ Yes ☐ No	Verified by:	Date & Time	Observations: Yes / No? If Yes add SIF

Failure to complete all portions of this ... delay analysis. **TAT may vary dependant on complexity of analysis and lab workload at time of submission. Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

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Brothers Limited Company www.alsglobal.com

L1228910-COFC

L1228910 Page 2 of 2

Company:	Treasury Metals Inc		
Contact:	Mac Potter		
Address:	PO Box 783		
	Dryden, ON P8N2Z4		
Phone:	807-938-6961	Fax:	807-938-6499
Email:	mac@treasurymetals.com		
Project:	Goliath Gold Project	PO:	
Quote #:	Q34478		
Invoice To:		Same as Report: ☐ Yes ☐ No	
Company:			
Contact:			
Address:			
Email:			
Account Manager	KAREN R.	Sampler:	M.P. J.B.

Regulatory Information

- ☐ O. Reg 153 (D. Reg 511 Amend) Table:
- Record of Site Condition ☐ Yes ☐ No
- PWQO ☐ MISA ☐ MMER ☐ CCME ☐
- Guideline Required:
- TCLP Regulation 558 ☐ Other:

Service Requested

- ☑ Regular TAT (7 Days)
- ☐ Priority TAT 50% Surcharge (3-5 Days)
- ☐ Emergency TAT 100% Surcharge (1-2 Days)
- Specify Date Required:

All TAT quoted material is in business days which exclude statutory holidays and weekends. Samples received past 3:00pm or Saturday/Sunday begin the next day.

Both questions below must answered for water samples

- Are any samples taken from a regulated DW System? ☐ Yes ☐ No
- If yes, an authorized DW COC must be used.
- Is the water sampled intended for human consumption? ☐ Yes ☐ No

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date	Time	Sample Type	ANIONS-WT	HG-WT	NH3-WT	TKN,TP-P-WT	N2N3-SAR-SK	PSA-PIPET+Gravel-SK	ZR-200.2-MS-ED	Number of Containers
1	SB12-4a	22/10/12	N/A		x	x	x	x	x	x	x	7
2	SB12-5a	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
3	SB12-2a	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
4	SB12-22	23/10/12	↓		↓	↓	↓	↓	↓	↓	↓	↓
5	SB12-23	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
6	SB12-24	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
7	SB12-25	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓
8	SB12-26	↓	↓		↓	↓	↓	↓	↓	↓	↓	↓

Special Instructions / Comments:

FORMALIN ADDED TO ALL BENTHOS SAMPLES

3.2, 4.6, 4.6

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by:	Date & Time	Received by:	Date & Time	Temp	Cooling Initiated	Verified by:	Date & Time	Observations: Yes / No ? If Yes add SIF
MACKENZIE POTTER <Original signed by>	24/10/12 8:30 PM	<Original signed by>	Oct 25/12 9:00	4.6	☑ Yes ☐ No			

Complete all portions of this ... delay analysis. *TAT may vary dependant on complexity of analysis and lab workload at time of submission.

Please contact the lab to confirm TATs. Any known or suspected hazards relating to a sample must be noted on the chain of custody in the comments section. By use of the form the user acknowledges and agrees with the Terms and Conditions as specified on the back page.

APPENDIX B

Relative Percent Differences

Inorganics

Parameter	SW1		RPD	SW3		RPD	SW4		RPD	SW6		RPD	SW7		RPD	TL1A		RPD	TL2A		RPD
	March			May			Jan.			June			July			Jan			Oct.		
	(Apr 4)	(Apr 4) Duplicate		15	15 Duplicate		26	26 Duplicate		21	21 Duplicate		23	23 Duplicate		29	29 Duplicate		31	31 Dupllicate	
Alkalinity (Total as CaCO3)	20.6	21.2	-2.87081	53.4	53.2	0.3752	54.8	54.9	-0.1823	44.3	44.3	0	49.4	50.1	-1.40704	56.4	57.2	-1.4085	63.5	62.9	0.94937
Conductivity	59	58.5	0.851064	182	182	0	120	118	1.68067	115	115	0	111	110	0.90498	135	136	-0.738	142	141	0.70671
Dissolved Chloride (Cl)	0.36	0.38	-5.40541	16.9	17	-0.59	3.68	3.71	-0.8119	4.20	4.22	-0.48	0.28	0.17	48.8889	3.1	2.68	14.5329	0.93	0.94	-1.0695
Dissolved Sulphate (SO4)	1.96	1.97	-0.50891	3.56	3.55	0.2813	2.19	2.20	-0.4556	2.85	2.80	1.77	3.8	3.75	1.3245	5.58	4.57	19.9015	2.08	2.08	0
Hardness (CaCO3)	24.9	25	-0.4008	67.6	67.6	0	54.9	57	-3.7534	48	47	2.105	57.7	58.5	-1.37694	75	71	5.47945	66.4	67.5	-1.643
Nitrate (N)	0.169	0.132	24.58472	<0.030	<0.030		<0.030	<0.030		<0.030	<0.030		0.099	0.095	4.12371	0.056	<0.030		<0.030	<0.030	
Nitrite (N)	<0.020	<0.020		<0.020	<0.020		<0.020	<0.020		<0.020	<0.020		<0.020	<0.020		<0.020	<0.020		<0.020	<0.020	
pH	7.08	7.11	-0.42283	7.71	7.62	1.1742	7.49	7.5	-0.1334	7.76	7.75	0.129	7.27	7.3	-0.41181	6.77	6.83	-0.8824	7.12	7.13	-0.1404
Total Ammonia-N	<0.020	<0.020		<0.020	<0.020		0.027	0.026	3.77358	<0.020	<0.020		0.021	<0.020		0.552	0.545	1.27621	0.04	0.033	19.1781
Total Phosphorus	0.0176	0.0172	2.298851	0.0191	0.0071	91.603	0.0278	0.0284	-2.1352	0.0068	0.0071	-4.32	0.0155	0.0154	0.64725	0.0636	0.0574	10.2479	0.0423	0.0483	-13.245
Total Suspended Solids	2.6	<2.0		5.9	4.5	26.923	3.7	2.6	34.9206	2.6	<2.0		2.4	<2.0		12	11.7	2.53165	6.9	14.4	-70.423
Acidity (as CaCO3)	4	3.6	10.52632	2.8	2.4	15.385	2	2.6	-26.087	4	3.4	16.22	3	4	-28.5714	22.4	21	6.45161	7	8	-13.333
Oil and Grease	<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0		<2.0	<2.0	
Cyanide, Weak Acid Diss	<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	
Cyanide, Total	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	0.0030		0.0059	0.0049	18.52	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020	
Cyanide, Free	<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050	

Dissolved Metals

Parameter	SW1		RPD	SW3		RPD	SW4		RPD	SW6		RPD	SW7		RPD	TL1A		RPD	TL2A		RPD
	March			May			Jan.			June			July			Jan			Oct.		
	(Apr 4)	(Apr 4) Duplicate		15	15 Duplicate		26	26 Duplicate		21	21 Duplicate		23	23 Duplicate		29	29 Duplicate		31	31 Dupllicate	
Dissolved Aluminum (Al)	0.0583	0.0577	1.034483	0.0130	0.0130	0	0.0147	0.0217	-38.462	<0.010	<0.010		0.0483	0.0501	-3.65854	0.176	0.183	-3.8997	0.0678	0.0705	-3.9046
Dissolved Antimony (Sb)	<0.00060	<0.00060		<0.00060	<0.00060		<0.00060	<0.00060		<0.0050	<0.0050		<0.00060	<0.00060		<0.00050	<0.00050		<0.00060	<0.00060	
Dissolved Arsenic (As)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		0.0012	0.0012	0	0.0011	0.0011	0	<0.0010	<0.0010	
Dissolved Barium (Ba)	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		0.011	0.011	0	0.02	0.0199	0.50125	0.012	0.012	0
Dissolved Beryllium (Be)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010	
Dissolved Bismuth (Bi)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010	
Dissolved Boron (B)	<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.010	<0.010		<0.050	<0.050	
Dissolved Cadmium (Cd)	<0.000017	<0.000017		<0.000017	<0.000017		<0.000017	<0.000017		<0.000090	<0.000090		<0.000017	<0.000017		<0.000090	<0.000090		<0.000017	<0.000017	
Dissolved Calcium (Ca)	7.35	7.41	-0.81301	19.5	19.4	0.5141	16.8	17.4	-3.5088	13.9	13.6	2.182	17.8	18.0	-1.11732	19.50	19.20	1.55039	17.5	17.8	-1.6997
Dissolved Cesium (Ce)	-																				
Dissolved Chromium (Cr)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010	
Dissolved Cobalt (Co)	<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		0.00593	0.00601	-1.34	<0.00050	<0.00050	
Dissolved Copper (Cu)	<0.0010	<0.0010		0.0011	0.0010	9.5238	0.0017	0.0019	-11.111	<0.0010	<0.0010		0.0165	0.0011	175	<0.0010	0.0011		<0.0010	<0.0010	
Dissolved Iron (Fe)	0.134	0.130	3.030303	<0.020	0.048		<0.020	<0.020		<0.050	<0.050		0.684	0.717	-4.71092	6.670	6.640	0.45079	0.421	0.413	1.91847
Dissolved Lead (Pb)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010	
Dissolved Lithium (Li)	<0.050	<0.050		<0.050	<0.050		<0.050	<0.050					<0.050	<0.050		<0.10	<0.10		<0.050	<0.050	
Dissolved Magnesium (Mg)	1.59	1.58	0.630915	4.60	4.66	-1.296	3.12	3.31	-5.9098	3.18	3.05	4.173	3.23	3.28	-1.5361	4.60	4.65	-1.0811	5.48	5.63	-2.7003
Dissolved Manganese (Mn)	0.0096	0.0100	-4.08163	0.0093	0.0104	-11.17	0.0022	0.0023	-4.4444	0.0025	0.0021	17.39	0.007	0.007	-9.92908	1.76	1.76	0	0.0431	0.0406	5.97372
Dissolved Mercury (Hg)	<0.00010	<0.00010		<0.000010	<0.000010		<0.00010	<0.00010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010	
Dissolved Molybdenum (Mo)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010	
Dissolved Nickel (Ni)	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		0.0012	0.0012	0	<0.0020	<0.0020	
Dissolved Phosphorus (P)										<0.050	<0.050					<0.050	<0.050				
Dissolved Potassium (K)	0.94	0.93	1.069519	1.33	1.33	0	0.86	0.94	-8.8889	<1.0	<1.0		0.79	0.80	-1.25786	<1.0	<1.0		2.92	2.98	-2.0339
Dissolved Rubidium (Rb)																					
Dissolved Selenium (Se)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00040	<0.00040		<0.0010	<0.0010		<0.00040	<0.00040		<0.0010	<0.0010	
Dissolved Silicon (Si)	-									<1.0	<1.0					7.4	7.5	-1.3423			
Dissolved Silver (Ag)	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010	
Dissolved Sodium (Na)	1.07	1.14	-6.33484	10.5	10.6	-0.948	3.35	3.45	-2.9412	3.27	3.23	1.231	1.59	1.61	-1.25	2.34	2.35	-0.4264	2.69	2.77	-2.9304
Dissolved Strontium (Sr)	0.0132	0.0133	-0.75472	0.0466	0.0464	0.4301	0.0291	0.0315	-7.9208	0.0274	0.0264	3.717	0.0343	0.0343	0	0.0407	0.0410	-0.7344	0.0402	0.0401	0.24907
Dissolved Tellurium (Te)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010					<0.0010	<0.0010					<0.0010	<0.0010	
Dissolved Thallium (Tl)	<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030	
Dissolved Tin (Sn)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010	
Dissolved Titanium (Ti)	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		0.0025	0.0025	0	0.0059	0.0059	0	<0.0020	<0.0020	
Dissolved Tungsten (W)	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010	
Dissolved Uranium (U)	<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0010	<0.0010		<0.0050	<0.0050	
Dissolved Vanadium (V)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		0.001	0.001	0	0.00197	0.00199	-1.0101	<0.0010	<0.0010	
Dissolved Zinc (Zn)	<0.0030	0.0062		0.0031	<0.0030		<0.0030	<0.0030		<0.0030	<0.0030		0.0109	<0.0030		0.0084	0.0070	18.1818	<0.0030	<0.0030	
Dissolved Zirconium (Zr)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0040	<0.0040		<0.0010	<0.0010		<0.0040	<0.0040		<0.0010	<0.0010	

Total Metals

Parameter	SW1		RPD	SW3		RPD	SW4		RPD	SW6		RPD	SW7		RPD	TL1A		RPD	TL2A		RPD
	March			May			Jan.			June			July			Jan			Oct.		
	(Apr 4)	(Apr 4) Duplicate		15	15 Duplicate		26	26 Duplicate		21	21 Duplicate		23	23 Duplicate		29	29 Duplicate		31	31 Dupllicate	
Total Aluminum (Al)	0.107	0.113	-5.45455	0.0915	0.0901	1.5419	0.415	0.403	2.93399	0.024	0.021	13.33	0.0978	0.1010	-3.21932	0.428	0.453	-5.6754	0.243	0.588	-83.032
Total Antimony (Sb)	<0.00060	<0.00060		<0.00060	<0.00060		<0.00060	<0.00060		<0.0050	<0.0050		<0.00060	<0.00060		<0.00050	<0.00050		<0.0060	<0.0060	
Total Arsenic (As)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		0.0014	0.0014	0	0.0014	0.0013	7.40741	<0.010	<0.010	
Total Barium (Ba)	<0.010	<0.010		<0.010	<0.010		0.012	0.011	8.69565	<0.010	<0.010		0.012	0.012	0	0.0258	0.0247	4.35644	<0.10	<0.10	
Total Beryllium (Be)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.010	<0.010	
Total Bismuth (Bi)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	0.0012		<0.0010	<0.0010		<0.0010	<0.0010		<0.010	<0.010	
Total Boron (B)	<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.050	<0.050		<0.010	<0.010		<0.50	<0.50	
Total Cadmium (Cd)	<0.000017	<0.000017		<0.000017	<0.000017		<0.000017	<0.000017		<0.000090	<0.000090		<0.000017	<0.000017		<0.000090	<0.000090		<0.00017	<0.00017	
Total Calcium (Ca)	6.21	7.76	-22.1904	18.8	17.5	7.1625	18.1	17.4	3.94366	13.5	12.9	4.545	18.9	19.5	-3.125	21.50	20.30	5.74163	19.0	20.7	-8.5642
Total Cesium (Ce)																					
Total Chromium (Cr)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.0010	<0.0010		0.00123	0.00129	-4.7619	<0.010	<0.010	
Total Cobalt (Co)	<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		<0.00050	<0.00050		0.00723	0.00691	4.52617	<0.0050	<0.0050	
Total Copper (Cu)	<0.0010	<0.0010		0.0013	0.0013	0	0.0026	0.0025	3.92157	0.0011	0.0010	9.524	0.0011	0.0011	0	0.0013	0.0016	-20.69	<0.010	<0.010	
Total Iron (Fe)	0.234	0.205	13.21185	0.212	0.193	9.3827	0.460	0.447	2.86659	<0.050	<0.050		1.170	1.190	-1.69492	10.40	9.81	5.83869	0.76	1.11	-37.433
Total Lead (Pb)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.010	<0.010	
Total Lithium (Li)	<0.050	<0.050		<0.050	<0.050		<0.050	<0.050					<0.050	<0.050		<0.10	<0.10		<0.50	<0.50	
Total Magnesium (Mg)	1.43	1.74	-19.5584	3.79	4.28	-12.14	3.40	3.30	2.98507	2.70	2.55	5.714	3.17	3.19	-0.62893	5.13	4.95	3.57143	6.05	6.64	-9.2987
Total Manganese (Mn)	0.0105	0.0083	23.40426	0.0167	0.0163	2.4242	0.0092	0.0122	-28.037	0.0038	0.0037	2.667	0.0296	0.0305	-2.99501	2.140	2.020	5.76923	0.056	0.068	-19.355
Total Mercury (Hg)	<0.00010	<0.00010		0.000017	<0.000010		<0.00010	<0.00010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010		<0.000010	<0.000010	
Total Molybdenum (Mo)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00050	<0.00050		<0.010	<0.010	
Total Nickel (Ni)	<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		<0.0020	<0.0020		0.0015	0.0015	0	<0.020	<0.020	
Total Phosphorus (P)	-															0.09	0.091	-1.105			
Total Potassium (K)	0.83	0.69	18.42105	1.13	1.19	-5.172	1.08	1.05	2.8169	<1.0	<1.0		0.82	0.82	0	<1.0	<1.0		<5.0	<5.0	
Total Rubidium (Rb)	-																				
Total Selenium (Se)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.00040	<0.00040		<0.0010	<0.0010		<0.00040	<0.00040		<0.010	<0.010	
Total Silicon (Si)	-									<1.0	<1.0					8.70	8.30	4.70588			
Total Silver (Ag)	<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.00010	<0.00010		<0.0010	<0.0010	
Total Sodium (Na)	0.89	1.11	-22	9.03	9.79	-8.077	3.51	3.49	0.57143	2.85	2.70	5.405	1.55	1.54	0.64725	2.61	2.49	4.70588	2.9	3.1	-6.6667
Total Strontium (Sr)	0.0117	0.0144	-20.6897	0.0384	0.0445	-14.72	0.0320	0.0301	6.11916	0.0276	0.0271	1.828	0.0375	0.0382	-1.84941	0.051	0.048	5.62249	0.041	0.047	-13.636
Total Tellurium (Te)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010					<0.0010	<0.0010					<0.010	<0.010	
Total Thallium (Tl)	<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.00030	<0.00030		<0.0030	<0.0030	
Total Tin (Sn)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.010	<0.010	
Total Titanium (Ti)	0.0033	0.0039	-16.6667	0.0041	0.0037	10.256	0.0141	0.0131	7.35294	<0.0020	<0.0020		0.0047	0.0049	-4.16667	0.0147	0.0164	-10.932	<0.020	0.021	
Total Tungsten (W)	<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.010	<0.010		<0.10	<0.10	
Total Uranium (U)	<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0050	<0.0050		<0.0010	<0.0010		<0.050	<0.050	
Total Vanadium (V)	<0.0010	<0.0010		<0.0010	<0.0010		0.0011	0.0011	0	<0.0010	<0.0010		0.0015	0.0015	0	0.00362	0.0034	6.26781	<0.010	<0.010	
Total Zinc (Zn)	<0.0030	<0.0030		<0.0030	<0.0030		0.0031	<0.0030		<0.0030	<0.0030		<0.0030	<0.0030		0.0045	0.0051	-12.5	<0.030	<0.030	
Total Zirconium (Zr)	<0.0010	<0.0010		<0.0010	<0.0010		<0.0010	<0.0010		<0.0040	<0.0040		<0.0010	<0.0010		<0.0040	<0.0040		<0.010	<0.010	

APPENDIX C

Limitations of the Report