
Appendix 5.1.2.2A
Surface Water and Sediment Quality
2011 - 2013 Baseline Report

Water and Sediment Quality 2011-2013 Baseline Report

newgold[™]
Blackwater Gold Project





Blackwater Gold Project

2013 Baseline Report Water and Sediment Quality

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ACRONYMS

Abbreviations and Units of Measure	Definition
%	percent
°C	degrees Celsius
µg/L	micrograms per litre
µm	micrometre
µS/cm	microSiemens per centimetre
AMEC	AMEC Environment & Infrastructure
ARD	acid rock drainage
avg.	Average
BC	British Columbia
BC FWG	BC MOE Protection of Freshwater Aquatic Life Guidelines
BC MOE	British Columbia Ministry of Environment
BC MOF	British Columbia Ministry of Forests
bg	background
CaCO ₃	calcium carbonate
CALA	Canadian Analytical Laboratories Association
CCME	Canadian Council of Ministers of the Environment
CO	dissolved oxygen
d	dissolved
DO	dissolved oxygen
EQG	Environmental Quality Guidelines
H ₂ O	water
ha	hectare
ISQG	Interim Sediment Quality Guidelines
km	kilometre
km ²	kilometres square
LEL	lowest effect level
LL	low level
LSA	local study area
m	metre
masl	metres above sea level
max.	maximum
MeHg	methyl-mercury
mg CaCO ₃ /L	milligrams of calcium carbonate per litre

Abbreviations and Units of Measure	Definition
mg N/L	milligrams of nitrogen per litre
mg/kg	milligrams per kilogram
mg/L	milligrams per litre
min.	minimum
mL	millilitre
mm	millimetre
Mm ³	million metres cubic
NCD	non-continuous drainage
NCD	non-continuous drainage
NH ₃	ammonia
NH ₃ -N	ammonia-nitrogen
NTU	nephelometric turbidity units
PEL	presumed effects level
PM	particulate matter
ppm	parts per million
Project (the)	proposed Blackwater Gold Project
QA/QC	Quality Assurance/Quality Control
ROS	Regression on Ordered Statistics
RSA	regional study area
SEL	severe effect level
TCU	true colour unit
TKM	Total Kjeldahl Nitrogen
TOC	total organic carbon
TRC	total residual chlorine
TSF	tailings storage facility
TSS	total suspended solids
WAD	weak acid dissociable
WQO	water quality objective

1.0 INTRODUCTION

This baseline report provides surface water, lake water, and stream sediment results for 2011 and 2012 for the proposed Blackwater Gold Project (the Project). The purpose of water and sediment quality monitoring is to establish a baseline against which to judge changes that may occur from development of the proposed mining project.

2.0 STUDY AREA DESCRIPTION

Figure 2.13-1 provides an overview of the Project water and sediment quality study area.

2.1 Chedakuz Creek

Chedakuz Creek is a third order stream that originates above Kuyakuz Lake and flows generally northwest, emptying into the Nechako Reservoir. Chedakuz Creek is situated along the northern flanks of the Fawnie Range within the greater Nechako Plateau, and drains into the Nechako Reservoir. The watershed is characterized by predominantly lodgepole pine forests interspersed with natural meadows (British Columbia Ministry of Forests (BC MOF), 1997). Upper Chedakuz Creek is approximately 15 kilometres (km) long and flows into Kuyakuz Lake. Middle Chedakuz Creek is approximately 12 km long and runs from Kuyakuz Lake into Tatelkuz Lake. Below Tatelkuz Lake, the Chedakuz Creek flows northwest for a distance of approximately 53 km.

2.2 Davidson Creek and Tributaries

Davidson Creek is a third order stream draining the Blackwater property, flowing northeast, and emptying into Chedakuz Creek just north of Tatelkuz Lake. The Davidson Creek drainage area is 77 square kilometres (km²).

2.3 Turtle Creek and Tributaries

Turtle Creek is a third order stream north of Davidson Creek. It originates east of Top Lake, the headwaters of Fawnie Creek. At least two of its tributaries originate close to areas that could be affected by mining. Turtle Creek enters Chedakuz Creek downstream approximately 2 km from Davidson Creek in an ill-defined wetland area.

2.4 Fawnie Creek and Tributaries

Fawnie Creek is located approximately 10 km northwest of the Blackwater deposit. The creek flows southwest to join the Entiako River, which flows into Nechako Reservoir. One of

Fawnie Creek's major tributaries from the south originates close to the Project and could be indirectly affected by the mine.

The Nechako Reservoir drains into the Nechako River, which joins the Fraser River at Prince George.

2.5 Creek 661

Creek 661 is an unnamed tributary of Chedakuz Creek that joins Chedakuz upstream of Tatelkuz Lake. Creek 661 drains the Blackwater deposit and flows in a northeasterly direction toward Tatelkuz Lake. It is a third-order stream with two of its branches originating east of the Project mine site.

2.6 Creek 700, Turtle Creek Tributary

Creek 700 flows into Reach 5 of Turtle Creek. Reach 1 of Creek 700 is a short, low gradient reach located within wetland complex in the lower valley of Turtle Creek. Average stream gradient increases to 3.3% in Reach 2 and is dominated by gravel and cobble substrates. Channel confinement and average gradient increases to 5.4% in Reach 3 for 1,200 metres (m). The average stream gradient drops to 0.9% in Reach 4 of Creek 700 and becomes influenced by drainage from a large wetland complex along the east bank margin. Reach 5 and 6 are governed by steeper stream gradients.

2.7 Creek 705 and Tributaries

Creek 705 is a third order stream flowing down slope on the western side of Mt. Davidson to Fawnie Creek, approximately 8 km downstream of Top Lake. The watershed area of Creek 705 is 45 km² and ranges in elevation from approximately 1,500 metres above sea level (masl) upstream of Lake 01538UEUT to 1,000 masl near the confluence with Fawnie Creek.

Creek 705 contains a moderate-sized lake (Lake 01538UEUT) near the headwaters of the southern drainage. Creek 705 receives runoff from a number of small tributaries in the middle to upper watershed. The main northern basin in the upper part of the watershed is drained by Creek 606013 through a headwater lake (Lake 01428UEUT).

2.8 Kuyakuz Lake

Kuyakuz Lake is located approximately 20 km southeast of the Project. The lake has a surface area of 820 hectares (ha), a volume of 63 million cubic metres (Mm³) and a mean depth of 7.7 m. The lake provides spawning and overwintering habitat for fish, including rainbow trout and a number of forage fish.

2.9 Tatelkuz Lake

Tatelkuz Lake is the second largest lake near the headwaters of Chedakuz Creek. It has a surface area of 927 ha and a volume of 188 Mm³. The mean lake depth is 20 m.

Tatelkuz Lake is characterized by exposed cobble and sandy beaches, and by a forested shoreline. Tatelkuz Lake has six inlets and one outlet. Based on the lake survey, two inlets and the outlet were reported to have spawning potential. Numerous fish were observed, including rainbow fry and juveniles within the lake outlet. Fish inhabiting the lake include kokanee, rainbow trout, and several forage fish species.

2.10 Snake Lake

Snake Lake is located approximately 10 km northeast of the centre of the Project. The outlet stream feeds into Davidson Creek about half way along its length. The lake is slightly more than 10 m deep at its deepest point. A limnological survey of the lake is pending.

2.11 Lake 1682

Lake 1682 is the headwater lake of Davidson Creek. It has one circular basin with the deepest portion of the lake located in the centre. The basin has shallow slopes creating a large littoral area. There are two small islands in the lake, both of which are well vegetated. The lake does not have any inlets, but it has one outlet to Davidson Creek exiting at the north end of the lake.

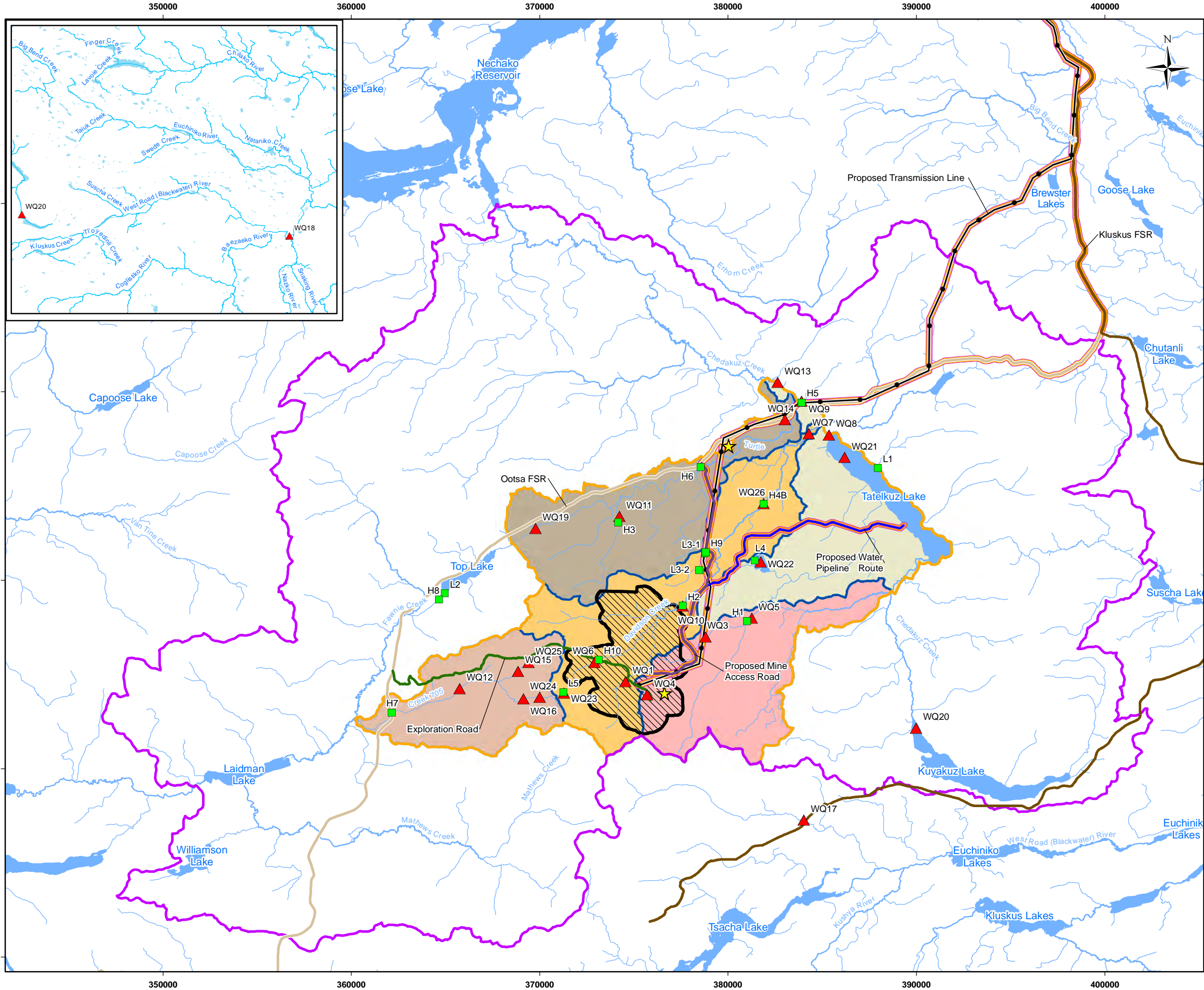
2.12 Lake 1538

Lake 1538 is a moderate-sized lake near the headwaters of the southern drainage. It has two distinct basins that are orientated in an east to west direction. The smaller, western basin is less than 9 m deep and has a large littoral area at the western end near the lake outlet. There is also one inlet tributary, classified as a non-continuous drainage (NCD) that enters the western basin. The eastern basin of Lake 1538 is deeper and larger than the western basin. There are two inlet tributaries flowing into the lake at its eastern end; one was classified as S4 and the other classified as NCD. The steepest gradients in Lake 1538 are located in the eastern basin on the north and south shorelines.

2.13 Lake 1428

Lake 1428 is a headwater lake of Stream 705. It has one large main basin with a small, shallow bay branching off at the northeastern end of the lake. The lake is longer than it is wide, and is oriented along a northeast/southwest axis. The main basin is deepest near the middle and has steep gradients along the northern shoreline. The southeastern end of the lake is shallow with depths less than 4 m. The small bay is very shallow (<2 m) and extends into a large wetland area. The lake has no islands and has a single inlet tributary and a

single outlet. The inlet tributary flows in from the northeast and the outlet discharges to Creek 705 to the southwest. Lake 1428 has a maximum depth of 7.6 m, an average depth of 3.09 m, and a relative depth of 1.64 m.



Legend

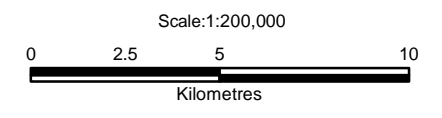
- ★ Meteo Station
- Hydrology Station
- ▲ Water Quality Site
- Kluskus FSR
- Ootsa FSR
- Waterbody (> 50 Ha)
- Stream (>= 2nd Order)
- Proposed Mine Access Road
- Proposed Transmission Line
- Proposed Water Pipeline Route
- Proposed Mine Site

Catchments

- Creek 661
- Creek 705
- Davidson Creek
- Tatelkuz Lake Tributary
- Turtle Creek

Hydrology, Surface Water and Sediment Quality, Fish and Fish Habitat

- Regional Study Area
- Local Study Area
- Regional and Local Study Areas



Reference
BC Government GeoBC Data Distribution

CLIENT:

PROJECT: **Blackwater Gold Project**

Hydrology, Surface and Sediment Quality, Wetlands, Fish and Fish Habitat Study Areas

DATE: February, 2013	ANALYST: AA	Figure 2.13-1
JOB No: VE52095	QA/QC: MY	PDF FILE: 09-100-003_v15_SA_WQ_sites.pdf
GIS FILE: 09-100-003_v15.mxd		
PROJECTION: UTM Zone 10	DATUM: NAD83	

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3.0 WATER QUALITY DATA COLLECTION RATIONALE AND METHODS

3.1 Monthly Sampling

3.1.1 Rationale

Water quality samples were collected monthly from 13 sites on streams that could be affected by Project development or could act as controls for operations monitoring in 2011. The number of monthly sample sites was increased to 15 in 2012. **Figure 2.13-1** shows the sites. On the recommendation of the British Columbia Ministry of Environment (BC MOE) in Prince George, two additional sites were added in December 2011 on the Blackwater River and a major tributary south of the Project, which will be sampled quarterly. Quarterly sampling of selected lakes also commenced in 2012. **Table 3.1-1** lists the sample periods for the water quality.

The number of samples taken varied depending on the station (sites were progressively added as the project evolved; higher elevation sites were frozen in winter; lakes were sampled quarterly) and on whether data were from field measurements or laboratory analyses. **Annex 1** provides a listing.

Table 3.1-1: Sample Periods for Blackwater Water Quality

Site	Location	Type	Sample Period
WQ1	Davidson Crk tributary near camp	Monthly	Mar 2011 – Dec 2012
WQ2	Dropped after initial field inspection as there was no stream at the site		
WQ3	Crk 659, tributary of Crk 661	Monthly	Mar 2011 – Dec 2012
WQ4	Crk 661 headwaters	Monthly	Mar 2011 – Dec 2012
WQ5	Crk 661 mid watershed	Monthly	Mar 2011 – Dec 2012
WQ6	Davidson Crk near headwaters	Monthly	Mar 2011 – Dec 2012
WQ7	Davidson Crk near mouth	Monthly	Mar 2011 – Dec 2012
WQ8	Chedakuz Crk above Davidson Crk	Monthly	Mar 2011 – Dec 2012
WQ9	Chedakuz Crk above Turtle Crk	Monthly	Mar 2011 – Dec 2012
WQ10	Davidson Crk mid watershed	Monthly	Mar 2011 – Dec 2012
WQ11	Turtle Crk tributary Crk 700	Monthly	Mar 2011 – Dec 2012
WQ12	Crk 705	Monthly	Mar 2011 – Dec 2012
WQ13	Chedakuz Crk downstream of Turtle Creek	Monthly	Mar 2011 – Dec 2012
WQ14	Turtle Crk near mouth	Monthly	Mar 2011 – Dec 2012
WQ15	Crk 705 tributary	Monthly	Jun 2012 – Dec 2012
WQ16	Crk 705 tributary	Monthly	Jun 2012 – Dec 2012
WQ17	Blackwater R tributary	Quarterly	Dec 2011 – Dec 2012 ²
WQ18	Blackwater River	Quarterly	Dec 2011 – Dec 2012 ²
WQ19	Turtle Creek headwaters	Quarterly	Jun 2012 – Dec 2012 ²

Table continues...

Site	Location	Type	Sample Period
WQ20	Kuyakuz Lake	Quarterly ¹	Jun 2012 – Feb 2013 ²
WQ21	Tatelkuz Lake	Quarterly ¹	Jun 2012 – Mar 2013
WQ22	Snake Lake	Quarterly ¹	Jun 2012 – Mar 2013
WQ23	Lake 1682	Quarterly ¹	Jun 2012 – Mar 2013
WQ24	Lake 1538	Quarterly ¹	Jun 2012 – Mar 2013
WQ25	Lake 1428	Quarterly ¹	Sep 2012 – Mar 2013
WQ26	Davidson Creek at FSR crossing	Monthly	Jan 2013 – Jun 2013

Notes: Numbered water bodies are the last 3 or 4 digits of the provincial watershed code; apply to ungazetted waterbodies

Sites not sampled if completely frozen

Crk = creek, R = River, FSR = Forest Service Road

¹ Not sampled in Q4 2012 due to safety concerns

² Will be discontinued in 2013; other stream sites will be sampled monthly and weekly at freshet; lake samples will continue to be sampled quarterly.

3.1.2 General Methods

All stream samples were collected as single grab replicates from each monitoring site in sample bottles provided by the laboratory doing the analysis and labelled. Sample collection followed standardized protocols (BC MOE, 2011¹). Samples were collected mid-stream; however, samples were collected from the stream bank when the safety of field personnel was a concern due to increased stream flow.

Polythene contact gloves were worn during sample collection. Polythene bottles without cap liners were used. Bottles were opened underwater to fill. Sample bottles without preservatives, except acid pre-rinsed metal bottles, were rinsed three times before filling.

Table 3.1-2 lists the rationale for each of the sites.

Table 3.1-2: Rationale for Selected Surface Water Quality Sites

Site	Rationale
WQ1	Drains the Blackwater mineral deposit
WQ3	Drains the Blackwater mineral deposit
WQ4	Drains the Blackwater mineral deposit
WQ5	Drains the Blackwater mineral deposit
WQ6	Background water quality
WQ7	Integrate water quality of Davidson Creek
WQ8	Background water quality
WQ9	Monitor influence of Davidson Creek

Table continues...

¹ Updated 2012 to a final version

Site	Rationale
WQ10	Downstream of a potential TSF
WQ11	Downstream of potential TSF indirect effects
WQ12	Downstream of potential TSF indirect effects
WQ13	Monitor influence of Turtle Creek; potential cumulative effects site
WQ14	Integrate water quality in Turtle Creek
WQ15	Proximate to TSF saddle dam
WQ16	Proximate to TSF saddle dam
WQ17	Requested by BC MOE for comparison with the Project drainages
WQ18	Requested by BC MOE for comparison with the Project drainages
WQ19	Origin of source water for Turtle Creek
WQ20	Early optional source of make-up water for Davidson Creek
WQ21	Potential source of make-up water for Davidson Creek
WQ22	Potential source of post closure low flow water for Davidson Creek
WQ23	Proximate to TSF saddle dam
WQ24	Proximate to TSF saddle dam
WQ25	Proximate to TSF saddle dam
WQ26	Proximate to EEM mid-field point on Davidson Creek

Notes: BC MOE = British Columbia Ministry of Environment; TSF = Tailings Storage Facility

Bottles were recapped underwater and placed in poly bags in coolers fitted with freezer packs. Samples were stored and refrigerated overnight, and shipped via air courier to AMEC Environmental & Infrastructure (AMEC) Edmonton assay lab the morning following collection. Dissolved metals samples were filtered and preserved in the field to help ensure holding time guidelines were not exceeded. Preservatives used were AA-grade.

Field measurements included pH, temperature, conductivity, and dissolved oxygen (DO).

Table 3.1-3 lists the parameters analyzed for the water samples. **Annex 2** provides a list of analysis methods and detection limits used by the lab for water samples.

Table 3.1-3: 2011-2012 Assay Parameters

Physical Tests	Total and Dissolved Metals
pH at 25°C	Aluminum
Conductivity at 25°C	Antimony
Total dissolved solids at 180°C	Arsenic
Total suspended solids at 105°C	Barium
Turbidity	Beryllium
Total hardness as CaCO ₃	Boron
	Cadmium
Dissolved Anions	Calcium
Total alkalinity as CaCO ₃	Chromium
Fluoride – D	Cobalt
Sulphate – D	Copper
Chloride – D	Iron
	Lead
	Lithium
Nutrients	Magnesium
Ammonia – nitrogen	Manganese
Nitrate-nitrogen – D	Mercury
Nitrite-nitrogen – D	Molybdenum
Total Kjeldahl Nitrogen	Nickel
Phosphorus-ortho – dissolved-LL	Phosphorus
Phosphorus – total dissolved-LL	Potassium
	Selenium
Organic Parameters	Silicon
Carbon (total organic)	Silver
Carbon (dissolved organic)	Sodium
	Strontium
Cyanide	Thallium
Cyanide, total	Tin
Cyanide, WAD	Titanium
Cyanate	Uranium
Thiocyanate	Vanadium
	Zinc

Notes: CaCO₃ = calcium carbonate; D = dissolved; °C = degrees Celsius; LL = low level; TKN = Total Kjeldahl Nitrogen; WAD = weak acid dissociable

3.2 Weekly Sampling at Freshet

Weekly samples were collected at freshet high flow periods in May and June. The purpose was to determine variation within the months at periods likely to reflect maximum differences due to freshet conditions. Samples were collected over a consecutive five-week period. Samples were collected in the same manner as noted above.

WQ1 to 14 were sampled weekly during freshet in 2011, 2012, and 2013 as follows:

- 24 May to 13 June in 2011;
- 14 May to 18 June in 2012; and
- 13 May to 17 June in 2013.

3.3 Sediment Chemistry

Stream sediments were collected once in August 2011 and once in August 2012 at water quality sites. In 2013 sediments were collected from new sites WQ15, WQ16, and WQ26 and from WQ21 (Tatelkuz Lake), WQ22 (Snake Lake), WQ23 (Lake 1682), WQ24 (Lake 1538), and WQ25 (Lake 1438). Splits were analyzed at WQ3, WQ6, WQ7, and WQ12; WQ14 was a composite of five replicates in 2011. Splits were analyzed at WQ3, WQ4, WQ7, and WQ12; WQ14 was a composite of five replicates in 2012. At other sites, a single grab sample was analyzed. Samples were collected with a plastic spoon and placed in wide-mouth polyethylene jars. The sampling protocol followed BC MOE 2011 guidelines for orientation surveys.

Assay parameters for sediments are listed in **Table 3.3-1**. Analysis parameters were based on BC MOE metals package for soils; analyses were made by strong acid leaching. The -63 micron (μm) fraction is specified in the method based on the assumption that metals (in particular) are adsorbed proportionally to surface area; therefore, the silt and clay fractions are likely to absorb more strong acid extractable metal ions than coarser fractions and thus provide a conservative estimate of metal availability. The pH (1:1 with water (H_2O)), grain size, and total organic carbon (TOC) by LECO furnace were also assayed.

Table 3.3-1: Stream Sediment Assay Parameter List

General Parameters	Metals*		Organics
Moisture	Aluminum	Mercury	Inorganic carbon
pH (1:1 H ₂ O)	Antimony	Molybdenum	Total organic carbon
	Arsenic	Nickel	CaCO ₃ equivalent
	Barium	Phosphorus	Total carbon by combustion
	Beryllium	Potassium	
	Bismuth	Selenium	
	Boron	Silver	
	Cadmium	Sodium	
	Calcium	Strontium	
	Chromium	Thallium	
	Cobalt	Tin	
	Copper	Titanium	
	Iron	Vanadium	
	Lead	Zinc	
	Magnesium		
	Manganese		

Notes: *Analyses based on dry weight
 CaCO₃ = calcium carbonate; H₂O = water

4.0 RESULTS

4.1 Introduction

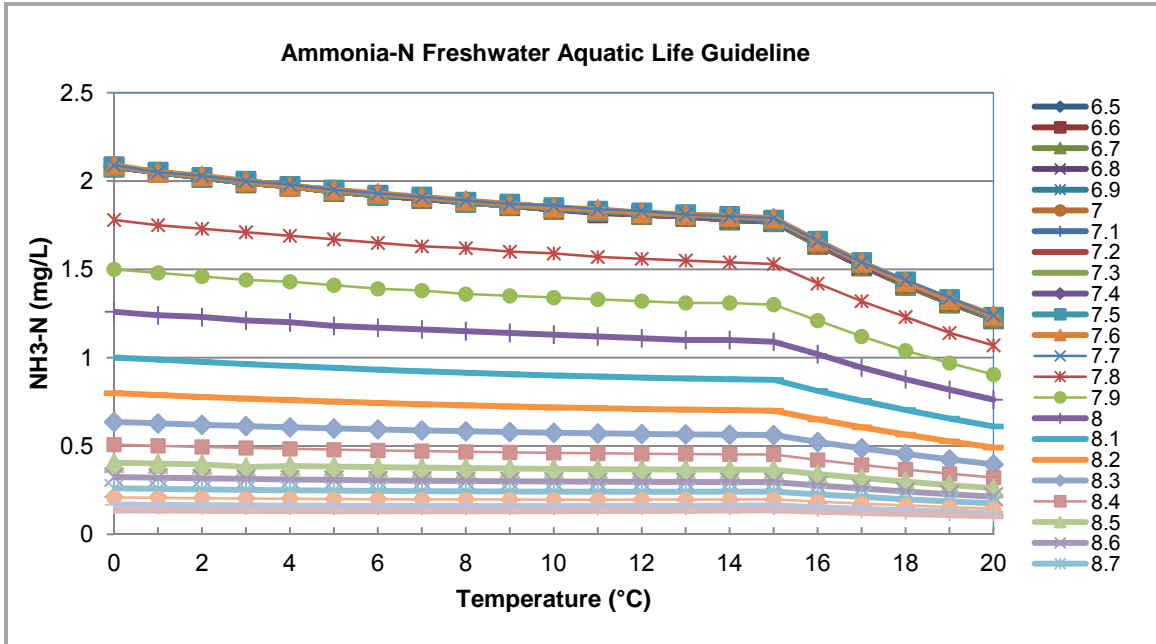
Water quality is defined by the levels of nutrients, chemicals, and metals found in the surface water. The parameters selected for a baseline water quality analysis must be related to the industry for which the study is being conducted. Future monitoring will then enable identification of changes associated with changing land use and with industrial and anthropogenic activities.

The monitored streams within the Project mine site, Local Study Area (LSA), and Regional Study Area (RSA) could drain the deposit area, be indirectly affected by mine development and operation, or act as background controls for operational monitoring.

4.2 BC MOE Protection of Freshwater Aquatic Life Guidelines

Table 4.2-1 provides a summary of BC MOE (2006a, 2006b, 2008, 2009, and 2012) water quality guidelines (BC FWG). The ammonia (NH₃) guideline is based on biologically available un-ionized ammonia, whereas laboratory analysis is based on the ionized form. The proportion of un-ionized ammonia in water varies with pH and temperature.

Figure 4.2-1 is a graphical presentation of reference tables used for the BC MOE guidelines.



Notes: °C = degrees Celsius; mg/L = milligrams per litre; NH₃-N = ammonia-nitrogen

Figure 4.2-1: Ammonia-Nitrogen Guidelines to Protect Freshwater Aquatic Life

Table 4.2-1: Water Quality Guidelines

Parameter	BC MOE Water Quality Guidelines			Canadian Environmental Quality Guidelines		Health Canada	
	Freshwater Aquatic (30 day average)	Freshwater Aquatic (Max. grab)	Unit	Freshwater Aquatic	Unit	Drinking Water	Units
General Parameters							
pH	6.5 to 9.0		pH unit	6.5 to 9.0	pH unit	6.5 to 8.5	pH unit
Conductivity						700	µS/cm
Hardness (as mg CaCO ₃)						80 to 100	mg/L
Colour						15	TCU
Dissolved oxygen	8		mg/L				
Total dissolved solids						500	mg/L
Total suspended solids	25 in 24 hour (bg ≤25)		mg/L				
	mean of 5 in 30 day (bg ≤25)						
	10 (bg 25 to 100)						
	10% (bg >100)						
Turbidity	8 in 24 hour (bg ≤8)		NTU			0.1	NTU
	5 (bg 8 to 50)						
	10% (bg >50)						
Chlorine (as TRC or ClO)	2	100	µg/L				
Chloride (d)	150		mg/L	Short term: 640 Long term: 120	mg/L	250	mg/L
Fluoride		0.4 (hardness ≤10 mg/L CaCO ₃)	mg/L	120	µg/L	1.5	mg/L
		$[-51.73 + 92.57 * \log\{\text{hardness}\}] * 0.01$ (hardness >10 mg/L CaCO ₃)	mg/L				
Sulphate	115 (hardness 0 to 18 mg/L as CaCO ₃)		mg/L			500	mg/L
	195 (hardness 18 to 61 mg/L as CaCO ₃)						
	270 (hardness 61 to 181 mg/L as CaCO ₃)						
	410 (hardness 181 to 250 mg/L as CaCO ₃)						
Sulphide (as H ₂ S)						50	µg/L

Table continues ...

Parameter	BC MOE Water Quality Guidelines			Canadian Environmental Quality Guidelines		Health Canada	
	Freshwater Aquatic (30 day average)	Freshwater Aquatic (Max. grab)	Unit	Freshwater Aquatic	Unit	Drinking Water	Units
Nutrients							
Nitrate-nitrogen	3	31.3	mg/L	Short term: 550 Long term: 13	mg/L	10	mg/L
Nitrite-nitrogen	0.02	0.06	mg/L	60	µg/L	1.0	mg/L
Ammonia-nitrogen	1.95 to 1.94 (T = 5°C at pH 6.5 to 7.5)	26.8 to 13.4 (T = 5°C at pH 6.5 to 7.5)	mg/L	3.98 to 39.72 (T = 5°C at pH 6.5 to 7.5)	mg/L		
Phosphorus (lakes)	5 to 15		µg/L	Ultra-oligotrophic <4 Oligotrophic 4 to 10 Mesotrophic 10 to 20 Meso-eutrophic 20 to 35 Eutrophic 35 to 100 Hyper-eutrophic >100	µg/L	10	µg/L
Organics							
Total organic carbon	±20% 30 day median background		mg/L			4	mg/L
Dissolved organic carbon	±20% 30 day median background		mg/L				
Cyanide							
Cyanide (t)						200	µg/L
Cyanide (WAD)	5	10	µg/L	5 (as free CN)	µg/L		
Coliforms							
Total Coliforms							
Fecal Coliforms		Shellfish harvesting ≤43, 90 th percentile ^{†††} ≤14, median ^{†††}	/100 ml			0	/100 ml

Table continues...

Parameter	BC MOE Water Quality Guidelines			Canadian Environmental Quality Guidelines		Health Canada	
	Freshwater Aquatic (30 day average)	Freshwater Aquatic (Max. grab)	Unit	Freshwater Aquatic	Unit	Drinking Water	Units
Metals							
Aluminum (d)	0.05 (pH ≥6.5)	0.1 (pH ≥6.5)	mg/L ^{**}				
	$e(1.6 - 3.327 [\text{median pH}] + 0.402\text{pH}^2)$ (pH <6.5)	$e(1.209 - 2.426\text{pH} + 0.286\text{pH}^2)$ (pH <6.5)	mg/L [†]				
Aluminum (t)				100 (pH ≥6.5)	µg/L	0.2	mg/L
				5 (pH <6.5)			
Antimony (t)		20 ^w	µg/L			6	µg/L
Arsenic (t)	5		µg/L	5		10	µg/L
Barium (t) ^{††}	1	5	mg/L			1	mg/L
Beryllium (t)		5.3 ^w	µg/L				
Boron (t)	1.2		mg/L	Short term: 29 Long term: 1.5	mg/L	5	mg/L
Cadmium (t)		$10^{0.86[\log_{10}(\text{hardness})]-3.2}$ ^w	µg/L	$10^{0.86[\log_{10}(\text{hardness})]-3.2}$	µg/L	5	µg/L
Calcium(d)		Up to 4, highly sensitive to acid inputs ^w	mg/L				
		4 to 8, moderately sensitive ^w					
		Over 8, low sensitivity ^w					
Chromium (t) ^{††}		1, maximum, Cr(VI) ^w	µg/L	1, Cr(VI)	µg/L	50	µg/L
		8.9, interim max, Cr(III) ^w		8.9, Cr(III)			
Cobalt (t)	4	110	µg/L				
Copper (t)	2 (hardness ≤50 mg/L)	(0.094[hardness]) + 2 (hardness ≤50 mg/L)	µg/L	$e^{0.8545[\ln(\text{hardness})]-1.465} \times 0.2$; minimum 2 µg/L	µg/L	1	mg/L
	0.04 x [mean hardness] (hardness >50 mg/L)	(0.094[hardness]) + 2 (hardness >50 mg/L)	µg/L				
Iron (t)		1	mg/L	300	µg/L	0.3	mg/L
Iron (d)		0.35	mg/L				
Lead (t)	none proposed (hardness <8 mg/L CaCO ₃)	3 (hardness <8 mg/L CaCO ₃)	µg/L	$e^{1.273[\ln(\text{hardness})]-4.705}$; minimum 1 µg/L	µg/L	10	µg/L
	$3.31 + e^{(1.273 \ln [\text{mean hardness}] - 4.704)}$ (hardness ≥8 mg/L CaCO ₃)	$e^{(1.273 \ln [\text{hardness}] - 1.460)}$ (hardness ≥ 8 mg/L CaCO ₃)					

Table continues...

Parameter	BC MOE Water Quality Guidelines			Canadian Environmental Quality Guidelines		Health Canada	
	Freshwater Aquatic (30 day average)	Freshwater Aquatic (Max. grab)	Unit	Freshwater Aquatic	Unit	Drinking Water	Units
Lithium(t)		0.014, secondary chronic 0.096, final chronic 0.870, aquatic maximum	mg/L				
Magnesium (d)						100	µg/L
Manganese (t)	(0.0044 * hardness) + 0.605	(0.01102 * hardness) + 0.54	mg/L			50	µg/L
Mercury (t)	0.02	0.1	µg/L	0.026	µg/L	1	µg/L
Molybdenum (t)	1	2	mg/L	73	µg/L	0.25	mg/L max
Nickel (t)		25 (hardness 0 to 60 mg/L as CaCO ₃) 65 (hardness 60 to 120 mg/L as CaCO ₃) 110 (hardness 120 to 180 mg/L as CaCO ₃) 150 (hardness >180 mg/L as CaCO ₃)	µg/L	$e^{0.76(\ln(\text{hardness}))+1.06}$	µg/L		
Selenium (t)	2		µg/L	1	µg/L	10	µg/L
Silver (t)	0.05 (hardness ≤100 mg/L CaCO ₃) 1.5 (hardness >100 mg/L CaCO ₃)	0.1 (hardness ≤100 mg/L CaCO ₃) 3 (hardness >100 mg/L CaCO ₃)	µg/L	0.1	µg/L		
Sodium (t)						200	mg/L
Thallium(t)		0.3	µg/L	0.8	µg/L		
Titanium(t)		2000, median threshold level: <i>Scenedesmus</i> 4600, median threshold level: <i>Daphnia</i>	µg/L				
Uranium (t)		300	µg/L	Short term: 33 Long term: 15	µg/L	20	µg/L
Vanadium(t)		6, Ontario WQO 10, secondary chronic value	µg/L				
Zinc (t)	7.5 (hardness <90 mg/L CaCO ₃) 7.5 + 0.75*[hardness - 90] (hardness ≥90 mg/L CaCO ₃)	33 (hardness <90 mg/L CaCO ₃) 33 + 0.75*[hardness - 90] (hardness ≥90 mg/L CaCO ₃)	µg/L	30	µg/L	5	mg/L

Notes: * Monitor mosses occasionally if above 50 mg/L; ** pH >6.5; †. pH <6.5; †† barium, chromium, and iron criteria currently being developed; ††† medians and geometric means are calculated from at least five samples in a 30-day period. Ten samples are required for 90th percentiles; ^w = A Compendium of Working Water Quality Guidelines for British Columbia; avg. = average; bg = background; CaCO₃ = calcium carbonate; ClO = chlorine monoxide; Cr (III) = chromium III; Cr (VI) = chromium VI; °C = degree Celsius; (d) = dissolved; Hg = mercury; H₂S = hydrogen sulphide; max = maximum; MeHg = methyl-mercury; µg/L = microgram per litre; µS/cm = microSiemens per centimetre; mg/L = milligram per litre; ml = millilitre; NTU = Nephelometric Turbidity Unit; T = temperature; t = total; TCU = True Colour Unit; TRC = total residual chlorine; WAD = weak acid dissociable; WQO = Water Quality Objective

Source: BC MOE, 2006a, 2006b, 2008, 2009; CCME, 2007; HC, 2012.

4.3 Stream Surface Water Quality Summary

4.3.1 Mean Water Quality

Table 4.3-2, overleaf, lists mean water quality (including the weekly freshet samples) for the parameters analyzed—exceedances of the BC FWG (BC MOE, 2006a, 2006b, 2008, 2009, 2012) and exceedances of Canadian Council of Ministers of the Environment (CCME, 2007) guidelines. The 30-day and maximum grab guidelines are shaded red bold, and red bold, respectively. CCME short-term and long-term guidelines are red underlined and red bold italics, respectively.

Site water has circum-neutral pH and has low hardness; alkalinities are also low, consistent with low hardness and conductivity. For general parameters, only WQ18 on Blackwater Creek had exceedances based on mean values: BC FWG turbidity (10.1 NTU versus BC FWG of 8 NTU), CCME fluoride (0.13 mg/L versus CCME short-term guide of 0.12 mg/L). WQ18 will not be affected by the Project.

Mean metals concentrations are all low, typically one to several orders of magnitude below their respective guidelines. **Table 4.3-1** lists the exceptions.

Table 4.3-1: Mean Concentration Exceedances

Site	Parameters Exceeded			
	BC FWG 30-day	BC FWG Max.	CCME Long Term	CCME Short Term
WQ1, WQ3, WQ4, WQ5, WQ6, WQ7, WQ10, WQ11, WQ12, WQ16, WQ18, WQ26			Al-t	
WQ1, WQ3, WQ4, WQ5, WQ6, WQ7, WQ10, WQ11, WQ12, WQ13, WQ16, WQ18	Cd-t			Cd-t
WQ18		Cr-t		
WQ7, WQ14, WQ18				Fe-t
WQ4	Ag-t	Zn-t		
WQ7, WQ18		Zn-t		
WQ1, WQ4, WQ5, WQ10, WQ11, WQ26		Al-d		
WQ3, WQ6, WQ7, WQ12	Al-d			

Notes: d = dissolved, t = total, Al = aluminum, Cd = cadmium, Cr = chromium, Fe = iron, Ag = silver, Zn = zinc. The cadmium guidelines used were BECOME 2006 and CCME draft 2012.

Table 4.3-2: Mean Surface Water Quality Summary for the Project

Parameters	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MOE Guideline		CCME			
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	30-day	Maximum	Long Term	Short Term	
Physical Tests																										
pH at 25°C BC-D	pH	6.64	7.57	7.09	7.15	7.2	7.57	7.91	7.84	7.42	7.36	7.29	7.83	7.8	7.32	7.31	7.43	7.95	8.04	7.55		6.5-9.0			6.5-9.0	
Conductivity at 25°C	µS/cm	22.9	77.2	53.9	41.1	40.4	80	145.8	130.1	63.7	66.3	43.5	127	142.6	54.4	46	70.2	150	199.3	78.6						
T-Dissolved Solids at 180°C	mg/L	42.9	64	52.4	52.6	39.8	65.3	97.7	83.7	51.6	68.9	45.4	84.6	109	65	50.7	45.2	96.8	124	64.4						
Total Suspended Solids at 105°C	mg/L	1.8	3	3.8	2.9	1.6	10.8	6	4.7	2.3	<2	<2	5.4	2.2	2.1	6.2	<2	<2	<2	3.1						
Turbidity	NTU	2.63	1.83	3	1.34	1.5	4.43	3.63	2.21	1.58	1.58	1.57	2.26	1.52	1.55	2.79	0.62	10.06	0.8	1.44	8			8		
T-Hardness as CaCO ₃	mg/L	7.2	33.6	20.7	17.2	15.9	38.1	70.1	61.8	27.5	31.3	18.9	58.9	85.6	25.4	20.1	29.2	64.5	100.2	37.1						
Dissolved Anions																										
Total Alkalinity as CaCO ₃	mg/L	5.9	38.6	13.8	17.7	16.9	38.7	75.4	63.7	30	31.2	20.4	62.4	71.5	23.3	21.6	31.8	76.6	98.7	38.8						
Fluoride-D	mg/L	0.03	0.06	0.05	0.05	0.04	0.05	0.07	0.07	0.05	0.05	0.04	0.07	0.07	0.04	0.03	0.05	0.13	0.06	0.05		0.4-1.33 ^c			0.12	
Sulphate-D	mg/L	1.3	1.5	7.5	0.9	1.5	2.1	4	3.9	2	1.4	1.2	3.7	2.9	1.4	1.4	2.8	1.7	3	2.2	115-270 ^c					
Chloride-D	mg/L	0.5	0.4	0.9	0.3	0.4	0.4	0.5	0.5	0.3	0.4	0.3	0.8	0.6	0.3	0.3	0.3	0.8	1.2	0.3	150		120		640	
Nutrients																										
Ammonia - Nitrogen	mg/L	<0.02	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.424-2.08 ^a	2.91-28.7 ^a		0.42-189.97 ^a	
Nitrate-N-D	mg/L	0.01	0.021	0.013	0.023	0.015	0.018	0.034	0.03	0.021	0.022	0.018	0.02	0.017	0.028	0.029	0.046	0.066	0.179	0.03	3		31.3	13	550	
Nitrite-N-D	mg/L	0.002	0.002	<0.003	<0.003	<0.003	<0.003	0.002	0.002	<0.003	<0.003	0.002	0.002	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.02		0.06		0.06	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.22	0.18	0.38	0.19	0.14	0.17	0.27	0.23	0.16	0.19	0.18	0.23	0.2	0.24	0.2	0.21	0.55	<0.08	0.11						
Phosphorous-Ortho-DLL	mg/L	0.006	0.018	0.006	<0.003	0.006	0.007	0.008	0.006	0.007	0.005	<0.003	0.008	0.007			<0.003	<0.003	<0.003							
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.03	<0.02	<0.02	<0.02	0.4	0.01	0.01	0.01	0.01	<0.02	0.01	0.01	0.01	0.01	<0.01	0.04	<0.01	0.01						
Organic Parameters																										
Carbon (Total Organic)	mg/L	11.2	7.2	10.5	11.5	7.5	8.1	9.7	9.3	7.6	14.9	8.6	10.5	10.3	9.3	6.1	6.6	9.6	7.9	6.5						
Carbon (Dissolved Organic)	mg/L	10.4	6.9	10.5	11	7.3	8.1	9.1	8.9	7.4	14.5	8.6	9.4	10.2	8.9	6	6.5	9.4	7.1	6.4						
Total Metals																										
Aluminum-T	mg/L	0.302	0.113	0.261	0.185	0.139	0.224	0.027	0.071	0.164	0.35	0.134	0.076	0.06	0.059	0.103	0.063	0.223	<0.002	0.109						0.1 ^b
Antimony-T	mg/L	0.00005	0.00006	0.00016	<5e-05	0.00005	0.00004	<5e-05	0.00004	<5e-05	<5e-05	<5e-05	0.00004	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	0.00004			0.02			
Arsenic-T	mg/L	0.0005	0.0008	0.0018	0.0004	0.0006	0.0005	0.0005	0.0005	0.0005	0.0002	0.0002	0.0005	0.0003	0.0003	0.0005	0.0004	0.0006	0.0004	0.0007		0.005				0.005
Barium-T	mg/L	0.00387	0.00503	0.00382	0.00406	0.00577	0.00874	0.00658	0.00761	0.00672	0.00838	0.00652	0.01034	0.01438	0.00885	0.00515	0.00633	0.01274	0.00903	0.00763		1		5		
Beryllium-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04				0.0053		
Boron-T	mg/L	0.001	0.001	0.001	0.001	<0.001	0.001	0.001	0.001	0.001	0.001	<0.001	0.001	0.001	0	<0.001	<0.001	0.001	0.001	0.003		1.2		1.5		29
Cadmium-T	mg/L	0.000018	<1.5e-05	0.000116	<1.5e-05	<1.5e-05	0.000016	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05	0.000014	<1.5e-05	<1.5e-05	0.000024	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05		0.000010 – 0.000033		0.000017-0.00016		0.00014-0.0021
Calcium-T	mg/L	2.3	9.9	6.7	4.8	5.1	11	20.8	18.5	8.5	9.7	6.1	17.8	26.4	8.3	6.3	8.2	13.6	32.8	11.2						
Chromium-T	mg/L	0.0002	0.0008	<3e-04	0.0002	<3e-04	0.0004	<5e-04	<5e-04	0.0002	0.0003	<5e-04	<5e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04			0.001-0.0089			0.001-0.0089
Cobalt-T	mg/L	0.00006	0.00005	0.00006	0.00006	0.00003	0.0001	0.00003	0.00005	0.00003	0.00005	0.00004	0.00005	0.00004	0.00002	0.00003	0.00004	0.00037	<2e-05	0.00003		0.004		0.11		
Copper-T	mg/L	0.0008	0.0005	0.0006	0.0004	0.0003	0.0014	0.0005	0.0004	0.0003	0.001	0.0004	0.0004	0.0009	0.0003	0.0002	0.0005	0.0013	<1e-04	0.0004		0.002-0.004 ^c		0.00267-0.0114 ^c		0.002-0.0024 ^c
Iron-T	mg/L	0.2255	0.164	0.1879	0.1655	0.1372	0.3082	0.0689	0.1804	0.1237	0.1661	0.2194	0.217	0.3526	0.1292	0.1936	0.0801	0.8952	0.0213	0.094				1		0.3
Lead-T	mg/L	0.00006	0.00006	0.00028	0.00004	0.00006	0.00012	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	0.00016	<5e-05	<5e-05	<5e-05	0.00005		0.0036-0.0065 ^c		0.003-0.081 ^c		0.001-0.0032 ^c
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		0.014		0.87		
Magnesium-T	mg/L	0.5	2.32	1.11	1.36	0.86	3.07	4.82	4.16	1.68	1.9	1.02	4.01	5.48	1.27	1.19	2.34	8.23	4.32	2.35						
Manganese-T	mg/L	0.012094	0.009346	0.026335	0.017403	0.008651	0.025601	0.023165	0.025236	0.006504	0.003713	0.016478	0.030234	0.029154	0.023624	0.034923	0.008892	0.082472	0.001563	0.007634				0.64-1.05 ^c		0.62-1.64 ^c
Mercury-T	mg/L	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	0.000006	<8e-06	<8e-06	<8e-06	<5e-06	<5e-06	<8e-06	<8e-06	<5e-06	<5e-06		0.00002		0.0001		0.000026
Molybdenum-T	mg/L	0.00014	0.00055	0.00009	0.00014	0.00038	0.00049	0.00054	0.00057	0.00047	0.00015	0.00043	0.00054	0.00067	0.00059	0.00077	0.00187	0.00071	0.00069	0.00055		1		2		0.073
Nickel-T	mg/L	0.00027	0.00032	0.00032	0.00021	0.00023	0.00037	0.00026	0.00026	0.00018	0.00023	0.00012	0.00028	0.00041	0.00008	0.00008	0.00016	0.00154	<5e-05	0.00016				0.025-0.065 ^c		0.025-0.096 ^c
Phosphorous-T	mg/L	0.01	0.04	0.01	<0.02	0.01	0.14	0.02	0.01	0.01	0.01	0.01	0.01	0.02	<0.02	0.02	<0.02	0.09	<0.02	0.01						
Potassium-T	mg/L	<0.5	0.5	0.6	<0.5	<0.5	0.8	0.9	0.8	<0.5	0.4	<0.5	0.8	0.9	<0.5	<0.5	<0.5	2.5	0.6	0.5						
Selenium-T	mg/L	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04		0.002				0.001
Silicon-T	mg/L	4.78	7.24	5.04	4.87	4.99	5.7	4.24	4.71	5.47	5.75	3.66	4.75	7.76	2.3	1.74	6.05	12.34	6.26	4.85						
Silver-T	mg/L	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<																		

Parameters	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MOE Guideline		CCME	
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	30-day	Maximum	Long Term
Titanium-T	mg/L	0.0048	0.0028	0.0049	0.0027	0.0021	0.0066	0.0011	0.0026	0.0026	0.0044	0.0025	0.0027	0.0016	0.0009	0.0019	0.0006	0.0166	<2e-04	0.0019				
Uranium-T	mg/L	0.00015	0.00017	0.00005	0.00007	0.00017	0.00019	0.00009	0.00011	0.0002	0.00018	0.00018	0.00011	0.00012	0.00015	0.00037	0.0001	0.00013	0.00135	0.0002		0.3	0.015	0.033
Vanadium-T	mg/L	0.00026	0.00127	0.00017	0.00026	0.00011	0.00061	0.00015	0.0003	0.00022	0.00038	0.00014	0.0003	0.00021	<1e-04	0.00007	0.00012	0.00242	0.00063	<1e-04		0.006-0.01		
Zinc-T	mg/L	0.0043	0.0026	0.0445	0.0027	0.003	0.0095	0.0022	0.0016	0.0025	0.002	0.0022	0.0045	0.004	0.0021	0.0032	0.0018	0.0311	0.0017	0.0021	0.0075-0.015 ^c	0.033-0.0407 ^c		0.03
Dissolved Metals																								
Aluminum-D	mg/L	0.223	0.063	0.133	0.145	0.092	0.078	0.005	0.02	0.105	0.27	0.083	0.025	0.016	0.044	0.023	0.049	0.012	0.003	0.081	0.05 ^b	0.1 ^b		
Antimony-D	mg/L	0.00003	0.00005	0.00014	0.00005	0.00005	0.00007	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00029	0.00005	0.00004	0.00005	0.00006	0.00005	0.00005				
Arsenic-D	mg/L	0.0004	0.0008	0.0013	0.0003	0.0005	0.0004	0.0005	0.0005	0.0004	0.0001	0.0002	0.0005	0.0002	0.0003	0.0004	0.0004	0.0004	0.0004	0.0006				
Barium-D	mg/L	0.00307	0.0043	0.00263	0.00365	0.00519	0.00665	0.00598	0.00694	0.00603	0.00765	0.00586	0.00714	0.01266	0.0083	0.00397	0.00632	0.00544	0.00892	0.00715				
Beryllium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
Boron-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0	0	0.001	0.001	0.001	0.002				
Cadmium-D	mg/L	0.000012	0.000016	0.000075	0.000017	0.000016	0.000009	0.000015	0.000017	0.000015	0.000017	0.000016	0.000022	0.000017	0.000015	0.000018	0.000015	0.000108	0.000015	0.000015				
Calcium-D	mg/L	2.2	9.7	6.5	4.7	5	10.9	20.3	17.9	8.3	9.4	5.9	17.2	25.5	8.1	6.1	8	13	32.7	10.9				
Chromium-D	mg/L	0.0002	0.0006	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003				
Cobalt-D	mg/L	0.00003	0.00002	0.00002	0.00003	0.00002	0.00004	0.00001	0.00003	0.00002	0.00004	0.00002	0.00003	0.00003	0.00002	0.00001	0.00003	0.00003	0.00002	0.00002				
Copper-D	mg/L	0.0003	0.0003	0.0005	0.0004	0.0003	0.0013	0.0003	0.0003	0.0003	0.001	0.0003	0.0003	0.0008	0.0003	0.0002	0.0004	0.0008	0.0001	0.0004				
Iron-D	mg/L	0.1352	0.0796	0.0791	0.1115	0.0755	0.1047	0.0298	0.0911	0.0687	0.1188	0.1382	0.1043	0.1842	0.0902	0.066	0.0564	0.1234	0.0132	0.055	0.35			
Lead-D	mg/L	0.00007	0.00005	0.00005	0.00005	0.00006	0.00008	0.00005	0.00005	0.00006	0.00006	0.00005	0.00005	0.00008	0.00005	0.00008	0.00005	0.00005	0.00005	0.00005				
Lithium-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001				
Magnesium-D	mg/L	0.5	2.28	1.07	1.33	0.84	2.48	4.69	4.04	1.64	1.87	1	3.88	5.31	1.24	2.25	7.81	4.28	2.32					
Manganese-D	mg/L	0.00761	0.0042	0.00887	0.00412	0.00439	0.01352	0.00848	0.01747	0.00224	0.00164	0.00709	0.02168	0.01557	0.01142	0.01658	0.00817	0.00412	0.0012	0.00288				
Mercury-D	mg/L	0.000007	0.000006	0.000006	0.000006	0.000006	0.000006	0.000006	0.000006	0.000007	0.000007	0.000006	0.000006	0.000006	0.000005	0.000005	0.000006	0.000006	0.000005	0.000005				
Molybdenum-D	mg/L	0.00011	0.00048	0.00007	0.00012	0.00034	0.00043	0.00049	0.00051	0.00043	0.00014	0.00038	0.00049	0.0006	0.00052	0.00065	0.00164	0.00065	0.00066	0.00051				
Nickel-D	mg/L	0.00025	0.00029	0.00027	0.00018	0.0002	0.00043	0.00021	0.00023	0.00016	0.0002	0.00009	0.00023	0.00035	0.00007	0.00005	0.00014	0.00059	0.00005	0.00015				
Phosphorous-D	mg/L	0.01	0.03	0.01	0.01	0.01	0.41	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.01	0.01				
Potassium-D	mg/L	0.5	0.5	0.5	0.5	0.5	1.4	0.8	0.8	0.5	0.4	0.5	0.7	0.7	0.5	0.5	0.5	2.4	0.6	0.5				
Selenium-D	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0004	0.0004	0.0006	0.0006	0.0006	0.0003				
Silicon-D	mg/L	4.52	6.93	4.71	4.62	4.75	5.31	4	4.47	5.18	5.46	3.4	4.48	7.06	2.11	1.52	5.92	11.02	6.15	4.61				
Silver-D	mg/L	0.00005	0.00005	0.00003	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005				
Sodium-D	mg/L	1.6	2.9	2.2	2	1.9	5.4	3.4	3.2	2.3	2.3	1.7	3	3.6	1.8	1.9	3	5.7	2.8	2.6				
Strontium-D	mg/L	0.019419	0.061451	0.036204	0.03112	0.036829	0.063888	0.096156	0.089771	0.056016	0.057454	0.045274	0.087093	0.125312	0.069673	0.039949	0.049712	0.058884	0.119467	0.064182				
Thallium-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005				
Tin-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
Titanium-D	mg/L	0.0023	0.0012	0.0015	0.0014	0.0012	0.001	0.0002	0.0005	0.0012	0.0032	0.0012	0.0005	0.0006	0.0006	0.0004	0.0004	0.0008	0.0002	0.0011				
Uranium-D	mg/L	0.00014	0.00014	0.00005	0.00006	0.00015	0.00016	0.00008	0.0001	0.00018	0.00016	0.00016	0.0001	0.00011	0.00014	0.00022	0.00008	0.00011	0.00029	0.00019				
Vanadium-D	mg/L	0.00015	0.00104	0.00006	0.00017	0.00006	0.00024	0.00011	0.00018	0.00014	0.00027	0.00008	0.00018	0.00009	0.00005	0.00005	0.00012	0.00115	0.00064	0.00005				
Zinc-D	mg/L	0.0042	0.0023	0.0405	0.002	0.0025	0.0067	0.0018	0.0016	0.0022	0.0019	0.0023	0.0017	0.003	0.002	0.0027	0.0018	0.0253	0.0017	0.0019				
D-Hardness as CaCO ₃	mg/L	7.7	34	20.8	18.3	15.5	38.4	68.8	61	27.6	32.4	18.8	61	72.3	24.8	19.8	29.2	64.5	100.2	62				
Cyanide																								
Cyanide (Total)	mg/L	0.006	0.0056	0.0055	0.0059	0.0055	0.0056	0.005	0.0055	0.0058	0.0065	0.0057	0.0055	0.0054	0.005	0.005	0.005	0.005	0.005	0.005				
Cyanide (WAD)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanate	mg/L	0.28	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				0.2				
Thiocyanate (SCN)	mg/L	0.42	0.42	0.4	0.44	0.42	0.49	0.44	0.46	0.42	0.55	0.49	0.44	0.46	0.5	0.5				0.5				
Blackwater – Field Parameters																								
Conductivity (EC)	µS/cm	14.5	56.3	39.5	31.3	28.3	65.5	121.4	105.5	49.1	47.8	31.9	107.8	118.5	34.8	31.8	52.2	98.8	120	53.8				
DO Saturation %	%	94.9	97.2	87.5	91.6	96.5	96.5	90.1	96.3	97.7	95.6	91.4	98.7	89.9	84.8	78.5	107.2	113.1	80.7	110.1				
pH	pH	6.6	7.7	7	7.3	7.3	7.7	7.9	7.9	7.4	7.4	7.4	7.8	7.7	7.6	7.6	7.6	7.8	8.6	7.6	6.5-9.0			

4.3.2 95th Percentile Water Quality

The 95th percentile represents the upper two standard deviations above the mean. Based on probability, only 5% or less of samples in any population would be expected to equal or exceed this concentration. Maximum observed concentrations are often outliers based on, for example, high-suspended sediments, but these outliers also affect the population distribution and therefore the 95th percentile.

For general parameters, BC FWG for turbidity of 8 NTU was exceeded during freshet at WQ4, WQ7, WQ8, WQ16, and WQ18. Fluoride exceeded the CCME guideline at WQ18.

Table 4.3-4 lists the 95th percentile results for April 2011 to June 2013. The 30-day and maximum grab guidelines are shaded red bold, and red bold, respectively. CCME short-term and long-term guidelines are red underlined and red bold italics, respectively.

4.3.2.1 Metal 95th Percentile Guideline Exceedances

Table 4.3-3 shows a list of parameters exceedances of BC MOE and CCME guidelines.

Table 4.3-3: Parameters Exceeded

Site	Parameters Exceeded			
	BC FWG 30-day	BC FWG Max.	CCME Long Term	CCME Short Term
All sites except WQ19	-	-	Al-t	-
WQ1, WQ3, WQ4, WQ5, WQ6, WQ7, WQ9, WQ11, WQ12, WQ13, WQ14, WQ16, WQ18	-	-	Cd-t	
WQ3, WQ18	-	Cr-t (as Cr ⁶⁺)	-	Cr-t
WQ11	Cu-t	-	-	-
WQ18	-	Cu-t	Cu-t	
WQ1, WQ3, WQ4, WQ5, WQ6, WQ7, WQ11, WQ12, WQ13, WQ16	-	-	Fe-t	
WQ14, WQ18	-	Fe-t	Fe-t	
WQ4	-	Ag-t	-	Ag-t
WQ1, WQ3, WQ7, WQ13	Zn-t	-	-	-
WQ4, WQ18	-	Zn-t	-	Zn-t
WQ14, WQ15, WQ16	Al-d	-	-	-
WQ1, WQ3, WQ4, WQ5, WQ6, WQ7, WQ10, WQ11, WQ12, WQ17, WQ26	-	Al-d	-	-

Notes: d = dissolved, t = total, Al = aluminum, Cd = cadmium, Cr = chromium, Fe = iron, Hg = mercury, Ag = silver, Zn = zinc. The cadmium guidelines used were BC MOE 2006 and CCME draft 2012.

The pattern of exceedances is similar to mean concentrations, with the addition of metals exceedances of:

- CCME Al-t – 7 additional stations added;
- BC FWG max Cr-t – WQ3, WQ18;
- BC FWG.max Fe-t – WQ14, WQ18;
- BC FWG max Ag-t – WQ4;
- BC FWG max Zn-t – WQ4, WQ18; and
- BC FWG max Al-d – 11 additional stations.

Changes from 30-day to maximum exceedances are, for the most part, coincident with 95th percentile values driven by freshet concentrations. Weekly (freshet) results are discussed in **Section 4.4**.

The results for cadmium indicate that some cadmium is being leached from country rock at the site; therefore, a site-specific guideline is expected to be required. WQ4 is near the deposit and is anomalous for zinc, which indicates that a site-specific guideline for zinc is expected to be required for the mine site. The results for aluminum are not unusual and reflect the country rock. The BC MOE guidelines are based on lab tests using aluminum hydroxide; however, aluminum in natural waters is predominantly oxyhydroxides, which form small diameter colloids that report as dissolved in lab assays. A site-specific objective is expected to be required. The CCME guideline is based on total aluminum. Aluminum is a major proportion of the earth's crust (75% aluminosilicates) and thus exceedances of the CCME guideline are expected and not of any significance at the site since healthy aquatic ecosystems are present.

Parameters	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MOE Guideline			CCME	
		95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	30-day	Maximum	Long Term	Short Term
Tin-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04				
Titanium-T	mg/L	0.0105	0.0068	0.0226	0.0069	0.0062	0.0249	0.0043	0.0064	0.0066	0.0108	0.0064	0.0061	0.0048	0.0019	0.0079	0.0012	0.0621	<2e-04	0.0057					
Uranium-T	mg/L	0.0002	0.00026	0.00014	0.00012	0.00027	0.00029	0.0001	0.00014	0.0003	0.00031	0.00024	0.00014	0.00028	0.00019	0.00094	0.00015	0.0002	0.00318	0.00028			0.3	0.015	0.033
Vanadium-T	mg/L	0.00052	0.002	0.00063	0.00051	0.0004	0.00187	0.00041	0.0007	0.0004	0.00078	0.00036	0.0006	0.00035	<1e-04	0.00026	0.0002	0.00582	0.0008	<1e-04			0.0075-0.0236 ^c	0.033-0.0491 ^c	0.03
Zinc-T	mg/L	0.0094	0.0095	0.0701	0.0046	0.0072	0.0245	0.0061	0.0039	0.0063	0.0056	0.0042	0.0219	0.0138	0.0041	0.0072	0.0033	0.118	0.0024	0.0034					
Dissolved Metals																									
Aluminum-D	mg/L	0.345	0.173	0.235	0.251	0.202	0.197	0.012	0.056	0.256	0.492	0.168	0.05	0.053	0.088	0.063	0.128	0.034	0.006	0.227		0.05 ^b	0.1 ^b		
Antimony-D	mg/L	0.00009	0.00008	0.00024	0.00005	0.00006	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00005	0.00005	0.00008	0.00005	0.00007	0.00005	0.00005					
Arsenic-D	mg/L	0.0008	0.0012	0.0019	0.0004	0.0007	0.0005	0.0005	0.0006	0.0005	0.0001	0.0002	0.0006	0.0004	0.0007	0.0007	0.0006	0.0005	0.0005	0.0021					
Barium-D	mg/L	0.00506	0.00535	0.00361	0.00562	0.00685	0.00916	0.00736	0.00814	0.00772	0.01254	0.00828	0.00895	0.01455	0.01099	0.00816	0.00747	0.00703	0.00948	0.01514					
Beryllium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Boron-D	mg/L	0.004	0.003	0.002	0.002	0.001	0.002	0.003	0.002	0.001	0.002	0.001	0.002	0.003	0.002	0.001	0.001	0.002	0.001	0.013					
Cadmium-D	mg/L	0.000032	0.000015	0.000214	0.000025	0.000021	0.000022	0.000015	0.000024	0.000015	0.000019	0.000015	0.000026	0.000028	0.000015	0.000037	0.000015	0.000388	0.000015	0.000015					
Calcium-D	mg/L	3	14.2	10.6	8.6	7.8	19.7	24.2	23	16	22	7.9	22.2	32.4	11.4	7.4	10.6	14.8	35	19.2					
Chromium-D	mg/L	0.0004	0.0009	0.0003	0.0005	0.0003	0.0004	0.0003	0.0003	0.0004	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0003	0.0003					
Cobalt-D	mg/L	0.00005	0.00006	0.00003	0.00005	0.00004	0.00008	0.00003	0.00004	0.00004	0.00006	0.00004	0.00004	0.00004	0.00002	0.00003	0.00004	0.00006	0.00002	0.00003					
Copper-D	mg/L	0.0007	0.0008	0.001	0.0007	0.0006	0.0009	0.0006	0.0007	0.0007	0.0025	0.0006	0.0006	0.0008	0.0008	0.0004	0.0006	0.0029	0.0001	0.0008					
Iron-D	mg/L	0.2148	0.1687	0.1499	0.1769	0.1147	0.1511	0.0568	0.1697	0.1287	0.2112	0.2736	0.1825	0.3115	0.1366	0.143	0.0766	0.1564	0.0158	0.116		0.35			
Lead-D	mg/L	0.00015	0.00005	0.00019	0.00006	0.00006	0.00009	0.00005	0.00005	0.00006	0.00005	0.00005	0.00005	0.00026	0.00005	0.00017	0.00005	0.00005	0.00005	0.00005					
Lithium-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001					
Magnesium-D	mg/L	0.71	3.35	1.93	2.53	1.36	4.25	5.54	5.15	3.12	4.39	1.36	4.84	7.49	2.04	1.38	3.04	9.12	4.83	4.06					
Manganese-D	mg/L	0.01478	0.00763	0.02849	0.00817	0.00766	0.02454	0.02298	0.03642	0.00346	0.00336	0.01492	0.04627	0.06685	0.02009	0.0553	0.01284	0.00719	0.00155	0.00392					
Mercury-D	mg/L	0.000011	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.000008	0.00001	0.000013	0.000008	0.000008	0.000008	0.000005	0.000005	0.000008	0.000008	0.000005	0.000005					
Molybdenum-D	mg/L	0.0003	0.00083	0.00018	0.00027	0.00055	0.00077	0.00059	0.00062	0.00084	0.00035	0.0006	0.00063	0.00068	0.00068	0.00084	0.00213	0.00076	0.00074	0.00089					
Nickel-D	mg/L	0.00042	0.00075	0.0004	0.00028	0.00038	0.0005	0.00028	0.00033	0.00031	0.00029	0.00014	0.00033	0.00036	0.00015	0.00008	0.00024	0.00107	0.00005	0.00027					
Phosphorous-D	mg/L	0.02	0.05	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.01	0.05	0.01	0.01					
Potassium-D	mg/L	0.5	0.6	0.9	0.5	0.5	0.8	1	0.9	0.5	0.6	0.5	1	1.4	0.6	0.5	0.5	3.5	0.7	0.7					
Selenium-D	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006					
Silicon-D	mg/L	6.62	9.52	5.95	6.34	6.16	6.67	5.27	5.43	6.74	6.83	4	5.62	8.63	2.99	1.96	6.65	13.18	6.84	6.83					
Silver-D	mg/L	0.00005	0.00005	0.00012	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Sodium-D	mg/L	2.5	4.1	4.5	3.1	2.8	4.2	4.1	3.9	3.7	3.9	2.3	3.7	5.4	2.4	2.3	3.7	7.4	3	4.1					
Strontium-D	mg/L	0.026704	0.0873	0.055005	0.054925	0.053309	0.106855	0.10955	0.11	0.098147	0.12348	0.064415	0.110505	0.14995	0.082408	0.05103	0.061948	0.063676	0.12344	0.107					
Thallium-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Tin-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Titanium-D	mg/L	0.0049	0.0037	0.0035	0.0027	0.0026	0.0025	0.0004	0.0012	0.0033	0.006	0.0027	0.001	0.0012	0.0012	0.001	0.0009	0.0019	0.0002	0.0029					
Uranium-D	mg/L	0.00018	0.0002	0.00005	0.00008	0.00022	0.00028	0.0001	0.00013	0.00029	0.0003	0.00022	0.00012	0.00025	0.00017	0.00028	0.0001	0.00013	0.00034	0.00027					
Vanadium-D	mg/L	0.00031	0.00159	0.00014	0.00034	0.00017	0.00051	0.00025	0.00037	0.00031	0.00056	0.00024	0.00035	0.00024	0.00005	0.00005	0.0002	0.00141	0.00083	0.00005					
Zinc-D	mg/L	0.009	0.0089	0.0534	0.0041	0.0045	0.0153	0.0049	0.0039	0.005	0.0056	0.0054	0.0044	0.0123	0.0037	0.0059	0.0033	0.0958	0.0024	0.0029					
D-Hardness as CaCO ₃	mg/L	10	46.9	35.8	31.8	23	61.8	80	74.6	46.1	69	25.9	76.2	102.8	27.4	21.9	38.8	73.3	109.5	62					
Cyanide																									
Cyanide (Total)	mg/L	0.014	0.01	0.0097	0.0115	0.009	0.0104	0.0052	0.0083	0.0106	0.0164	0.0098	0.0083	0.0079	0.005	0.005	0.005	0.005	0.005	0.005					
Cyanide (WAD)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005		0.005	0.01	0.005	
Cyanate	mg/L	0.35	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				0.2					
Thiocyanate (SCN)	mg/L	0.6	0.5	0.54	0.64	0.5	0.7	0.5	0.59	0.5	1.08	0.69	0.58	0.64	0.5	0.5				0.5					
Blackwater – Field Parameters																									

4.3.3 Minimum and Maximum Water Quality

Minimum water quality data for most parameters in water bodies unaffected by development generally provide little characterization information beyond laboratory detection limits. Where minimums are outside (above) water quality guidelines (or below where there are both minimum and maximum guidelines), they do provide valuable water quality characterization. For the Project area streams, only the minimum pH recorded at WQ1 was below the BC FWG.

Maximum water quality data are less useful for characterizing water quality than 95th percentiles because maximum data include extreme outliers whereas the 95th percentiles eliminate these extreme data. Extremes usually record unusual circumstances or possibly contamination and do not reflect the long-term baseline characteristics of a water body.

Summaries of minimum and maximum data are provided in **Annex 3**.

4.3.4 Stream Water Quality—Selected Parameters

A number of parameters are discussed in more detail in this section. These include most of the parameters included in the BC MOE guidelines and working guidelines, as well as general parameters such as pH and hardness that affect toxicity of some parameters. Where CCME guidelines exist, these are discussed as well. In general, parameters likely to be affected by mining were selected.

Statistical distributions for box plots used all data for each parameter for each stream. For datasets where there were at least three values above detection, the most probable minimum value was estimated using Regression on Ordered Statistics (ROS). For datasets with less than three values above detection, the most probable minimums were calculated and the minimum set at the detection limit.

ROS calculates summary statistics with a regression equation on a probability plot. Censored data (less than the detection limit) values are estimated from a regression equation obtained by using observed data. The regression equation is obtained by fitting observed values to the probability plot, and the explanatory variable in the regression is the normal scores of observed values. Hence, the ROS uses exponentiated (if y is in log units) predicted values of unobserved data as well as observed data to compute summary statistics (Helsel, 2012).

Other than WQ1, pH levels for all sites were within the BC FWG. Variation (spatial) between sites was quite large, but variation within sites (temporal) was relatively moderate with WQ10 and WQ11 showing the greatest temporal variation; these two sites also had the largest outliers (as shown by the whiskers on the boxes).

4.3.4.1 pH

Figure 4.3-1 is a box and whisker plot of pH in monitored streams. Box and whisker plots show non-parametric (not dependent on the distribution of the population) measures of central tendency. The boxes enclose the first quartile to third quartile. The line between the boxes is the median, the diamond is the mean, and the whiskers represent minimum and maximum values.

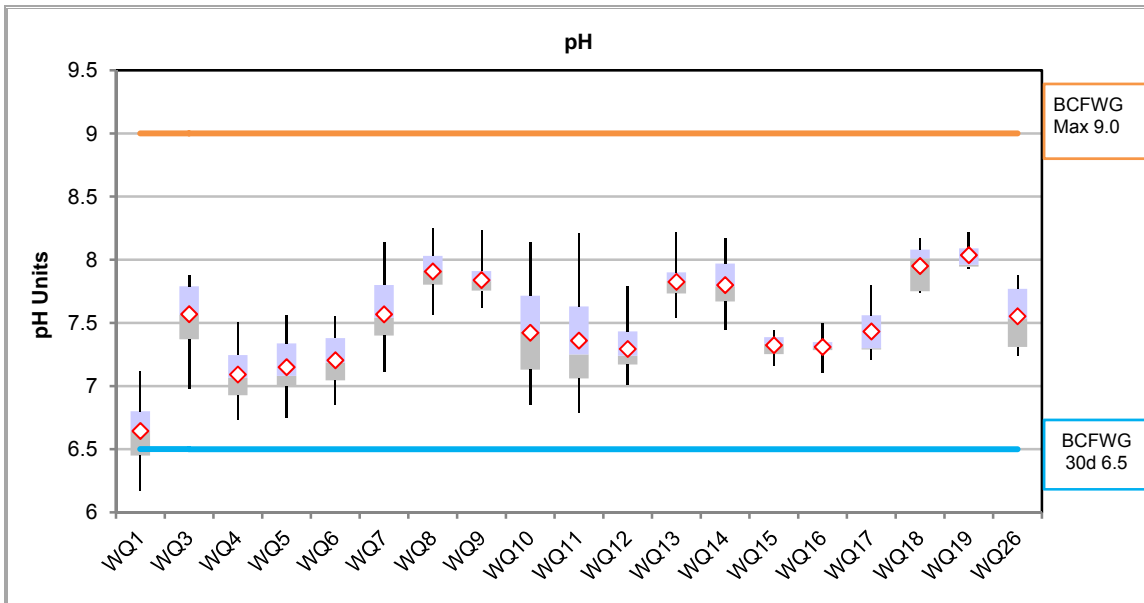
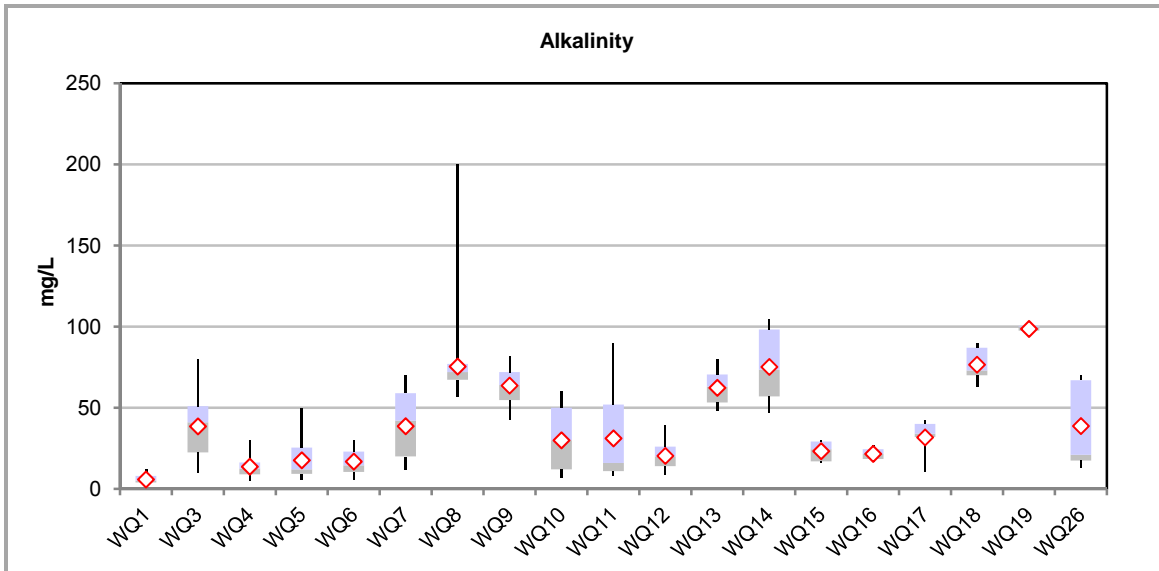


Figure 4.3-1: Box and Whisker Plot of pH

4.3.4.2 Alkalinity

Figure 4.3-2 is a box and whisker plot of total alkalinity for the streams within the Project mine site, LSA, and RSA.

Temporal variability was quite high with WQ11 showing the greatest variation, followed by WQ3 and WQ7, WQ10, WQ11, WQ14, and WQ26. WQ8 had high temporal variability caused by one outlier, but was not temporally very variable. While the graphical presentation suggests considerable spatial variation, the between-site differences were less than an order of magnitude (discounting the WQ8 outlier) and thus considered moderate. Alkalinity was low to moderate with WQ1 (with the most acidic pH also having the lowest alkalinity). This low alkalinity indicates little buffering capacity at WQ1 consistent with the low pH.

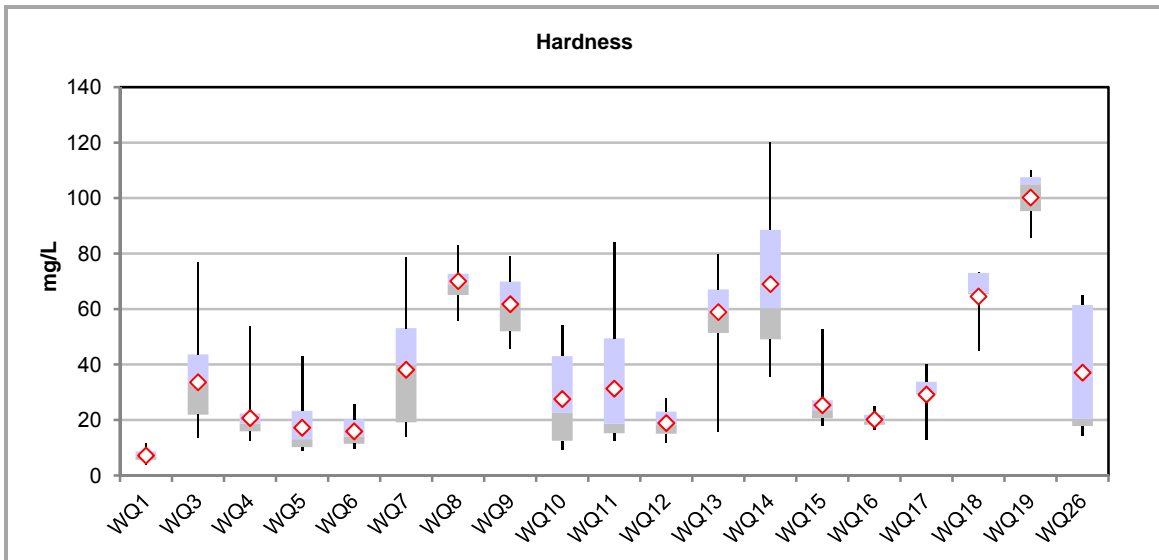


Note: mg/L = milligrams per litre

Figure 4.3-2: Box and Whisker Plot of Total Alkalinity

4.3.4.3 Hardness

Figure 4.3-3 is a box and whisker plot of total hardness (as calcium carbonate (CaCO₃)) for the streams within the Project mine site, LSA, and RSA.



Note: mg/L = milligrams per litre

Figure 4.3-3: Box and Whisker Plot of Total Hardness

Both temporal and spatial variability were quite high, but all streams can be categorized as relatively soft for interior BC streams. High whiskers on most box plots indicate higher hardness at certain times of the year. Examination of data indicates higher hardness was coincident with summer low flows. This trend would be expected due to the greater influence of groundwater during low flows, particularly in winter.

Table 4.3-5 lists median hardness at monitored stream sites.

Table 4.3-5: Median Hardness at Stream Monitoring Sites¹

WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11
7.1	34.0	18.6	13.5	14.6	39.9	70.1	61.8	27.6	22.9
WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	
36.8	18.6	15.3	15.4	41.6	69.7	61.9	27.7	27.1	

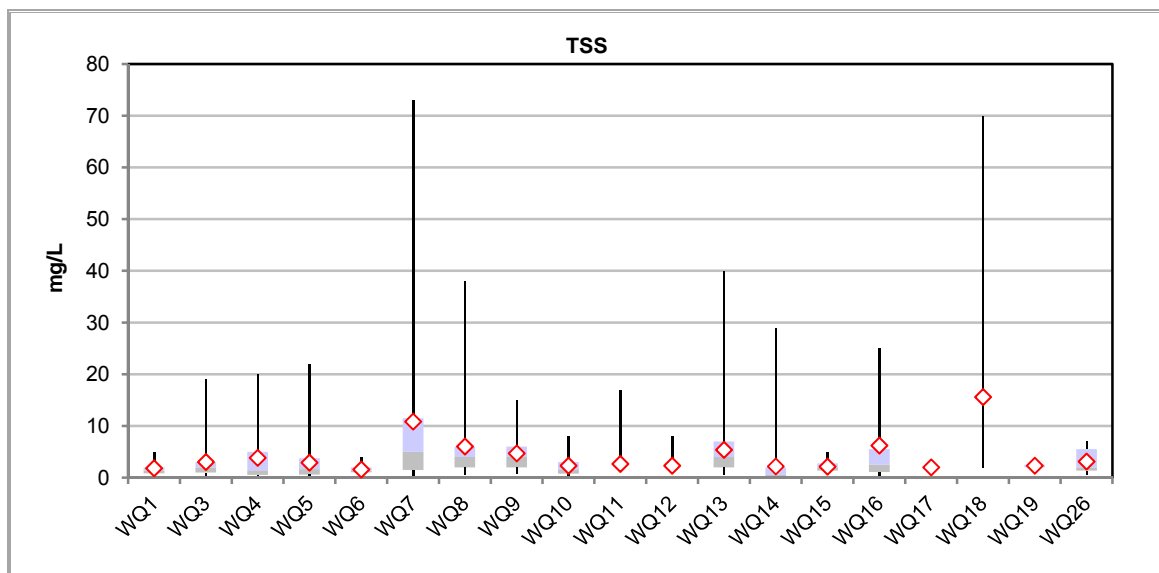
Note: ¹mg CaCO₃/L

4.3.4.4 Total Suspended Solids

Figure 4.3-4 is a box and whisker plot of total suspended solids (TSS).

Sixty-three percent of samples were below the detection limit of 2 mg/L and ROS was used to calculate a probable minimum. Moderately low spatial variation is exhibited, based on mean values.

BC WQGs are based on increases above background. For clear water, the guideline is 5 mg/L. The guideline for other situations is dependent on background. Where background is <25 mg/L, 5 mg/L above background is the guideline.



Note: mg/L = milligrams per litre

Figure 4.3-4: Box and Whisker Plot of Total Suspended Solids

Temporal variability was high with significantly high outliers for a number of sites. WQ7 and WQ18 had the highest outliers, followed closely by WQ8, WQ13, WQ14, and WQ16. The high variability and low to moderate mean concentration of background TSS will be important to consider when setting site-specific water quality objectives for the mine.

Mean TSS is listed in **Table 4.3-6**.

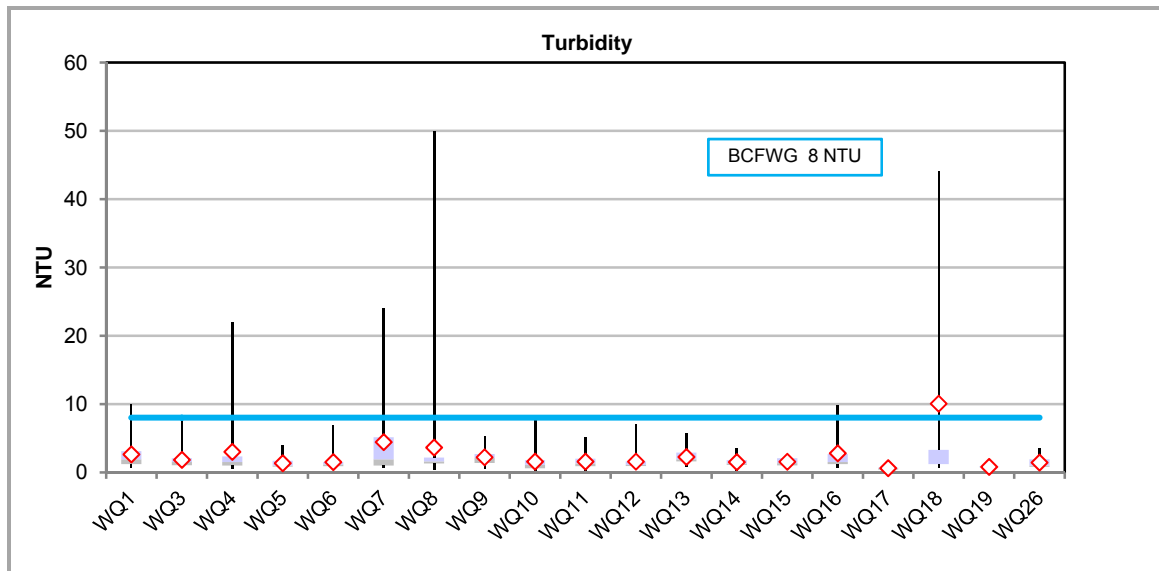
Table 4.3-6: Blackwater Area Stream Median Total Suspended Solids¹

WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11
1.8	3.0	3.8	2.9	1.6	10.8	6.0	4.7	2.3	2.7
WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	
2.3	5.4	2.2	2.1	6.2	2.0	15.6	2.3	3.1	

Note: ¹mg/L

4.3.4.5 Turbidity

Figure 4.3-5 is a box and whisker plot of turbidity for the streams within the Project mine site, LSA, and RSA.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; NTU = Nephelometric Turbidity Unit

Figure 4.3-5: Box and Whisker Plot of Turbidity

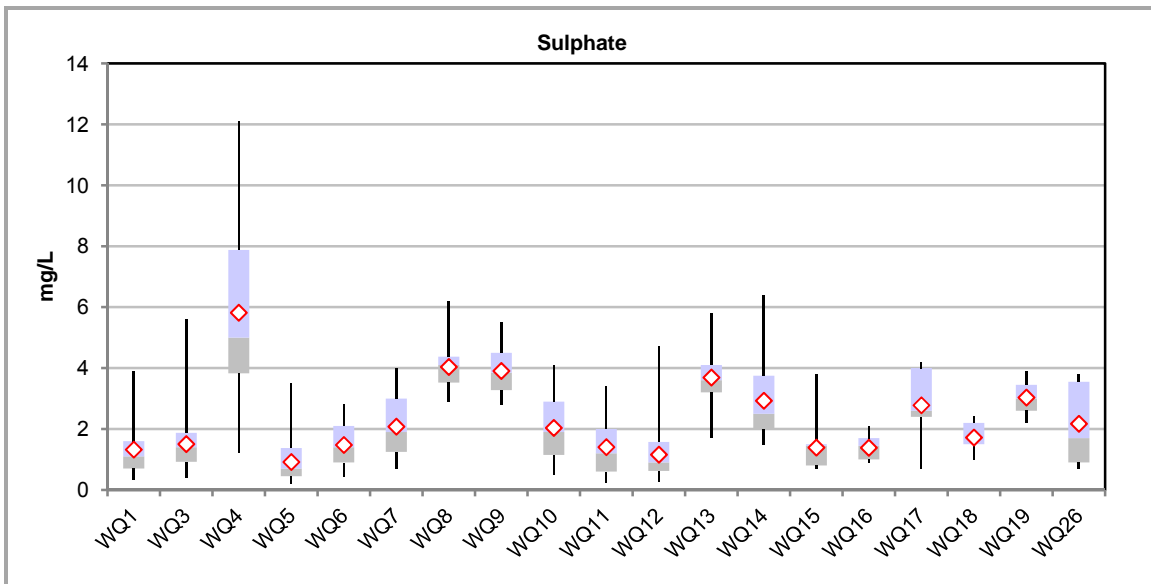
Turbidity is a measure of water clarity. Turbidity is caused by particulate matter in the water. Particulate matter may be organic (e.g., plankton) or inorganic (e.g., sediment from erosion).

TSS and turbidity typically increase together, but the relationship is rarely linear. Disturbance of soil cover coupled with wind or water erosion can lead to increased suspended particulates in water and increased turbidity.

Only 0.14% of samples were below the detection limit of 0.1 Nephelometric Turbidity Units (NTU). WQ1, WQ4, WQ7, WQ8, WQ16, and WQ18 exhibited turbidity above the BC FWG, which correlate with the elevated TSS found at these sites. The streams within the Project mine site, LSA, and RSA did not exceed BC MOE guidelines, other than the aforementioned sites.

4.3.4.6 Sulphate

Figure 4.3-6 is a box and whisker plot of sulphate for the streams within the Project mine site, LSA, and RSA.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
avg. = average; BC MOE = British Columbia Ministry of Environment; max = maximum;
mg/L = milligrams per litre

Figure 4.3-6: Box and Whisker Plot of Sulphate

Sulphur combines with oxygen to produce sulphate ions. Natural sulphate sources in surface water include leaching from sedimentary rocks such as shales and the oxidation of organic matter. Surface water in industrial areas typically acquires sulphate from industrial effluents and runoff entering lakes or streams. Oxidation of sulphide minerals in mining wastes is a significant potential source of sulphates at mines.

Sulphate background concentrations in the streams within the Project mine site, LSA, and RSA were low except two moderate outliers at WQ4 of 20 mg/L and 39 mg/L coincident with freshet; these outliers were removed to improve the display. Five percent of the data were

below the detection limit of 0.5 mg/L. All concentrations were below the draft BC FWG 30-day hardness-dependent guideline of 115 mg/L to 195 mg/L for soft (0 mg/L to 60 mg/L). Temporal variability was quite high (particularly for WQ4), showing the influence of proximity to the deposit for several parameters, with several high outliers for eight sites. Spatial variability was low except for WQ4 and outliers.

4.3.4.7 Ammonia

Ammonia-nitrogen ($\text{NH}_3\text{-N}$) is a nutrient necessary for the growth of aquatic vegetation in surface water. Ammonia-nitrogen in surface water typically comes from the decomposition of organic matter and industrial activities. Ammonia-nitrogen may also be found in anaerobic groundwater sources where it typically has concentrations an order of magnitude higher than most surface water concentrations. Ammonia-nitrogen concentration may increase in an area through airborne deposition from emissions, from mine water contact, and possibly during mine blasting residuals. Ammonium-nitrate-based explosives and decomposition of cyanate are important potential source of ammonia from gold mines.

Ninety percent of ammonia samples taken within the Project mine site, LSA, and RSA were below the detection limit of 0.01 or 0.02 milligrams of nitrogen per litre (mg N/L) for total ammonia; thus, no box and whisker plots were made. **Table 4.3-7** lists the temporal and spatial distribution of ammonia in the monitored streams within the Project mine site, LSA, and RSA for 2011, 2012, and 2013.

Detectable ammonia data were scattered, but occurred more at the end of freshet than at other times, which likely reflects runoff from the land undiluted by snow. Aside from one outlier, detectable ammonia varied between 0.02 mg N/L and 0.04 mg N/L.

Table 4.3-7: Spatial and Temporal Variation of Total Ammonia (mg N/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul 11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.01	-
WQ3	-	-	<0.02	<0.02	<0.02	<0.02	0.67	0.02	0.02	<0.02	<0.02	<0.01	<0.02
WQ4	-	-	0.04	<0.02	0.02	0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.01	-
WQ5	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.01	<0.02
WQ6	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	0.05	<0.02	<0.01	-
WQ7	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	0.03	0.04	<0.02	<0.01	<0.02
WQ8	-	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	0.02	<0.02	<0.02	<0.01	<0.02
WQ9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.01	<0.02
WQ10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02
WQ11	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	0.04	<0.02	<0.01	0.04
WQ12	-	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	0.02	<0.02	0.02	0.03	<0.01	0.03
WQ13	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	0.02	<0.02	<0.02	<0.01	<0.02
WQ14	-	-	-	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.01	<0.02
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	0.03
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	0.04

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ3	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02
WQ4	-	-	-	-	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.06	<0.02
WQ5	-	-	-	-	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
WQ6	-	-	-	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02
WQ7	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ8	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
WQ9	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ10	<0.02	-	-	-	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ11	-	-	-	-	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
WQ12	<0.02	<0.01	<0.02	<0.02	<0.02	0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ13	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-
WQ14	<0.02	-	<0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	<0.02	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.02	<0.02	<0.02	-
WQ17	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	<0.02	-	-	-
WQ18	-	-	<0.02	-	-	-	-	-	-	<0.02	-	-	<0.02	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.02	-	-	<0.02	-	-	<0.02

2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	27-May-13	06-Jun-13	10-Jun-13	17-Jun-13
WQ1	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ4	-	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ5	<0.02	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ7	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02
WQ8	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02
WQ9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ11	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ13	<0.02	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ14	-	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
WQ16	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02
WQ17	<0.02	-	-	-	-	-	-	-	-	-
WQ18	0.1	-	-	-	-	-	-	-	-	-
WQ26	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

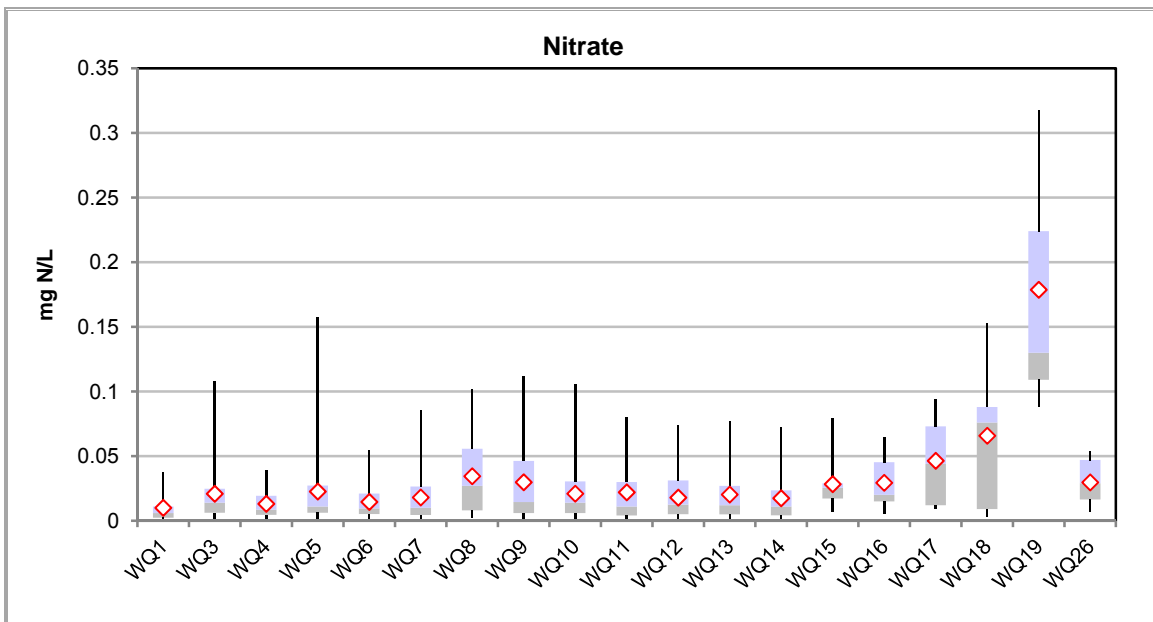
Notes: Ammonia guidelines are pH and temperature dependent. For Project area streams with pH ranging from 7 to 8.2 and temperature mean about 5°C, ammonia ranges from 1.94 mg N/L at pH 7 to 3.9 mg N/L at pH 8.2

4.3.4.8 Nitrate

Figure 4.3-7 is a box and whisker plot of nitrate concentrations for the streams within the Project mine site, LSA, and RSA. Thirty-five percent of samples were below the detection limit of 0.005 mg N/L.

Nitrate concentrations in natural surface waters are typically very low, though some natural sources include rainwater, lightning, the oxidation of plant and animal matter, and nitrogen fixation from the atmosphere by bacteria. Anthropogenic sources include wastewater and septic systems, blasting explosives (ammonium-nitrate-based) residuals and decomposition of ammonium.

Spatial variability was moderately low, except for WQ19, which is at the headwaters of Turtle Creek and highly organic. Temporal variability was moderate except WQ19, which was high. All nitrate concentrations were over an order of magnitude below the BC FWG 30-day average of 3 mg N/L. Twenty-four per cent of results were below the detection limit of 0.005 mg/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; mg/L = milligrams per litre

Figure 4.3-7: Box and Whisker Plot of Nitrate

4.3.4.9 Nitrite

Eighty-three percent of nitrite concentrations were below the detection limit of 0.003 mg N/L; no box and whisker plots were made. **Table 4.3-8** lists the spatial and temporal variation found during monitoring in 2011, 2012, and 2013. The BC FWG for nitrite are 0.02 mg N/L

30-day average and 0.06 mg N/L maximum grab. All of the samples were below the maximum guideline, and all but one (WQ3, December 2012 at 0.022 mg/L) were below the 30-day BC FWG.

Nitrite is an intermediate product between ammonia and nitrates in the nitrification process. Similar to nitrate, nitrite in surface water may be caused by the oxidation of ammonia by micro-organisms and electrical discharges such as lightning. Nitrite in surface waters may also be affected by anthropogenic activities that generate sewage and wastewater.

All detectable nitrite concentrations, except samples collected in December 2012, occurred at freshet in both 2011 and 2012, and ranged from 0.003 mg N/L to 0.022 mg N/L, or one to six times the detection limit concentration. The most probable cause was runoff that leached organics from the land. There is no apparent reason for detectable nitrite in water samples collected in December 2012.

Table 4.3-8: Spatial and Temporal Variation of Nitrite (mg N/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	<0.003	<0.003	0.011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ3	-	-	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ4	-	-	<0.003	<0.003	0.011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ5	-	-	<0.003	<0.003	0.012	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ6	-	-	<0.003	<0.003	0.012	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ7	-	<0.003	<0.003	<0.003	0.011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ8	-	<0.003	<0.003	<0.003	0.012	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ9	<0.003	<0.003	<0.003	<0.003	0.019	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ10	<0.003	<0.003	<0.003	<0.003	0.011	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ11	<0.003	<0.003	<0.003	<0.003	0.013	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ12	-	<0.003	<0.003	<0.003	0.012	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ13	-	<0.003	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ14	-	-	-	<0.003	0.012	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.003
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.003

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	0.003	0.003	0.004	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.015
WQ3	0.005	0.007	<0.003	0.003	<0.003	0.004	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.022
WQ4	-	-	-	-	<0.003	0.007	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.016
WQ5	-	-	-	-	<0.003	0.005	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ6	-	-	-	0.005	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.014
WQ7	0.006	0.005	<0.003	0.011	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	0.011
WQ8	0.005	0.01	<0.003	0.009	0.008	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ9	0.009	0.009	<0.003	0.01	0.003	0.005	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004	<0.003	0.014
WQ10	-	-	-	-	0.003	0.003	0.004	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.015
WQ11	-	-	-	-	<0.003	0.005	0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	-
WQ12	0.009	0.009	<0.003	<0.003	0.009	0.005	0.004	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003
WQ13	0.006	0.009	<0.003	0.011	<0.003	0.003	0.005	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	0.005	<0.003	-
WQ14	0.007	-	0.01	0.01	<0.003	0.005	-	<0.003	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	0.013
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.003	0.003	<0.003	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.003	<0.003	<0.003	-
WQ17	-	-	<0.003	-	-	-	-	-	-	<0.003	-	-	<0.003	-	-	-
WQ18	-	-	<0.003	-	-	-	-	-	-	<0.003	-	-	<0.003	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.003	-	-	<0.003	-	-	0.008

2013

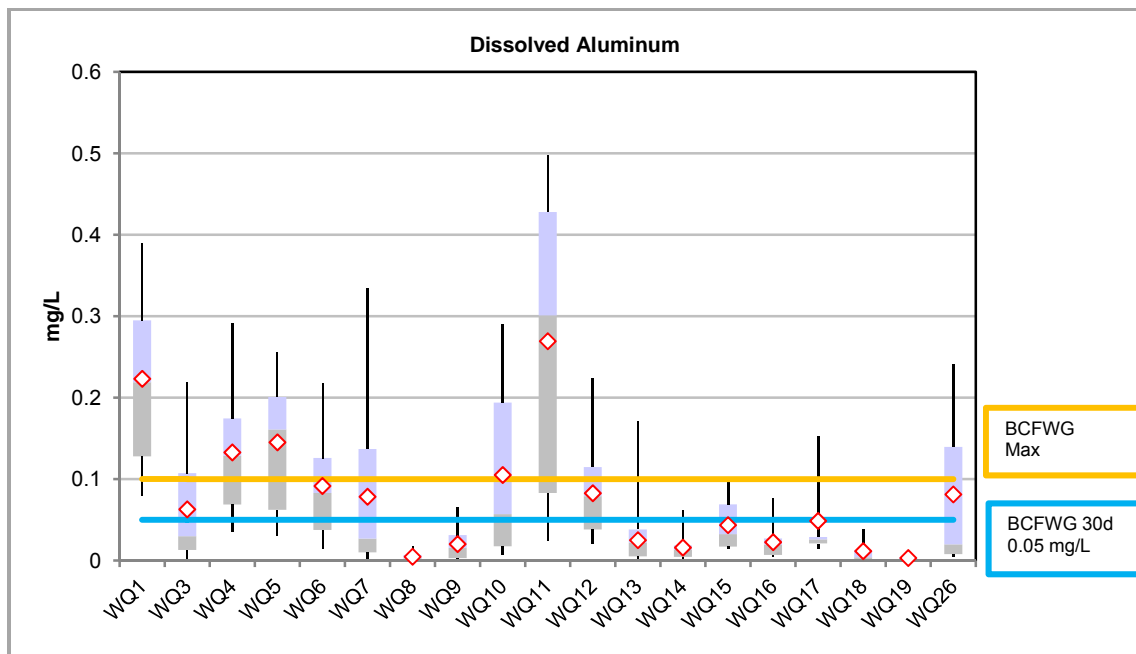
	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	14-May-13	21-May-13	28-May-13	06-Jun-13	10-Jun-13	18-Jun-13
WQ1	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ3	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ4	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ5	<0.003	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ6	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ7	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ8	<0.003	0.006	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ9	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ10	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ11	<0.003	<0.003	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ12	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ13	<0.003	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ14	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ15	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ16	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
WQ17	<0.003	-	-	-	-	-	-	-	-	-
WQ18	<0.003	-	-	-	-	-	-	-	-	-
WQ26	<0.003	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003

4.3.4.10 Dissolved Aluminum

Aluminum found in surface waters is typically from the release by weathering of aluminum from rocks and clays, as about 75% of the earth’s crust is composed of aluminosilicates. Aluminum in surface water may also result from industrial effluents and mine drainage.

The BC FWG for dissolved aluminum are 0.1 mg/L maximum and 0.05 mg/L 30-day average at pH >6.5. In many waterbodies, naturally occurring aluminum levels are much higher than guideline concentrations often because aluminum is in colloidal form; over time, aquatic organisms adjust to these higher concentrations. BC dissolved aluminum guidelines are based largely on laboratory-scale toxicity tests using aluminum hydroxide. Aluminum hydroxide is not a common form of aluminum in natural water bodies where oxyhydroxide colloids are more common (and less biologically available). Thus, guidelines may overestimate aluminum toxicity in non-acidic natural waterbodies.

Figure 4.3-8 is a box and whisker plot of dissolved aluminum concentrations for the streams within the Project mine site, LSA, and RSA. Six percent of samples were below the detection limit of 0.002 mg/L. Exceedances of means and 95th percentiles have already been discussed. Stations WQ8, WQ9, WQ13, WQ14, WQ18, and WQ19 (one winter sample) were below the 30-day average guideline. The distribution of sample concentrations at WQ11 was almost entirely above the maximum grab guideline. Both spatial and temporal variations were moderately high; temporal variation at WQ11 was high.

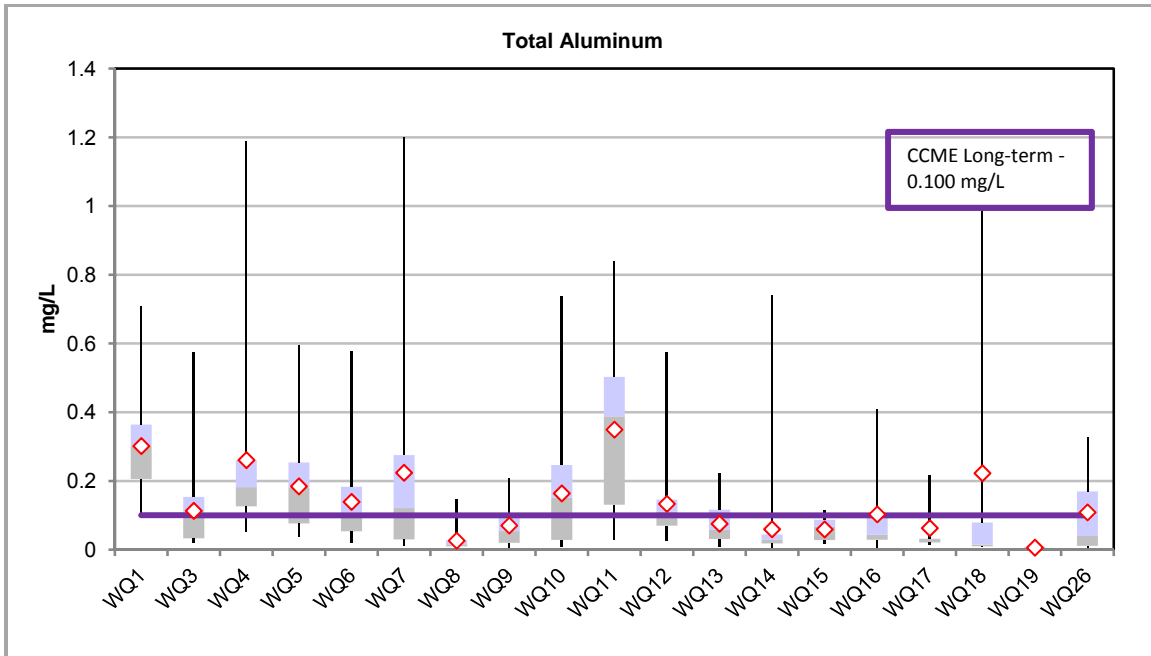


Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
avg. = average; BC MOE = British Columbia Ministry of Environment; max = maximum;
mg/L = milligrams per litre

Figure 4.3-8: Box and Whisker Plot of Dissolved Aluminum

4.3.4.11 Total Aluminum

The CCME aluminum guideline for waters with pH >6.5 is based on total aluminum. Figure 4.3-9 is a box plot of Project area total aluminum. The spatial and temporal patterns of concentrations are similar to dissolved as are the exceedances, except that fewer station concentrations were below the guideline.



Notes: CCME Environmental Quality Guidelines (2007)
CCME: = Canadian Council of Ministers of the Environment; max = maximum;
mg/L = milligrams per litre

Figure 4.3-9: Box and Whisker Plot of Total Aluminum

4.3.4.12 Total Antimony

Antimony in surface water may occur from bedrock through weathering and erosion. Seventy-three percent of samples were below the detection limit of 0.00005 mg/L. Table 4.3-9 lists the temporal and spatial distribution for 2011, 2012, and 2013.

The working guideline for total antimony to protect freshwater aquatic life is 0.020 mg/L, which was adopted from the Ontario guideline. Table 4.3-9 shows that there is little antimony leaching into the streams within the Project mine site, LSA, and RSA.

Table 4.3-9: Spatial and Temporal Variation of Total Antimony (mg/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	-
WQ3	-	-	0.00007	0.00006	0.00007	0.00007	0.00007	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.00007
WQ4	-	-	0.00009	0.00011	0.00012	0.00011	0.00014	0.00014	0.0001	0.00009	0.00008	0.00008	-
WQ5	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ6	-	-	0.00006	<0.00005	0.00005	0.00008	0.00006	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ7	-	<0.00005	0.00006	0.00005	0.00006	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ8	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ9	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ10	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ11	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ12	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ13	-	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ14	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	0.00009	0.00008	<0.00005	0.00006	<0.00005	<0.00005	0.00005	0.00013	0.00009	<0.00005	0.00013	<0.00005
WQ3	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	0.00005	0.00005	0.00006	0.00006	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ4	-	-	-	-	0.0002	0.00017	0.00014	0.00015	0.00015	0.0001	0.00015	0.00014	0.00014	0.00041	0.00025	0.00027
WQ5	-	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ6	-	-	-	0.00005	<0.00005	<0.00005	0.00006	0.00007	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ7	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	0.00005	<0.00005	0.00005	<0.00005	0.00089	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ8	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ9	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ10	-	-	-	-	0.00009	0.00008	<0.00005	0.00006	<0.00005	<0.00005	0.00005	0.00013	0.00009	<0.00005	0.00013	<0.00005
WQ11	-	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ12	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ13	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ14	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	<0.00005	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	0.00005	-
WQ17	-	-	<0.00005	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	-
WQ18	-	-	<0.00005	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	0.00005

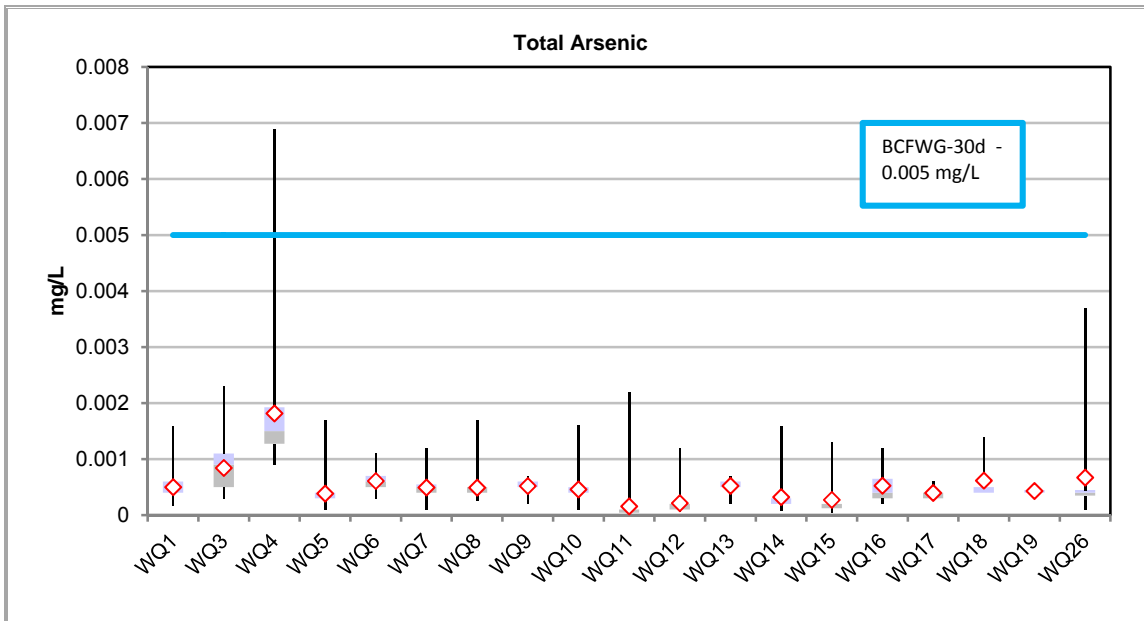
2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	28-May-13	06-Jun-13	11-Jun-13	18-Jun-13
WQ1	-	-	-	-	<0.00005	<0.00005	<0.00005	0.00038	0.00005	0.00005
WQ3	<0.00005	<0.00005	0.00006	0.00008	0.00007	0.00006	0.00007	0.00007	0.00009	0.00008
WQ4	-	-	-	-	0.00021	0.00021	0.00019	0.0002	0.0002	0.00021
WQ5	0.00005	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005
WQ6	0.00006	<0.00005	0.00005	<0.00005	0.00005	0.00006	0.00006	0.00006	0.00007	0.00007
WQ7	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	0.00005
WQ8	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	0.00005
WQ9	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00005	<0.00005	0.00005	0.00005
WQ10	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00007
WQ11	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ12	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ13	0.00006			-	<0.00005	<0.00005	0.00005	<0.00005	0.00005	0.00006
WQ14	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00737
WQ15	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	0.00006	<0.00005
WQ16	0.00005	<0.00005	0.00009	0.00005	<0.00005	<0.00005	0.00006	0.00005	0.00007	0.00006
WQ17	<0.00005	-	-	-	-	-	-	-	-	-
WQ18	0.00015	-	-	-	-	-	-	-	-	-
WQ26	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.00006	0.00005	0.00005

4.3.4.13 Total Arsenic

Arsenic in natural surface water typically comes from the weathering and erosion of rocks and soil. Groundwater may also contribute to arsenic content in streams. Anthropogenic sources of arsenic include industrial activities and aerosols from high-temperature processes such as coal, fossil fuel, and vegetation incineration, which settle out of the atmosphere over time or attach to rain.

Figure 4.3-10 is a box and whisker plot of total arsenic concentrations for the streams within the Project mine site, LSA, and RSA. Five percent of samples were below the detection limit of 0.0002 mg/L. The CCME guideline is the same as the BC FWG.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; mg/L = milligrams per litre

Figure 4.3-10: Box and Whisker Plot of Total Arsenic

Temporal variation (excluding outliers) was low except for WQ4 where temporal variation was high; spatial variation was moderately low. All samples excluding one, August 2012 outlier at WQ4, were well below the BC FWG of 0.005 mg/L. Arsenic had two outliers at WQ4 of 0.006 mg/L and 0.004 mg/L shown as the whisker in the box plots and also raised the mean arsenic concentration at that station above all others.

4.3.4.14 Total Cadmium

Cadmium naturally occurs in the earth’s crust and can enter surface water through weathering and erosion of rocks and soils, though concentrations in surface waters are

typically very low without anthropogenic sources. Cadmium can also enter surface water through effluent and emissions from mining and metal processing industries where ores are elevated in cadmium.

BC MOE only has approved guidelines for cadmium in drinking water and not for the protection of freshwater aquatic life or wildlife; the federal guideline for total cadmium (CCME 2012) is hardness dependent and is determined by the following equation:

$$\text{Total cadmium } (\mu\text{g/L}) = 10^{e^{(0.83[\log(\text{hardness})]-2.46)}}$$

Cadmium toxicity in surface water decreases with increasing water hardness. The working BC MOE guidelines for total cadmium are hardness dependent and expressed as:

$$\text{Total cadmium } (\mu\text{g/L}) = 10^{e^{(0.86[\log(\text{hardness})]-3.2)}}$$

The BC FWG cadmium guideline produces the following:

Hardness (mg CaCO₃/L)	Cadmium Guideline (µg/L)
10	0.005
20	0.008
40	0.015
60	0.021
80	0.027
100	0.033

The BC guideline is under review. CCME has produced a draft guideline for discussion which is hardness-based and higher than the 2007 guideline of 0.017 µg/L. No information was available at the time of writing when the guideline may be adopted.

Seventy-eight percent of samples were below the detection limit of 0.000015 mg/L. **Table 4.3-10** lists the spatial and temporal variation of total cadmium in 2011, 2012, and 2013 for the streams within the Project mine site, LSA, and RSA.

Most cadmium exceedances occurred at freshet with the highest concentrations recorded at the beginning of freshet. Elevated total cadmium concentrations correlate well with an increase in TSS in the water column, which may explain the relationship between freshet flows and elevated cadmium. Temporal variation and spatial variation are both high. A site-specific water quality objective will be required to account for background cadmium concentrations.

Table 4.3-10: Spatial and Temporal Variation of Total Cadmium (mg/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	0.00006	0.000047	0.000019	0.000027	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	-
WQ3	-	-	0.000026	0.000027	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000017	<0.000015	<0.000015	<0.000015
WQ4	-	-	0.000076	0.000064	0.000045	0.000048	<0.000015	0.00004	<0.000015	0.000042	0.000022	0.000098	-
WQ5	-	-	0.000029	0.000017	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000031
WQ6	-	-	0.000042	0.000034	<0.000015	0.00003	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	-
WQ7	-	<0.000015	0.000037	0.00004	0.000025	0.000022	<0.000015	<0.000015	<0.000015	0.00002	<0.000015	<0.000015	0.000029
WQ8	-	<0.000015	<0.000015	0.000024	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ9	<0.000015	<0.000015	0.000026	0.000016	<0.000015	0.000021	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ10	<0.000015	<0.000015	0.000038	0.000017	<0.000015	0.000019	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ11	<0.000015	<0.000015	0.000027	0.000025	<0.000015	0.000022	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ12	-	<0.000015	0.000021	0.000017	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ13	-	<0.000015	0.000019	0.000022	<0.000015	0.000027	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ14	-	-	-	<0.000015	<0.000015	0.000038	<0.000015	0.000018	<0.000015	<0.000015	<0.000015	<0.000015	0.000019
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.000015
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.000015

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	0.000035	<0.000015	0.00005	<0.000015	<0.000015	<0.000015	<0.000015	0.000062	0.000016	0.000023	<0.000015	<0.000015
WQ3	0.000032	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ4	-	-	-	-	0.00008	0.000087	0.000049	0.000044	0.000022	0.000034	0.000048	0.000045	0.000019	0.000247	0.000106	0.001284
WQ5	-	-	-	-	0.000019	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000025	-
WQ6	-	-	-	0.000027	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ7	<0.000015	0.000054	<0.000015	<0.000015	<0.000015	<0.000015	0.000025	<0.000015	<0.000015	0.000122	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ8	<0.000015	<0.000015	<0.000015	<0.000015	0.000017	<0.000015	0.000018	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	-
WQ9	<0.000015	<0.000015	<0.000015	<0.000015	0.00005	<0.000015	0.000058	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ10	-	-	-	-	0.000035	<0.000015	0.00005	<0.000015	<0.000015	<0.000015	<0.000015	0.000062	0.000016	0.000023	<0.000015	<0.000015
WQ11	-	-	-	-	<0.000015	<0.000015	0.000069	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	-
WQ12	<0.000015	<0.000015	<0.000015	0.000017	<0.000015	0.000027	<0.000015	0.000044	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ13	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000059	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	-
WQ14	<0.000015	-	<0.000015	<0.000015	<0.000015	<0.000015	-	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000082
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.000015	<0.000015	<0.000015	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.000015	<0.000015	<0.000015	-
WQ17	-	-	<0.000015	-	-	-	-	-	-	<0.000015	-	-	<0.000015	-	-	-
WQ18	-	-	<0.000015	-	-	-	-	-	-	<0.000015	-	-	<0.000015	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.000015	-	-	<0.000015	-	-	<0.000015

2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	28-May-13	06-Jun-13	11-Jun-13	18-Jun-13
WQ1	-	-	-	-	<0.000015	<0.000015	0.000017	<0.000015	0.000024	0.00002
WQ3	<0.000015	<0.000015	<0.000015	<0.000015	0.000045	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ4	-	-	-	-	0.000124	0.000153	0.000169	0.000078	0.000113	0.00009
WQ5	0.000105	-	-	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ6	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000018	<0.000015	0.000015	0.000017
WQ7	0.000017	0.000105	<0.000015	<0.000015	<0.000015	<0.000015	0.000016	<0.000015	<0.000015	<0.000015
WQ8	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ9	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ10	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000015
WQ11	<0.000015	<0.000015	-	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ12	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ13	0.000025	-	-	-	<0.000015	<0.000015	0.000028	<0.000015	0.000221	<0.000015
WQ14	-	-	-	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000057
WQ15	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
WQ16	<0.000015	<0.000015	0.000037	<0.000015	0.000063	<0.000015	<0.000015	<0.000015	0.000126	<0.000015
WQ17	<0.000015	-	-	-	-	-	-	-	-	-
WQ18	0.000655	-	-	-	-	-	-	-	-	-
WQ26	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	0.000016	<0.000015

4.3.4.15 Total Chromium

Chromium in natural waters occurs in trivalent form (chromium III) only when pH <5, after which it is present in hexavalent form (chromium VI). Natural chromium typically comes from erosion and weathering of soils and rocks by wind and water. Chromium in the atmosphere settles quickly and has an affinity for soil particles. Anthropogenic sources of chromium include the burning of fossil fuels and industrial emissions.

Working guidelines for chromium (III) and chromium (VI) concentrations in freshwater have been set at 0.0089 mg/L and 0.001 mg/L by the BC FWG. These guidelines are the same as CCME guidelines.

Seventy-seven percent of samples were below the detection limit of 0.0003 mg/L. **Table 4.3-11** lists the spatial and temporal variation of total chromium in 2011, 2012, and 2013 for the streams within the Project mine site, LSA, and RSA.

Occasional exceedances of the BC FWG for chromium (VI) of 0.001 mg/L occurred. In 2012 and 2013, unlike 2011, most exceedances occurred in winter and early spring at WQ3. Exceedances occurred at WQ3, WQ12, and WQ18, with the latter coincident with high background TSS. Spatial variation and temporal variation are difficult to determine with the large number of samples below detection; for the samples above detection, variation was moderately low.

Table 4.3-11: Spatial and Temporal Variation of Total Chromium (mg/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	0.0003	0.0003	0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	-
WQ3	-	-	0.0015	0.0008	0.0006	0.0006	0.0006	0.0007	0.0004	0.0019	0.0006	0.0008	0.0009
WQ4	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	-
WQ5	-	-	0.0006	0.0004	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003
WQ6	-	-	0.0005	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	-
WQ7	-	<0.0005	0.0016	0.0014	0.001	0.0009	0.0005	0.0005	<0.0003	<0.0003	<0.0003	<0.0003	0.0005
WQ8	-	<0.0005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ9	<0.0005	<0.0005	0.0003	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ10	<0.0005	<0.0005	0.0006	0.0004	0.0004	0.0003	<0.0003	0.0003	<0.0003	0.0004	<0.0003	<0.0003	<0.0003
WQ11	<0.0005	<0.0005	0.0006	0.0006	0.0004	0.0005	0.0004	0.0005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ12	-	<0.0005	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ13	-	<0.0005	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ14	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	0.0012	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0009	<0.0003	0.0003	0.0003	<0.0003
WQ3	0.0009	0.0012	0.0009	0.0008	0.0007	0.0006	0.0003	0.0004	0.0006	0.0009	0.0006	0.0006	0.0009	0.0009	0.001	<0.0003
WQ4	-	-	-	-	0.0007	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0008	0.0003	<0.0003
WQ5	-	-	-	-	<0.0003	<0.0003	<0.0003	0.0004	<0.0003	0.0005	0.0005	<0.0003	<0.0003	<0.0003	0.0003	-
WQ6	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	0.0005	0.0004	<0.0003
WQ7	<0.0003	0.0006	<0.0003	<0.0003	0.0005	0.0008	<0.0003	<0.0003	<0.0003	0.0007	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003
WQ8	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	-
WQ9	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ10	-	-	-	-	0.0004	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0009	<0.0003	0.0003	0.0003	<0.0003
WQ11	-	-	-	-	0.0003	0.0004	<0.0003	<0.0003	0.0004	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0004	-
WQ12	<0.0003	<0.0003	<0.0003	0.0005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0007	0.0004	0.0004	<0.0003	<0.0003	<0.0003	<0.0003
WQ13	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	-
WQ14	<0.0003	-	<0.0003	<0.0003	<0.0003	<0.0003	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0008
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	<0.0003	<0.0003	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	<0.0003	<0.0003	-
WQ17	-	-	<0.0003	-	-	-	-	-	-	<0.0003	-	-	<0.0003	-	-	-
WQ18	-	-	0.0004	-	-	-	-	-	-	<0.0003	-	-	<0.0003	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.0003	-	-	<0.0003	-	-	<0.0003

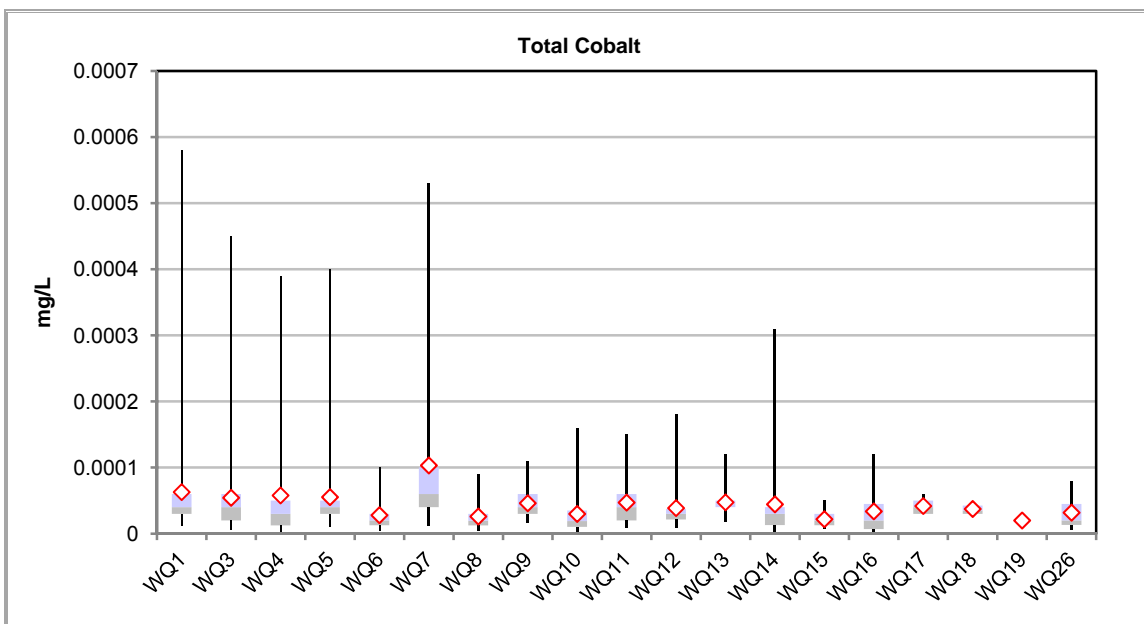
2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	28-May-13	06-Jun-13	11-Jun-13	18-Jun-13
WQ1	-	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ3	0.0008	0.0009	0.001	0.0012	0.0005	<0.0003	0.0006	0.0005	0.0005	0.0004
WQ4	-	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ5	<0.0003	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ6	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ7	<0.0003	0.0005	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003
WQ8	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ9	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0004	<0.0003
WQ10	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ11	<0.0003	<0.0003	-	0.0005	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ12	<0.0003	0.0247	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ13	<0.0003	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ14	-	-	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ15	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ16	<0.0003	<0.0003	0.0005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
WQ17	<0.0003	-	-	-	-	-	-	-	-	-
WQ18	0.0068	-	-	-	-	-	-	-	-	-
WQ26	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003

4.3.4.16 Total Cobalt

Cobalt is typically present in natural surface waters as a result of erosion and weathering of rocks and soil by wind and water. Vehicle exhaust and burning coal and oil are some of the most common anthropogenic sources of cobalt in surface waters as atmospheric particles either settle out or are deposited with rain.

Figure 4.3-11 is a box and whisker plot of cobalt concentrations for the streams within the proposed Project mine site, LSA, and RSA. Twenty-four percent of samples were below the detection limit of 0.00002 mg/L to 0.00005 mg/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; mg/L = milligrams per litre

Figure 4.3-11: Box and Whisker Plot of Total Cobalt

One outlier at WQ18 of 0.00171 mg/L was removed to improve the display. Other than outliers (shown by the whiskers on the box plots), all concentrations were more than an order of magnitude below the BC FWG 30-day average of 0.004 mg/L. There is little spatial variation and, aside from outliers, temporal variation is also relatively low. Cobalt outliers were coincident with freshets in all years sampled, suggesting a correlation with elevated TSS.

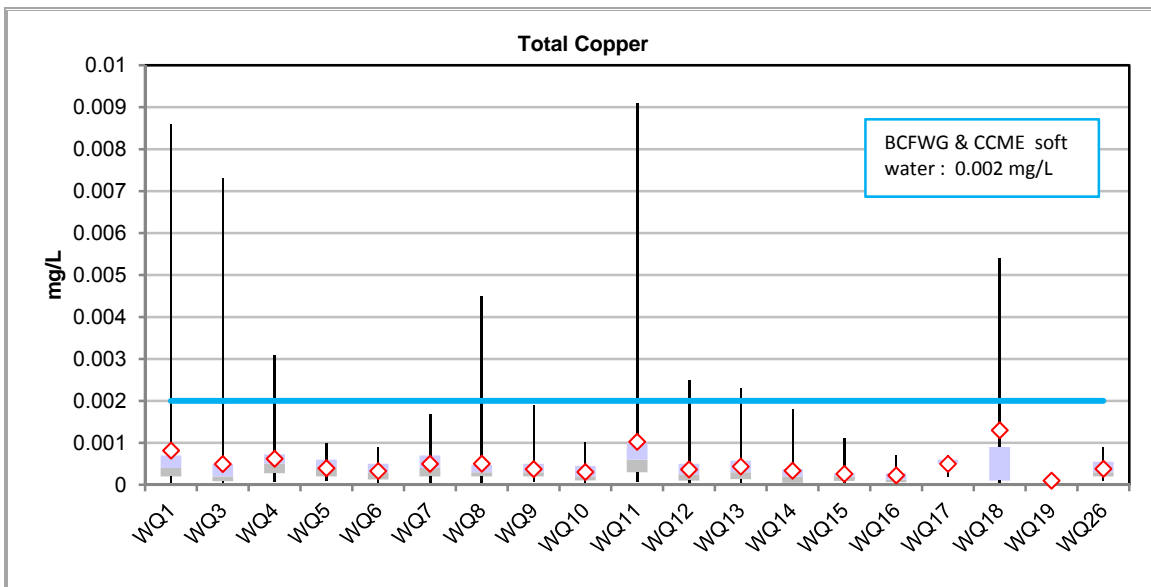
4.3.4.17 Total Copper

The average concentration of total copper in fresh surface waters is generally <0.020 mg/L and for dissolved copper <0.005 mg/L (Moore, 1990). Copper from industrial and urban

sources is more common than naturally occurring copper. Copper, among other metals, will leach from bedrock under acidic conditions (acid rock drainage (ARD)).

The BC MOE and CCME guidelines are hardness dependent. **Table 4.2-1** lists the BC FWG and CCME guidelines.

Figure 4.3-12 is a box and whisker plot of total copper in the streams within the Project mine site, LSA, and RSA. Four percent of samples were below the detection limit of 0.0001 mg/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012); CCME (2007) long-term freshwater guide avg. = average; BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; max = maximum; mg/L = milligrams per litre; soft water \leq 50 mg/L hardness.

Figure 4.3-12 Box and Whisker Plot of Total Copper

Two high outliers—0.036 mg/L at WQ7 and 0.018 mg/L at WQ14, both at the end of freshet in 2013—were removed to improve the display.

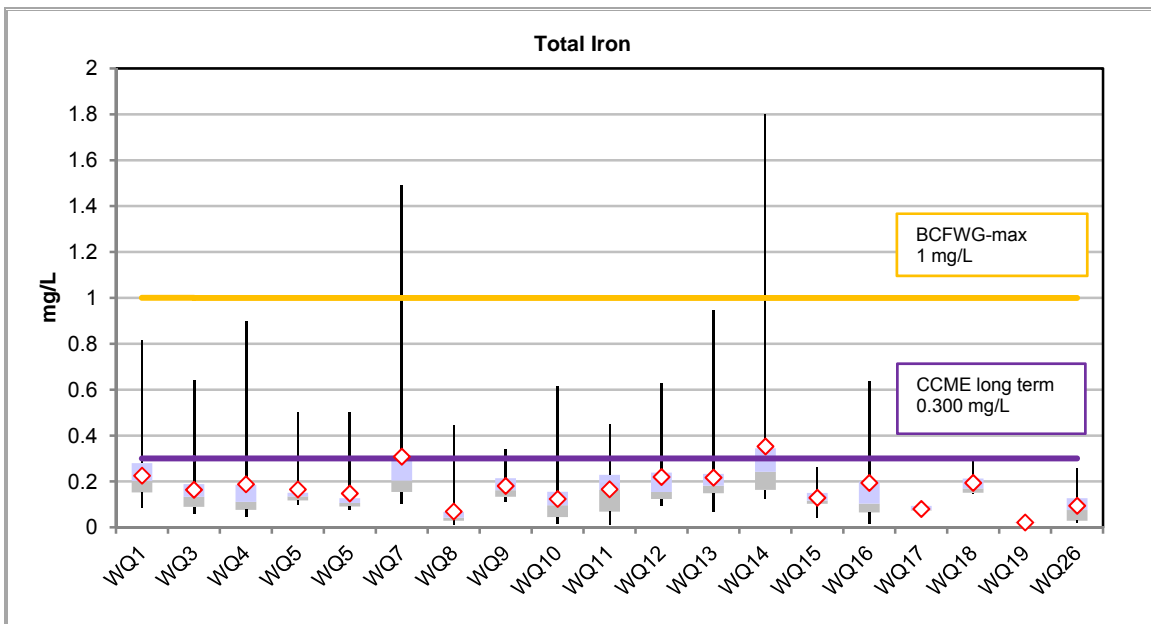
The mean and third quartile concentrations at all sites were below the BC FWG 30-day average and the CCME long-term guidelines for water of 50 mg/L hardness. Most stations were below 50 mg/L hardness; WQ13, WQ14, and WQ18 were slightly above; and WQ19 was 100 mg/L. Occasional spikes were well above the maximum guide of 0.007 mg/L for water of 50 mg/L hardness. For the most part, spikes occurred during freshet and can be ascribed to relatively elevated TSS. However, the highest concentration at WQ1 occurred in mid-July (0.0086 mg/L) when TSS was below detection. No reason for this spike is apparent.

Aside from these outliers, both temporal and spatial variations of total copper were moderately low for the streams within the Project mine site, LSA, and RSA. Some adjustment of the BC FWG will be required to account for TSS-related spikes.

4.3.4.18 Total Iron

The presence of iron in natural surface waters is typically related to the amount of groundwater contributing to the base flow. In many watersheds, groundwater accumulates dissolved and particulate iron as it passes from deep reservoirs through decayed organic matter before entering the surface water flow. Iron may be attributed to surface waters from runoff in areas where the soil has been disturbed by anthropogenic activities including urbanization, logging, and mining. Acid rock leachate usually has elevated iron concentrations.

Figure 4.3-13 is a box and whisker plot of total iron for the streams within the Project mine site, LSA, and RSA. None of the samples collected were below detection.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE 2006a, 2006b, 2008, 2009, 2012), CCME (2007) long term freshwater guideline
BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; EQG = Environmental Quality Guidelines; max = maximum; mg/L = milligrams per litre

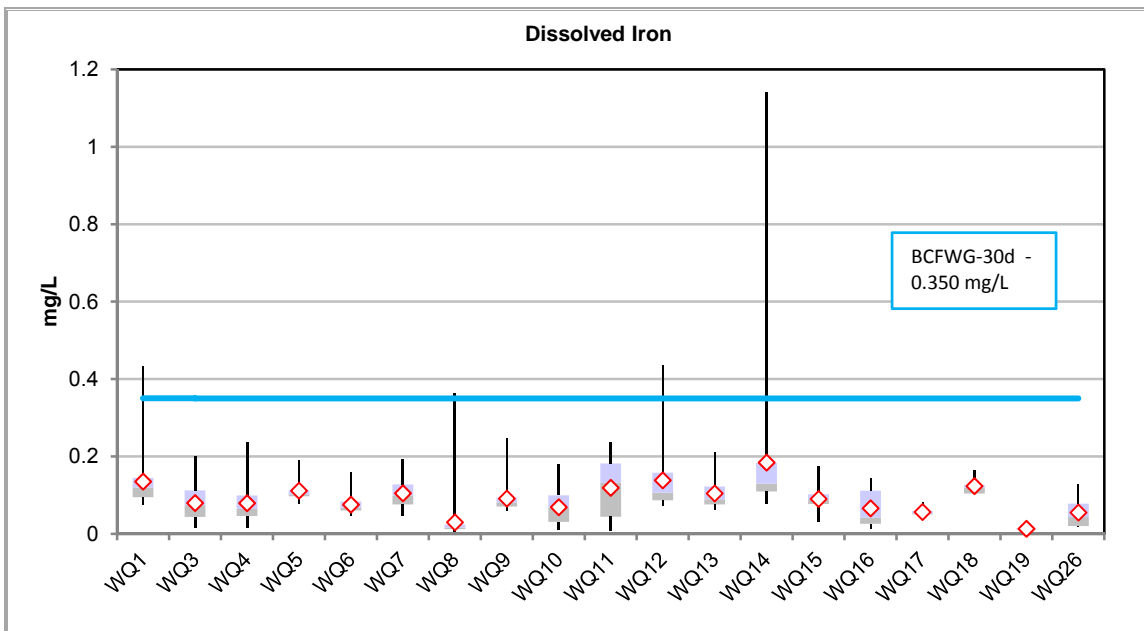
Figure 4.3-13: Box and Whisker Plot of Total Iron

Only WQ7 and WQ14 had outliers above the BC FWG of 1 mg/L. The two exceedances at WQ7 occurred during early freshet and the one exceedance at WQ14 occurred in September when TSS was high (29 mg/L). Most sites had outliers above the CCME guideline, although means and third quartiles were generally below the CCME guideline.

Except for spikes and sites WQ7 and WQ14, temporal and spatial variations in total iron for streams within the Project mine site, LSA, and RSA were relatively low.

4.3.4.19 Dissolved Iron

The BC FWG for dissolved iron is 0.350 mg/L. **Figure 4.3-14** is a box and whisker plot of concentrations of dissolved iron for the streams within the Project mine site, LSA, and RSA. None of the samples collected in 2011 through June 2013 were below detection.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; max = maximum; mg/L = milligrams per litre

Figure 4.3-14 Box and Whisker Plot of Dissolved Iron

Similar to total iron, the highest outlier was at WQ14, and on the same date as for total iron. Other outliers above the BC FWG are at WQ1, WQ8 (slightly), and WQ12. Spatial and temporal variations of dissolved iron closely resemble those of total iron. Outliers occurred in August 2012 when most sites had dissolved iron elevated above averages, suggesting the influence of groundwater. Site WQ14 is near the mouth of Turtle Creek and is not expected to be directly affected by mine development.

4.3.4.20 Total Lead

Lead is typically rare in natural surface waters. Areas where lead is present are often associated with soil weathering and erosion, forest fire, or volcanic activity. Surface water concentrations of lead are more commonly the result of anthropogenic activities such as mining, industrial emissions, and municipal effluents.

The maximum guideline for total lead concentrations in freshwater has been set at ≤ 0.003 mg/L when hardness, as CaCO_3 , is < 8 mg/L, based on the BC MOE guidelines. When $\text{CaCO}_3 \geq 8$ mg/L, the guideline concentration for total lead is determined according to the formula:

$$[\text{Max Total Lead } (\mu\text{g/L})] = e^{(1.273 \ln [\text{hardness}] - 1.460)}$$

There is no guideline proposed when the 30-day average for total lead concentrations in freshwater for the protection of aquatic life when hardness, as CaCO_3 , is < 8 mg/L. When $\text{CaCO}_3 \geq 8$ mg/L, the 30-day average guideline concentration for total lead is determined according to the formula:

$$\text{30-day average guideline for total lead } (\mu\text{g/L}) = 3.31 + e^{(1.273 \ln(\text{mean hardness}) - 4.704)}$$

Representative 30-day guideline values for lead at various hardness values are:

Hardness (mg CaCO_3 /L)	Lead Guideline ($\mu\text{g/L}$)
10	3.48
20	3.72
40	4.30
60	4.97
80	5.71
100	6.49

Hardness values in Project area streams range from 4 mg CaCO_3 /L to 120 mg CaCO_3 /L with median hardness of 26 mg CaCO_3 /L.

Table 4.3-12 lists concentrations of total lead for the streams within the Project mine site, LSA, and RSA. Seventy-five percent of samples were below the detection limit of 0.00005 mg/L over the two years reported here (March 2011 through June 2013).

Most above detection concentrations were only slightly above the detection limit. Spikes occurred predominantly at freshet but occasionally in the fall. No spatial patterns are evident.

Table 4.3-12: Spatial and Temporal Variation of Total Lead (mg/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00035	0.00007	<0.00005	<0.00005	0.00017	-
WQ3	-	-	0.00021	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ4	-	-	0.00008	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	0.00025	<0.00005	<0.00005	0.0002	-
WQ5	-	-	0.00014	0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	0.00011
WQ6	-	-	0.00055	0.00019	0.00011	0.0001	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ7	-	<0.00005	0.00064	0.00042	0.00026	0.00025	0.0001	0.00006	<0.00005	<0.00005	0.00009	<0.00005	0.00013
WQ8	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	0.00008
WQ9	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ10	<0.00005	<0.00005	0.00044	0.00015	0.00011	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ11	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ12	-	<0.00005	0.00016	0.00005	<0.00005	<0.00005	<0.00005	0.00014	<0.00005	0.00007	<0.00005	<0.00005	<0.00005
WQ13	-	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ14	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	0.00019	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	0.00045	0.00006	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	0.00021	<0.00005	<0.00005	<0.00005	<0.00005
WQ3	0.00084	0.00007	<0.00005	<0.00005	0.00017	0.0001	<0.00005	0.00032	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005
WQ4	-	-	-	-	0.00093	0.00064	0.00013	<0.00005	<0.00005	<0.00005	<0.00005	0.00012	<0.00005	0.00341	0.00012	0.00099
WQ5	-	-	-	-	0.00014	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ6	-	-	-	0.00017	0.00012	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00024	<0.00005	<0.00005	<0.00005	<0.00005
WQ7	<0.00005	0.0001	<0.00005	<0.00005	0.00027	0.00022	<0.00005	<0.00005	<0.00005	0.00094	<0.00005	0.00037	<0.00005	<0.00005	<0.00005	<0.00005
WQ8	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.00013	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00074	<0.00005	<0.00005	0.00009	-
WQ9	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	0.00014	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ10	-	-	-	-	0.00045	0.00006	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	0.00021	<0.00005	<0.00005	<0.00005	<0.00005
WQ11	-	-	-	-	0.00006	0.00043	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-
WQ12	<0.00005	<0.00005	<0.00005	0.00006	0.00018	0.00009	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ13	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00028	<0.00005	<0.00005	<0.00005	-
WQ14	<0.00005	-	<0.00005	0.00069	<0.00005	<0.00005	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	<0.00005	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	0.0004	-
WQ17	-	-	<0.00005	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	-
WQ18	-	-	<0.00005	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.00005	-	-	<0.00005	-	-	<0.00005

2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	28-May-13	06-Jun-13	11-Jun-13	18-Jun-13
WQ1	-	-	-	-	0.00007	<0.00005	0.00005	0.00006	0.00005	<0.00005
WQ3	<0.00005	<0.00005	<0.00005	0.00009	0.00005	0.00005	<0.00005	<0.00005	<0.00005	0.00005
WQ4	-	-	-	-	0.00028	0.00013	0.00013	0.00007	0.00005	0.00007
WQ5	0.00035	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007
WQ6	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.00006	0.00005	<0.00005	<0.00005
WQ7	<0.00005	0.00007	<0.00005	<0.00005	0.00013	0.00005	0.0001	0.00008	0.00005	<0.00005
WQ8	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ9	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ10	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	0.00006	0.00006	<0.00005	<0.00005
WQ11	<0.00005	<0.00005	-	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ12	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ13	<0.00005	-	-	-	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ14	-	-	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00046	<0.00005
WQ15	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
WQ16	<0.00005	<0.00005	0.00034	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00019	<0.00005
WQ17	<0.00005	-	-	-	-	-	-	-	-	-
WQ18	0.00036	-	-	-	-	-	-	-	-	-
WQ26	<0.00005	<0.00005	<0.00005	<0.00005	0.00009	<0.00005	0.00007	0.00006	0.00006	<0.00005

4.3.4.21 Total Manganese

In unpolluted waters, the predominant source of manganese is from groundwater. Manganese under groundwater reducing conditions is in the +2 valence state but readily oxidizes on exposure to air to the +4 valence state, which will precipitate at relatively low concentrations.

The BC FWG is hardness dependent. For maximum grab sample total manganese concentrations (mg/L), the relationship is:

$$0.01102 \times \text{hardness} + 0.54$$

For the 30-day average (mg/L), the relationship is:

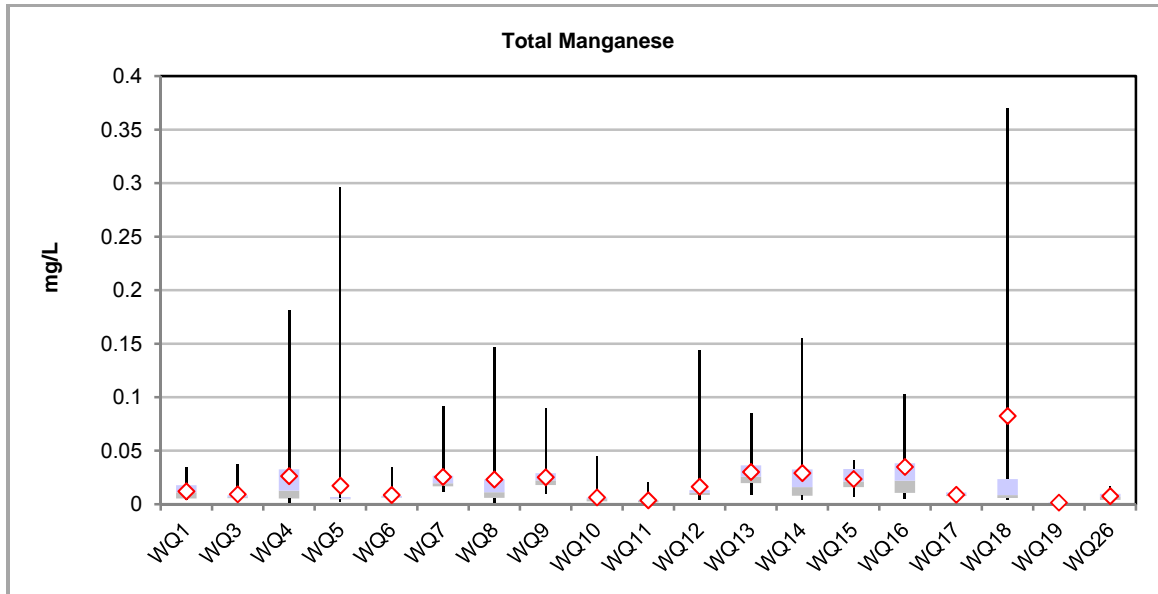
$$0.0044 \times \text{hardness} + 0.605$$

Hardness values in Blackwater area streams range from 4 mg CaCO₃/L to 120 mg CaCO₃/L; overall mean hardness was 37 mg CaCO₃/L. Representative 30-day guidelines are provided below:

Hardness (mg CaCO ₃ /L)	Manganese Guideline (mg/L)
10	0.65
20	0.69
40	0.78
60	0.87
80	0.96
100	1.05

Figure 4.3-15 is a box and whisker plot of concentrations of total manganese for the streams within the Project mine site, LSA, and RSA. Only two of 503 results were below detection.

Mean concentrations of total manganese for the streams within the Project mine site, LSA, and RSA were 0.2% to 11% of the 30-day average BC FWG. The maximum outlier at WQ18 at Blackwater River mouth was about 50% of this guideline; at WQ14 on lower Turtle, the maximum outlier was about 20% of the 30-day average BC FWG. Temporal variation was low (excluding outliers). Spatial variation among sites was relatively low. High outliers occurred in spring and summer, possibly due to increases in TSS and greater proportions of groundwater, respectively.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; mg/L = milligrams per litre

Figure 4.3-15: Box and Whisker Plot of Total Manganese

4.3.4.22 Total Mercury

Mercury has an average crustal concentration of 0.08 milligrams per kilogram (mg/kg) (parts per million (ppm)) and occurs in sedimentary, igneous, and metamorphic rocks (Moore, 1990). Dissolved mercury readily forms organic complexes, many of which are toxic to aquatic organisms (e.g., methyl-mercury (MeHg)). Coal-burning power plants are the largest anthropogenic source of mercury, with chemical manufacturing and municipal solid waste leachate being other important sources (Moore, 1990). Atmospheric fall-out from long distance transport is important in remote locations (Moore, 1990). The 30-day guideline from the BC FWG for mercury is 0.02 µg/L; the maximum guideline is 0.1 µg/L.

Table 4.3-13 lists concentrations found in the streams within the Project mine site, LSA, and RSA. Above detection concentrations occurred at freshet and was associated with increased TSS. The BC FWG 30-day average guideline for total mercury is 0.02 µg/L and the CCME long-term guideline is 0.026 µg/L. There were no exceedances of the BC FWG and CCME long-term guidelines.

Ninety-two percent of samples were below the detection limit of 0.000008 mg/L (0.008 µg/L) over the sampling period. Since most concentrations were below detection, spatial variation is not apparent.

Table 4.3-13: Spatial and Temporal Variation of Total Mercury (mg/L)

2011

	28-Mar-11	19-Apr-11	17-May-11	24-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11	17-Oct-11	14-Nov-11	12-Dec-11
WQ1	-	-	0.000017	0.000015	0.000009	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	-
WQ3	-	-	0.000013	0.00001	0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	0.000009	<0.000008	<0.000008
WQ4	-	-	0.000009	0.000011	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	-
WQ5	-	-	0.000016	0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ6	-	-	0.000015	0.00001	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	-
WQ7	-	<0.000008	0.000042	0.00001	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ8	-	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ9	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ10	0.00001	<0.000008	0.000017	0.00001	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ11	<0.000008	<0.000008	0.000019	0.000014	0.000009	<0.000008	0.000024	0.000014	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ12	-	<0.000008	0.000012	0.000014	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ13	-	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ14	-	-	-	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008	<0.000008
WQ17	-	-	-	-	-	-	-	-	-	-	-	-	<0.000008
WQ18	-	-	-	-	-	-	-	-	-	-	-	-	<0.000008

2012

	12-Jan-12	13-Feb-12	12-Mar-12	16-Apr-12	14-May-12	22-May-12	29-May-12	05-Jun-12	12-Jun-12	19-Jun-12	17-Jul-12	14-Aug-12	18-Sep-12	15-Oct-12	13-Nov-12	10-Dec-12
WQ1	-	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ3	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ4	-	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	0.000014	<0.000005	<0.000005
WQ5	-	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-
WQ6	-	-	-	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	0.000005	<0.000005	<0.000005
WQ7	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	0.000006	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ8	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-
WQ9	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ10	-	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ11	-	-	-	-	<0.000005	<0.000005	<0.000005	0.000009	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-
WQ12	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ13	<0.000008	<0.000008	<0.000008	<0.000008	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-
WQ14	<0.000008	-	<0.000008	<0.000005	<0.000005	<0.000005	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ15	-	-	-	-	-	-	-	-	-	-	-	-	<0.000005	<0.000005	<0.000005	-
WQ16	-	-	-	-	-	-	-	-	-	-	-	-	<0.000005	<0.000005	<0.000005	-
WQ17	-	-	<0.000008	-	-	-	-	-	-	<0.000005	-	-	<0.000005	-	-	-
WQ18	-	-	<0.000008	-	-	-	-	-	-	<0.000005	-	-	<0.000005	-	-	-
WQ19	-	-	-	-	-	-	-	-	-	<0.000005	-	-	<0.000005	-	-	<0.000005

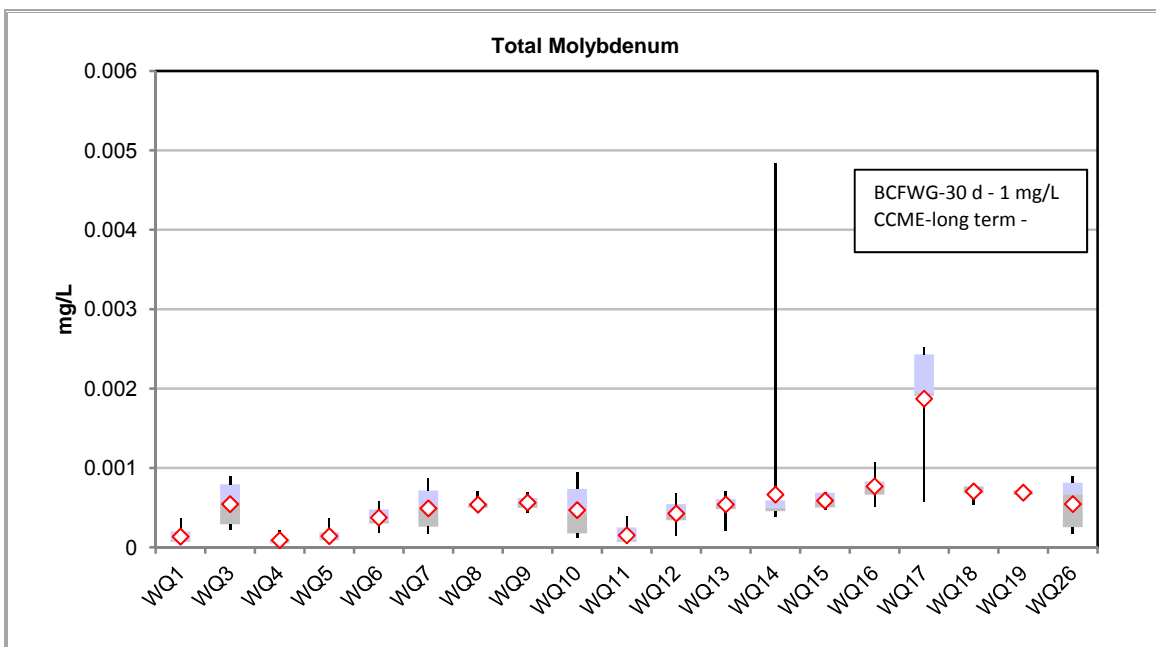
2013

	13-Jan-13	12-Feb-13	13-Mar-13	15-Apr-13	13-May-13	21-May-13	28-May-13	06-Jun-13	11-Jun-13	18-Jun-13
WQ1	-	-	-	-	0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ3	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ4	-	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ5	<0.000005	-	-	<0.000005	0.000006	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ6	<0.000005	<0.000005	<0.000005	<0.000005	0.000006	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ7	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ8	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ9	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ10	<0.000005	<0.000005	<0.000005	<0.000005	0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ11	<0.000005	-	<0.000005	-	0.000015	-	<0.000005	<0.000005	<0.000005	<0.000005
WQ12	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ13	<0.000005	-	-	-	<0.000005	-	<0.000005	<0.000005	<0.000005	<0.000005
WQ14	-	-	-	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ15	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-	<0.000005	<0.000005	<0.000005	<0.000005
WQ16	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
WQ17	<0.000005	-	-	-	-	-	-	-	-	-
WQ18	0.000009	-	-	-	-	-	-	-	-	-
WQ26	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	-	<0.000005	<0.000005	<0.000005	<0.000005

4.3.4.23 Total Molybdenum

Molybdenum occurs naturally in the water column as a result of weathering of rocks and soils. Anthropogenic sources of molybdenum in the environment include industrial process effluents and the burning of fossil fuels. The BC FWG for total molybdenum is 1 mg/L 30-day average and 2 mg/L maximum.

Figure 4.3-16 is a box and whisker plot of total molybdenum concentrations for the streams within the Project mine site, LSA, and RSA. Twenty-four percent of samples were below the detection limit of 0.00005 mg/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012); CCME (2007) long-term guidelines for protection of aquatic life
BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; mg/L = milligrams per litre

Figure 4.3-16: Box and Whisker Plot of Total Molybdenum

Excluding WQ14 (at the mouth of Turtle Creek and not expected to be influenced by mining) and WQ17 (a tributary of the Blackwater River and outside the proposed Project watershed), all samples were 1,000 to 2,000 times below the BC FWG; WQ14 and WQ17 high outliers were, respectively, 200 and 500 times below the BC guideline. No results, including outliers approached the CCME long-term guideline of 0.073 mg/L. Spatial and temporal variations were moderate (excluding WQ17).

4.3.4.24 Total Nickel

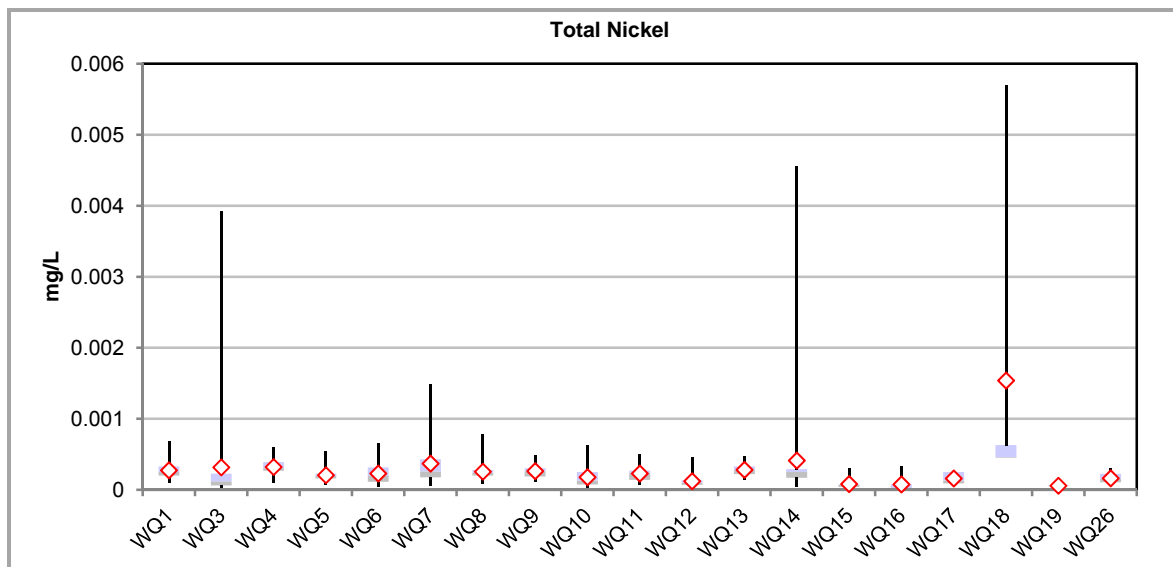
The major source of nickel in waterbodies affected by anthropogenic sources is municipal wastewater, followed by smelting and refining of nonferrous metals (Moore, 1990). Burning of coal adds nickel to surface waters through air transport but is not an important source where coal-fired power plants do not exist. Nickel is also derived from bedrock where the element is elevated and solubility chemistry favours leaching. Nickel predominantly (90%) forms free ions, hydroxides, and sulphides in water (Förstner and Wittmann, 1981).

The BC FWG for total nickel is hardness dependent. The maximum total nickel guidelines are as follows:

- 0.025 mg/L at hardness of 0 mg/L to 60 mg/L as calcium carbonate;
- 0.065 mg/L at hardness of 60 mg/L to 120 mg/L as calcium carbonate;
- 0.110 mg/L at hardness of 120 mg/L to 180 mg/L as calcium carbonate; and
- 0.150 mg/L at hardness greater than 180 mg/L as calcium carbonate.

The BC and CCME guidelines are the same. Mean hardness values in the Project area streams ranged from 4 mg CaCO₃/L to 120 mg CaCO₃/L. The guideline for most streams would be 0.025 mg CaCO₃/L.

Figure 4.3-17 is a box and whisker plot of total nickel concentrations for the streams within the Project mine site, LSA, and RSA. Fourteen percent of samples were below the detection limit of 0.00005 mg CaCO₃/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; max = maximum; mg/L = milligrams per litre

Figure 4.3-17 Box and Whisker Plot of Total Nickel

Mean concentrations at all sites were 16 to 400 times lower than the BC FWG and CCME long-term guidelines for soft water; no maximum concentrations exceeded the 0.025 mg/L guideline. Temporal variation (except for outliers) was low to moderate. Spatial variability (except for WQ18 on the Blackwater River) was moderate (not apparent from the box plots because of outliers).

4.3.4.25 Total Selenium

Selenium occurs in most types of rocks. It geochemically resembles sulphur and may be found in association with it (Moore, 1990). While metallic selenide may be present in unweathered rock, it readily oxidizes during weathering to forming selenite (Se^{3+}) in acid soils and selenate (Se^{5+}) in alkaline soils (Moore, 1990). The largest single anthropogenic source is coal-fired power plants (Moore, 1990).

Selenium was universally below the analytical detection limit of 0.0006 mg/L at all surface water quality sites for all samples analyzed. In 2013, when the laboratory detection limit was lowered to 0.0001 mg/L, there were two samples (WQ7 0.0003 mg/L and WQ14 0.0011 mg/L) above this detection limit, both at freshet in June. Neither exceeded the BC FWG of 0.002 mg/L, and the WQ14 sample was just slightly above the CCME guideline of 0.001 mg/L.

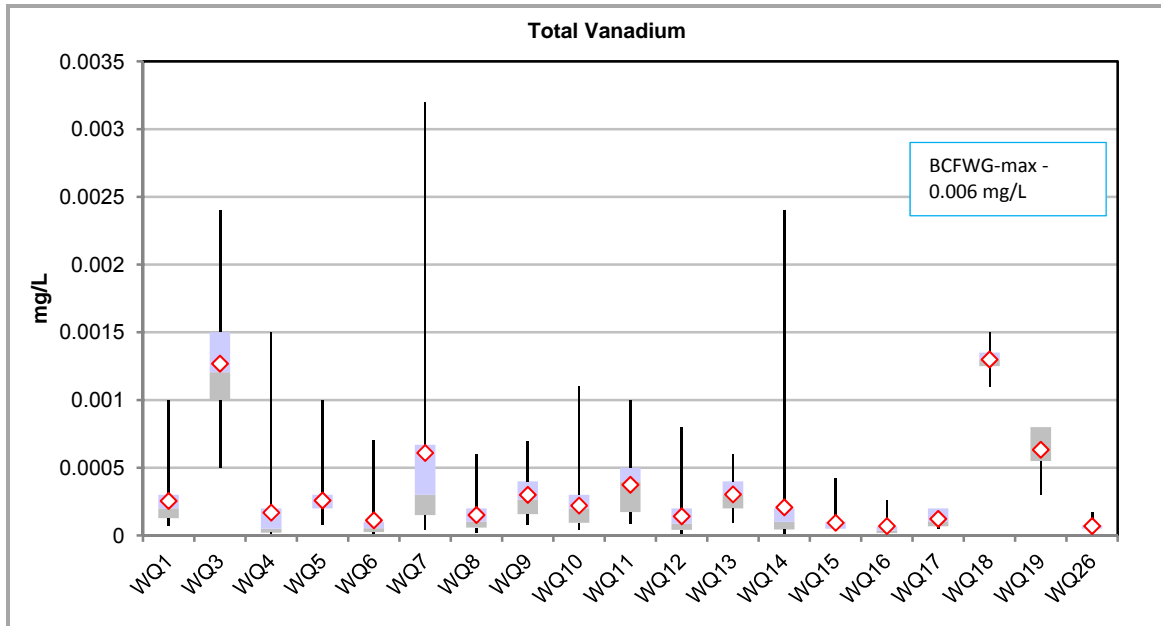
4.3.4.26 Total Silver

Silver is discussed in this baseline report because there is economic silver in the Blackwater deposit. Nine samples were above detection and at or above the BC FWG for soft water. The detection limit is right at the BC FWG for soft water of 0.05 $\mu\text{g/L}$. Only one sample was above the CCME long-term guideline of 0.1 $\mu\text{g/L}$. All but one of the above detection limit samples were from WQ4 which is close to the deposit; one June 2013 sample from WQ10 on Davidson Creek was above detection. All above detection limit results occurred during freshet and were coincident with somewhat elevated TSS.

4.3.4.27 Total Vanadium

Vanadium is a common element in the earth's crust, ranking 22nd in abundance with a mean concentration of 150 mg/kg (ppm) and worldwide freshwater concentrations ranging from <0.5 $\mu\text{g/L}$ to 50 $\mu\text{g/L}$ (Moore, 1990). Igneous rock, carbonatite complexes, titaniferous magnetite complexes, and deposits of iron, uranium, chromium, and manganese all contain vanadium (Moore, 1990). Combustion of fossil fuels is the principal source of vanadium. The BC FWG (based on the Ontario guideline) is 0.006 mg/L.

Figure 4.3-18 is a box and whisker plot of total vanadium for the streams within the Project mine site, LSA, and RSA. Eighteen percent of samples were below the detection limits of 0.0001 mg/L and 0.00005 mg/L.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012)
BC MOE = British Columbia Ministry of Environment; mg/L = milligrams per litre

Figure 4.3-18: Box and Whisker Plot of Total Vanadium

High outliers occurred at different times of the year at different sites. One sample from WQ18 (January 2013) slightly exceeded the BC FWG (0.0069 mg/L versus BC FWG 0.006 mg/L); the sample was removed from the data to improve the display. Aside from outliers and other than WQ3 and WQ7, temporal variability was low to moderate. Sites WQ3 and WQ7 had moderately high temporal variability. Spatial variability was also moderate. Vanadium exhibited the same anomalous pattern at WQ7 as did nickel, dissolved iron, and cobalt. The cause of these anomalous results is not apparent but needs to be considered when interpreting water quality results going forward.

4.3.4.28 Total Zinc

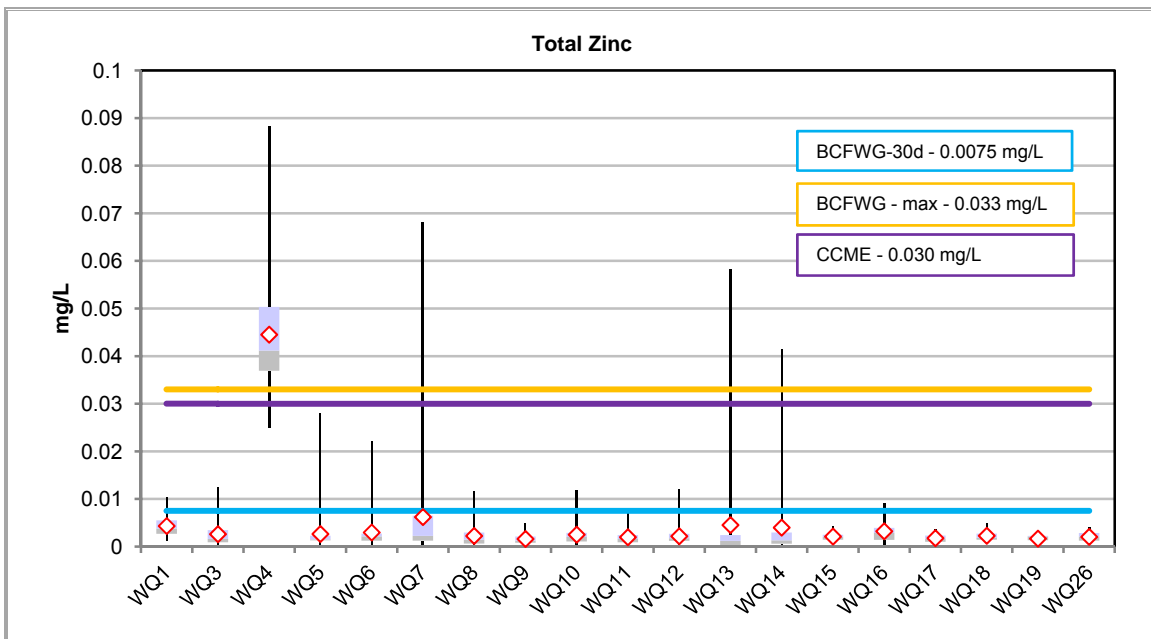
Zinc naturally occurs in surface waters, typically as a result of weathering of rocks and soils. Anthropogenic sources of zinc in surface water include industrial waste and mining. Zinc is a neutral-leaching metal and can be found at anomalous concentrations in neutral pH waters; acidic drainage can also result in elevated concentrations.

The BC FWG is tied to hardness by the following formulae:

- Maximum concentration (µg/L): $33 + 0.75(\text{hardness}-90)$; and
- 30-day average concentration (µg/L): $7.5 + 0.75(\text{hardness}-90)$.

Below a hardness of 90 mg/L as CaCO₃, the guidelines are, respectively, 0.033 mg/L and 0.0075 mg/L, which would apply to all Project area streams based on average hardness, although peaks are up to 120 mg CaCO₃/L. The CCME protection of aquatic life guideline is 0.030 mg CaCO₃/L.

Figure 4.3-19 is a box and whisker plot of total zinc in 2011 to 2013 for the streams within the Project mine site, LSA, and RSA. Fourteen percent of samples were below the detection limit of 0.0005 mg/L. Two high outliers were removed to improve the display: 0.133 mg/L at WQ7 June 2013 and 0.146 mg/L at WQ18 January 2013.



Notes: BC MOE guidelines = BC MOE guidelines for the protection of freshwater aquatic life (BC MOE, 2006a, 2006b, 2008, 2009, 2012); CCME (2007) protection of aquatic life guideline
avg. = average; BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; max = maximum; mg/L = milligrams per litre

Figure 4.3-19: Box and Whisker Plot of Total Zinc

The streams within the Project mine site, LSA, RSA have soft water universally below 90 mg CaCO₃/L, except WQ19 where average hardness was 100 mg CaCO₃/L; therefore, the minimum BC MOE guidelines apply. Twelve per cent of samples were above the BC FWG 30-day average. All of the samples at WQ4 were above this guideline and total zinc was occasionally above the guideline at another site, predominantly associated with freshet. Only six per cent were above the CCME guideline and the BC FWG maximum guideline, again predominantly at WQ4.

Other than WQ4 and a few outliers associated with freshet, all samples were below the 30-day BC FWG. WQ4, located in a headwater stream east of the Blackwater deposit, was (except for the minimum concentration) universally above the maximum guideline. The

apparent reason for this was likely leaching from bedrock in the vicinity of the deposit. However, WQ1, also close to the deposit, did not have elevated zinc concentrations.

Other than WQ4, WQ7, WQ13, and WQ14 temporal variation was low. Spatial variation was low except for WQ4.

4.3.4.29 Cyanide

Total and weak acid dissociable (WAD) cyanide were analyzed in all samples. Additionally, on a quarterly basis, thiocyanate and cyanate were analyzed. The objective was to provide a solid baseline dataset since gold cyanidation (subsequent cyanide destruction treatment) will be required for gold recovery for the Project ore.

Except for obvious analytical errors (based on information provided by lab assayists) due to organic interference, all cyanide species results were below their respective detection limits. To combat the analytical errors for total and WAD cyanide, the lab suggested a change in procedure: Water samples with organics are susceptible to false positive cyanide results if sodium or potassium hydroxide preservatives are used; switching to sulphuric acid solved the problem.

The interference issue was particularly problematic for cyanate and thiocyanate. For quality control purposes, three independent laboratory check assays were conducted in September 2011 at laboratories certified by the Canadian Analytical Laboratories Association (CALA). The results varied, but the laboratory routinely used for these analyses produced the most consistent results; quarterly sampling was continued with that lab.

AGAT Laboratories provided incorrect preservative information for cyanate and could not provide results. The lab's thiocyanate results were below to slightly above detection (0.50 mg/L). Maxxam Analytics and ALS provided similar results, both at or near the respective detection limits of 0.20 mg/L for cyanate and 0.50 mg/L for thiocyanate, although the variability among samples was greater in the Maxxam test.

4.4 Weekly (Freshet Results)

This section compares the summary results from weekly (freshet) sampling in 2011 through 2013 to the monthly results for the same period. Left-censored data were treated the same way as monthly data, i.e., where there were three or more values above detection, ROS was used to estimate minimums which influenced the mean and, to a lesser extent, 95th percentile results. Weekly samples were collected on the following schedule:

2011: 05.16, 05.24, 05.31, 06.06, 06.13—WQ1, WQ3 – WQ14

2012: 05.14, 05.22, 05.28, 06.04, 06.11, 06.18—WQ1, WQ3 – WQ14

2013: 05.13, 05.22, 05.27, 06.04, 06.10, 06.17—WQ1, WQ3 – WQ16, WQ26

4.4.1 Weekly Means

Table 4.4-1 shows the exceedances occurred, and **Table 4.4-2** lists aggregate mean results from the three years.

Table 4.4-1: Exceedances Occurred

Site	Parameters Exceeded			
	BC FWG 30-day	BC FWG Max.	CCME Long Term	CCME Short Term
WQ7	Turbidity	-	-	-
WQ1, WQ3 – WQ7, WQ9 – WQ13, WQ26	-	-	-	Al-t
WQ1, WQ4, WQ6, WQ7, WQ10 – WQ13	-	Cd-t	-	-
WQ7	Zn-t	Cu-t	-	-
WQ7	-	-	Fe-t	
WQ4,	-	Zn-t	-	-
WQ1, WQ3 – WQ7, WQ10 – WQ12, WQ15	-	Al-d	-	-

Notes: d = dissolved, t = total, Al = aluminum, Cd = cadmium, Fe = iron, Zn = zinc. The cadmium guidelines used were BC MOE 2006 and CCME draft 2012.

Table 4.4-2: Weekly Mean Water Quality Results

Physical Tests	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ26	BC MOE Guideline			CCME
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	30-day	Maximum	Long Term
pH at a 25°C BC-D	pH	6.51	7.4	6.97	7.01	7.07	7.34	7.94	7.83	7.07	7.06	7.21	7.82	7.74	7.26	7.29	7.35	6.5-9.0			6.5-9.0
Conductivity at 25°C	µS/cm	20	50.6	46.7	27.9	31.1	43.1	144.8	113.7	30.1	34.2	34.6	111.6	106.4	53.5	41.8	40.8				
T-Dissolved Solids at 180°C	mg/L	42.2	58.1	53.4	47.8	39.9	47.3	101.8	82.6	42.6	62.1	48.4	78.7	99.4	88.7	72.7	60				
Total Suspended Solids at 105°C	mg/L	1.9	5	1.4	4	1.9	21.5	3.9	6.7	3.8	1.9	1.2	8.1	1.2	2.8	2.8	4.6				
Turbidity	NTU	2.52	2.32	2.56	1.54	1.89	8.29	1.82	3.07	2.69	2.15	1.71	2.74	1.31	1.87	1.52	2.03	8			8
Hardness as (CaCO ₃)	mg/L	6	21.3	17.1	11.1	11.8	22.3	68.5	52.5	12.1	15.8	14.8	50.3	82.3	25.3	18.4	17.7				
Dissolved Anions																					
Alkalinity as CaCO ₃	mg/L	4	22.6	10.3	9.5	11.3	18.2	70.9	54.8	10.9	11.9	14.1	54.4	52.6	17.2	19.3	17.3				
Fluoride-D	mg/L	0.03	0.06	0.05	0.05	0.04	0.05	0.08	0.07	0.04	0.05	0.04	0.06	0.07	0.03	0.03	0.03		0.47-1.27 ^c		0.12
Sulphate-D	mg/L	1.2	1.3	6.7	1	1.3	1.4	4.1	3.6	1.2	1	1.2	3.6	2.3	1.4	1.1	1.1	115-270 ^c			
Chloride-D	mg/L	0.6	0.5	1.1	0.4	0.6	0.5	0.6	0.6	0.5	0.5	0.4	1.2	0.7	0.3	0.3	0.3	150		120	640
Nutrients																					
Ammonia – Nitrogen	mg/L	<0.02	<0.02	0.01	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.651-2.08 ^a	3.63-28.7 ^a		0.588-189.97 ^a
Nitrate-N-D	mg/L	0.012	0.015	0.015	0.015	0.015	0.016	0.03	0.016	0.016	0.018	0.013	0.014	0.015	0.027	0.021	0.017	3	31.3	13	550
Nitrite-N-D	mg/L	0.002	<0.003	<0.003	<0.003	<0.003	<0.003	0.002	0.002	<0.003	<0.003	0.002	0.002	<0.003	<0.003	<0.003	<0.003	0.02	0.06		0.06
Total Kjeldahl Nitrogen (TKN)	mg/L	0.24	0.3	0.4	0.26	0.16	0.21	0.29	0.28	0.23	0.28	0.21	0.23	0.26	0.15	0.16	0.12				
Phosphorous-Ortho-DLL	mg/L	<0.003	0.009	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003							
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.02	<0.02	<0.02	<0.02	0.91	0.01	0.01	0.01	0.01	<0.02	0.01	0.01	<0.01	<0.01	<0.01				
Organic Parameters																					
Carbon (Total Organic)	mg/L	13.4	11.5	12.2	13.5	10.1	11.6	10.4	10.4	12	19.7	10.7	11.8	12	9.4	6.2	9.6				
Carbon (Dissolved Organic)	mg/L	12.2	11	12.4	13	9.9	12	9.5	9.9	11.6	19.1	10.8	9.9	11.9	9.3	6	9.6				
Total Metals																					
Aluminum-T	mg/L	0.349	0.186	0.259	0.261	0.211	0.441	0.026	0.117	0.304	0.502	0.179	0.108	0.047	0.09	0.08	0.187				0.1 ^b
Antimony-T	mg/L	0.00005	0.00006	0.00016	<5e-05	0.00006	0.00008	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	0.00004	<5e-05	<5e-05	0.00005	0.00005		0.02		
Arsenic-T	mg/L	0.0004	0.0005	0.0016	0.0003	0.0007	0.0006	0.0005	0.0005	0.0004	0.0001	0.0002	0.0005	0.0003	0.0002	0.0004	0.0003	0.005			0.005
Barium-T	mg/L	0.00403	0.00464	0.00342	0.00345	0.00562	0.00828	0.00617	0.00735	0.00581	0.0067	0.00588	0.0123	0.01471	0.00793	0.00458	0.00486	1	5		
Beryllium-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04		0.0053		
Boron-T	mg/L	0.001	0.001	0.001	<0.001	<0.001	0.001	0.001	0.001	<0.001	0.001	<0.001	0.001	0.003	<0.001	<0.001	0.001	1.2		1.5	29
Cadmium-T	mg/L	0.000021	<1.5e-05	0.000076	<1.5e-05	0.000013	0.00002	<1.5e-05	0.000013	0.00001	0.000012	0.00001	0.000024	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05	0.0000295-0.0000289 ^c			0.0000295-0.0000289 ^c
Calcium-T	mg/L	2	6.3	5.6	3.2	3.8	5.8	20.4	15.8	3.8	5	4.8	15.3	25.9	8.2	5.8	5.6				
Chromium-T	mg/L	0.0002	0.0006	<3e-04	0.0002	<3e-04	0.0005	<3e-04	<3e-04	0.0002	0.0003	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04		0.001-0.0089		0.001-0.0089
Cobalt-T	mg/L	0.00007	0.00009	0.00005	0.00007	0.00003	0.00017	0.00003	0.00006	0.00005	0.00006	0.00003	0.00005	0.00004	0.00003	0.00002	0.00005	0.004	0.11		
Copper-T	mg/L	0.0006	0.0005	0.0008	0.0005	0.0004	0.0028	0.0005	0.0005	0.0005	0.0013	0.0004	0.0005	0.0015	0.0002	<1e-04	0.0004	0.002-0.0034 ^c	0.00256-0.01 ^c		0.002 ^c
Iron-T	mg/L	0.2132	0.2102	0.1698	0.1696	0.1503	0.475	0.0794	0.1849	0.2087	0.2383	0.1492	0.1696	0.2776	0.156	0.1616	0.1467		1		0.3
Lead-T	mg/L	0.00005	0.00007	0.00016	0.00004	0.00009	0.00021	<5e-05	<5e-05	0.00008	0.00004	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	0.00006	0.0035-0.0059 ^c	0.003-0.067 ^c		0.001-0.0026 ^c
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.014	0.87		
Magnesium-T	mg/L	0.43	1.44	0.91	0.85	0.62	2.6	4.76	3.55	0.72	0.94	0.78	3.43	5.26	1.36	1.06	1.09				
Manganese-T	mg/L	0.010868	0.008323	0.011308	0.007503	0.008423	0.026597	0.030351	0.02437	0.011022	0.005083	0.009719	0.022717	0.013856	0.022658	0.025862	0.010482	0.63-0.98 ^c	0.606-1.48 ^c		
Mercury-T	mg/L	0.000004	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	0.000008	<8e-06	<8e-06	<8e-06	<5e-06	<5e-06	<5e-06	0.00002	0.0001		0.000026
Molybdenum-T	mg/L	0.00009	0.0003	0.00006	0.00009	0.00027	0.00025	0.00053	0.00049	0.00018	0.00007	0.00031	0.00048	0.00074	0.00052	0.00071	0.00032	1	2		0.073
Nickel-T	mg/L	0.00028	0.00061	0.00032	0.00022	0.0003	0.00053	0.00024	0.00029	0.00028	0.00028	0.00012	0.0003	0.00052	0.00009	<5e-05	0.00021		0.025-0.065 ^c		0.025-0.085 ^c
Phosphorous-T	mg/L	0.01	0.04	0.01	<0.02	<0.02	0.3	0.02	0.01	0.01	0.01	<0.02	0.01	0.02	0.01	0.02	0.01				
Potassium-T	mg/L	<0.5	<0.5	0.7	<0.5	<0.5	1.1	0.8	0.8	<0.5	<0.5	<0.5	0.7	0.8	<0.5	<0.5	<0.5				
Selenium-T	mg/L	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	0.00011	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	0.00016	<1e-04	<1e-04	<1e-04	0.002			0.001
Silicon-T	mg/L	3.99	5.88	4.47	4.16	4.39	4.89	4.26	4.36	4.36	5.03	3.38	4.37	8.36	2.89	1.95	3.72				
Silver-T	mg/L	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	0.00005 ^c	0.0001 ^c		0.0001
Sodium-T	mg/L	1.4	2.2	2.2	1.6	1.5	8.1	3.5	2.9	1.5	1.7	1.4	2.8	4.6	1.7	1.7	1.8				
Strontium-T	mg/L	0.018565	0.04263	0.032892	0.022182	0.029316	0.038848	0.097209	0.081247	0.029523	0.034254	0.038197	0.079518	0.130561	0.067467	0.0434	0.037733				
Thallium-T	mg/L	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05		0.0003		0.0008

Table continues ...

Physical Tests	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ26	BC MOE Guideline			CCME
		Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	Mean	30-day	Maximum	Long Term
Tin-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04				
Titanium-T	mg/L	0.0052	0.0042	0.0047	0.0037	0.003	0.0127	0.0009	0.0038	0.0049	0.0062	0.003	0.0033	0.0014	0.0014	0.0013	0.0031				
Uranium-T	mg/L	0.00018	0.00015	0.00005	0.00009	0.00023	0.00019	0.00008	0.0001	0.00017	0.00016	0.00021	0.0001	0.00007	0.00016	0.00032	0.00017		0.3	0.015	0.033
Vanadium-T	mg/L	0.00026	0.00101	0.00017	0.00027	0.00015	0.00101	0.00013	0.00036	0.00028	0.00045	0.00013	0.00031	0.00013	<5e-05	<5e-05	<5e-05		0.006-0.01		
Zinc-T	mg/L	0.0044	0.0032	0.0461	0.002	0.0035	0.011	0.0023	0.0018	0.003	0.0023	0.0026	0.0041	0.0032	0.0015	0.0013	0.0016	0.0075 ^c	0.033 ^c		0.03
Dissolved Metals																					
Aluminum-D	mg/L	0.268	0.121	0.169	0.204	0.144	0.16	0.008	0.039	0.203	0.409	0.127	0.044	0.025	0.071	0.04	0.142	0.05 ^b	0.1 ^b		
Antimony-D	mg/L	<5e-05	0.00005	0.00013	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05				
Arsenic-D	mg/L	0.0003	0.0005	0.0013	0.0002	0.0005	0.0003	0.0004	0.0004	0.0003	<1e-04	0.0001	0.0004	0.0002	0.0002	0.0002	0.0002				
Barium-D	mg/L	0.00319	0.00358	0.00262	0.00288	0.00484	0.00487	0.0057	0.0064	0.00454	0.00564	0.00509	0.00629	0.0131	0.00733	0.00362	0.00409				
Beryllium-D	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04				
Boron-D	mg/L	<0.001	0.001	0.001	<0.001	<0.001	0.001	0.001	0.001	<0.001	0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001				
Cadmium-D	mg/L	0.000016	<1.5e-05	0.00005	<1.5e-05	<1.5e-05	0.000016	<1.5e-05	0.000011	<1.5e-05	<1.5e-05	<1.5e-05	0.000017	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05				
Calcium-D	mg/L	2	6.2	5.4	3.1	3.7	6.6	19.8	15.3	3.7	4.8	4.7	14.6	24.7	8	5.6	5.3				
Chromium-D	mg/L	<3e-04	0.0005	<3e-04	0.0003	<3e-04	0.0002	<3e-04	0.0002	0.0003	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04				
Cobalt-D	mg/L	0.00003	0.00004	0.00002	0.00004	0.00002	0.00005	0.00002	0.00003	0.00003	0.00005	0.00002	0.00003	0.00003	0.00003	<2e-05	<2e-05	0.00002			
Copper-D	mg/L	0.0004	0.0005	0.0007	0.0004	0.0004	0.0026	0.0004	0.0005	0.0004	0.0013	0.0003	0.0003	0.0015	0.0002	0.0001	0.0004				
Iron-D	mg/L	0.1248	0.1203	0.0891	0.1104	0.08	0.1152	0.0436	0.0745	0.1066	0.1762	0.0942	0.0774	0.189	0.1003	0.0597	0.082		0.35		
Lead-D	mg/L	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05				
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001				
Magnesium-D	mg/L	0.43	1.41	0.88	0.82	0.6	1.43	4.59	3.44	0.69	0.91	0.75	3.32	4.99	1.3	1.04	1.06				
Manganese-D	mg/L	0.00617	0.00331	0.00439	0.00278	0.00313	0.00773	0.01269	0.01368	0.00267	0.00196	0.00431	0.01366	0.00574	0.0088	0.00365	0.00258				
Mercury-D	mg/L	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	0.000006	<8e-06	<8e-06	<8e-06	<5e-06	<5e-06	<5e-06				
Molybdenum-D	mg/L	0.00007	0.00023	0.00005	0.00007	0.00022	0.00019	0.00046	0.00043	0.00014	0.00006	0.00026	0.00041	0.00064	0.00041	0.00056	0.00028				
Nickel-D	mg/L	0.00027	0.00058	0.00031	0.0002	0.00029	0.00077	0.00023	0.00028	0.00024	0.00025	0.0001	0.00026	0.00052	0.00008	<5e-05	0.00022				
Phosphorous-D	mg/L	0.01	0.02	<0.01	<0.01	<0.01	0.91	0.01	0.01	0.01	0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01				
Potassium-D	mg/L	<0.5	<0.5	0.5	<0.5	<0.5	2.5	0.8	0.7	<0.5	<0.5	<0.5	0.7	0.6	<0.5	<0.5	<0.5				
Selenium-D	mg/L	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<1e-04	<1e-04	<1e-04				
Silicon-D	mg/L	3.73	5.47	4.2	3.85	4.11	4.33	3.96	4.07	4.03	4.68	3.18	4.11	7.3	2.53	1.72	3.4				
Silver-D	mg/L	<5e-05	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05				
Sodium-D	mg/L	1.3	2.1	2	1.6	1.5	7.9	3.3	2.8	1.5	1.6	1.4	2.6	3	1.6	1.6	1.7				
Strontium-D	mg/L	0.017306	0.039843	0.030105	0.020866	0.026975	0.035179	0.094865	0.077468	0.026773	0.031884	0.035538	0.074651	0.124755	0.0618	0.03785	0.033				
Thallium-D	mg/L	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05				
Tin-D	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04				
Titanium-D	mg/L	0.0026	0.0022	0.0017	0.0017	0.0017	0.0019	0.0003	0.0008	0.0023	0.0046	0.0016	0.0008	0.0009	0.001	0.0006	0.0018				
Uranium-D	mg/L	0.00016	0.00011	<5e-05	0.00007	0.0002	0.00013	0.00008	0.00009	0.00015	0.00015	0.00019	0.00009	0.00005	0.00015	0.00023	0.00016				
Vanadium-D	mg/L	0.00013	0.00077	0.00006	0.00015	0.00007	0.00029	0.00008	0.00019	0.00013	0.0003	0.00007	0.00017	0.00009	<5e-05	<5e-05	<5e-05				
Zinc-D	mg/L	0.0044	0.0031	0.0453	0.0017	0.0033	0.0102	0.0023	0.0018	0.0028	0.0022	0.0025	0.0018	0.0031	0.0015	0.0013	0.0016				
D-Hardness as CaCO ₃	mg/L	6.7	20.2	15.5	10.7	11.4	23	66.5	50.3	11.5	14.9	14	50.8	47.4							
Cyanide																					
Cyanide (Total)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.0058	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005				
Cyanide (WAD)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.01		0.005
Blackwater – Field Parameters																					
Conductivity (EC)	µS/cm	11.4	37.9	32.6	18.9	19.9	31.9	115.7	88.8	20.5	24	26.3	93.3	86.3	30	28.8	27.3				
DO Saturation %	%	95.8	94.5	88.9	85.7	97.3	98.5	91.9	99.8	98.8	91.7	95.7	98.3	89.6	83.9	82.6	95.2				
pH	pH	6.5	7.5	7	7.3	7.2	7.6	8.1	7.9	7.3	7.3	7.6	7.9	7.5	7.8	7.9	7.3	6.5-9.0			6.5-9.0
Temperature	°C	2.21	3.25	3.7	5	3.8	4.69	9.42	8.94	3.32	4.06	6.1	8.8	8.74	9.49	8.74	5.11		18		

Notes: µS/cm = microSiemens per centimetre; mg/L = milligram per litre; °C = degrees Celsius; % = percent

The pattern of exceedances of total aluminum was similar to the monthly results. The pattern of exceedances for total cadmium for the 2006 provincial guideline was similar, but no exceedances of the 2012 federal guideline occurred in the weekly samples. There was one copper exceedance in weekly samples and none in monthly means that were based on a much larger data set. Only WQ7 exceeded the federal total iron guideline in weekly samples, whereas WQ14 and WQ18 also exceeded in monthly samples; WQ18 was only collected on a quarterly basis and therefore does not appear in weekly samples. The pattern for total zinc was similar between the two data sets with WQ8 being dropped for the weekly set. Dissolved aluminum in the weekly data set exceeded the BC maximum guideline in a similar set of samples, whereas the monthly samples had a mixed pattern of exceedances with both 30-day and maximum exceedances occurring. The conclusion that a site-specific water quality objective will be required for the Project site is reinforced by the weekly results.

Total suspended solids in weekly samples were somewhat elevated above the clear water BC guideline of 5 mg/L at WQ7, WQ9, and WQ13, all of which are located in lower elevation drainages and away from the proposed Project site. These sites are all low velocity stream locations where sediments might be expected to slowly drop out of the water column.

Field pH results were not always reliable.

4.4.2 Weekly 95th Percentiles

Table 4.4-3 shows the exceedances observed and **Table 4.4-4** lists 95th percentile results for weekly samples.

Table 4.4-3: Exceedances Observed

Site	Parameters Exceeded			
	BC FWG 30-day	BC FWG Max	CCME Long Term	CCME Short Term
WQ4, WQ7	Turbidity	-	-	-
WQ1, WQ3 – WQ7, WQ9 – WQ16, WQ26	-	-	-	Al-t
WQ1, WQ3, WQ5, WQ6, WQ8 – WQ13	-	Cd-t	-	-
WQ7	Cr-t	-	-	-
WQ7, WQ11	Cu-t	-	Cu-t	-
WQ14	-	-	Cu-t	-
WQ1, WQ3 – WQ7, WQ10, WQ11, WQ16	-	-	Fe-t	
WQ4	Ag-t	-	-	Ag-t
WQ1, WQ3, WQ4, WQ6, WQ7	Zn-t	-	-	-
WQ4, WQ7	-	Zn-t	-	-
WQ9	Al-d	-	-	-
WQ1, WQ3 – WQ7, WQ10 – WQ16, WQ26	-	Al-d	-	-

Notes: d = dissolved, t = total, Ag = silver, Al = aluminum, Cd = cadmium, Cr = chromium, Fe = iron, Zn = zinc. The cadmium guidelines used were BC MOE 2006 and CCME draft 2012.

Table 4.4-4: 95th Percentile Results for Weekly Samples

Physical Tests	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ26	BC MOE Guideline			CCME	
		95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	30-day	Maximum	Long Term	Short Term	
pH at 25°C BC-D	pH	6.8	7.67	7.19	7.24	7.33	7.48	8.12	7.99	7.32	7.28	7.39	7.97	7.98	7.38	7.46	7.5	6.5-9.0				6.5-9.0
Conductivity at 25°C	µS/cm	26.1	64.2	61.8	33.8	36.8	55.2	161.8	125	34.6	39.2	38.6	134	128.5	99.2	43.8	44.8					
T-Dissolved Solids at 180°C	mg/L	64.6	80.8	76	88.8	65.6	82.4	144	113.6	72.8	92.8	79.2	108.8	180	207	164	89					
Total Suspended Solids at 105°C	mg/L	4.1	14.2	6.4	11.6	3.2	47.4	6.8	11.2	8	10.6	4.8	17.6	4.8	4.5	5.2	6.8					
Turbidity	NTU	6.01	5.1	9.12	3.02	4.42	22.4	3.66	5.14	4.96	3.76	3.52	4.18	2.6	2.4	1.92	3.2	8				8
Hardness as (CaCO ₃)	mg/L	9.5	26.4	22.5	14	14	35.4	81.3	60.5	14.2	18.9	17.5	58.5	189.4	45.2	20.6	20.1					
Dissolved Anions																						
Alkalinity as CaCO ₃	mg/L	5	31.2	14.2	12	16.2	23.4	81.8	64.2	14.2	16.8	20.6	63.4	67.5	20	24	20.8					
Fluoride-D	mg/L	0.05	0.07	0.07	0.07	0.06	0.07	0.1	0.09	0.07	0.07	0.07	0.09	0.09	0.06	0.04	0.04		0.47-1.59 ^c			0.12
Sulphate-D	mg/L	2	2.3	10	1.9	2.2	2.7	5.2	4.6	2	2.2	2.6	5.4	3.2	3.2	1.6	1.6	115-410 ^c				
Chloride-D	mg/L	1.6	1.1	2.2	1.2	1.4	1.3	1.6	1.2	1.1	1.6	1.1	3.6	1.6	0.3	0.3	0.4	150		120		640
Nutrients																						
Ammonia – Nitrogen	mg/L	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.651-2.08 ^a	3.63-28.7 ^a			0.588-189.97 ^a
Nitrate-N-D	mg/L	0.037	0.039	0.032	0.029	0.037	0.04	0.099	0.046	0.032	0.054	0.035	0.035	0.039	0.059	0.04	0.03	3	31.3	13		550
Nitrite-N-D	mg/L	0.005	<0.003	<0.003	<0.003	<0.003	<0.003	0.009	0.008	<0.003	<0.003	0.006	0.007	<0.003	<0.003	<0.003	<0.003	0.02	0.06			0.06
Total Kjeldahl Nitrogen (TKN)	mg/L	0.5	0.78	0.69	0.55	0.31	0.41	0.51	0.59	0.46	0.69	0.43	0.39	0.62	0.22	0.25	0.17					
Phosphorous-Ortho-DLL	mg/L	<0.003	0.026	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.007	<0.003								
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.02	<0.02	<0.02	<0.02	3.1	0.03	0.01	0.01	0.02	<0.02	0.01	0.02	<0.01	<0.01	<0.01					
Organic Parameters																						
Carbon (Total Organic)	mg/L	22.9	18.5	16.1	20.9	16.2	16.7	23.2	14.5	18.8	28.4	14.7	20.2	17.2	9.8	8.6	12.6					
Carbon (Dissolved Organic)	mg/L	21.5	17.5	18	17.6	17.1	20.6	14	13.3	17.9	26.1	16.8	12.7	17.4	9.7	8.5	12.5					
Total Metals																						
Aluminum-T	mg/L	0.481	0.371	0.692	0.388	0.426	1.072	0.061	0.196	0.518	0.834	0.334	0.194	0.128	0.11	0.163	0.32					0.1 ^b
Antimony-T	mg/L	0.00013	0.00008	0.00021	<5e-05	0.00007	0.00023	<5e-05	0.00005	<5e-05	<5e-05	<5e-05	0.00006	<5e-05	<5e-05	0.00007	0.00006		0.02			
Arsenic-T	mg/L	0.0007	0.0007	0.0023	0.0004	0.0009	0.001	0.0006	0.0006	0.0002	0.0003	0.0006	0.0007	0.0005	0.0005	0.0006	0.0004	0.005				0.005
Barium-T	mg/L	0.00724	0.00723	0.00625	0.00606	0.01006	0.01446	0.00755	0.00846	0.00806	0.00886	0.00798	0.0257	0.03832	0.00824	0.00805	0.0054	1	5			
Beryllium-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04		0.0053			
Boron-T	mg/L	0.001	0.002	0.001	<0.001	<0.001	0.004	0.003	0.002	<0.001	0.002	<0.001	0.003	0.008	<0.001	<0.001	0.002	1.2		1.5		29
Cadmium-T	mg/L	0.000051	<1.5e-05	0.000156	<1.5e-05	0.000036	0.000056	<1.5e-05	0.000052	0.000023	0.000035	0.00003	0.000091	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05	0.00000437-0.0000573				0.00000437-0.0000573
Calcium-T	mg/L	2.9	7.7	7.3	3.9	4.4	7.7	25.1	18.4	4.5	6.3	5.5	18.4	61	14.1	6.4	6.5					
Chromium-T	mg/L	0.0003	0.001	<3e-04	0.0005	<3e-04	0.0014	<3e-04	<3e-04	0.0005	0.0006	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	0.001-0.0089				0.001-0.0089
Cobalt-T	mg/L	0.00015	0.00023	0.00014	0.00019	0.00007	0.00046	0.00007	0.00009	0.0001	0.00013	0.00007	0.00008	0.00012	0.00005	0.00005	0.00008	0.004	0.11			
Copper-T	mg/L	0.0013	0.001	0.0017	0.0007	0.0008	0.0086	0.0012	0.0009	0.0008	0.0029	0.0007	0.0014	0.0059	0.0003	<1e-04	0.0008	0.002-0.0076 ^c	0.0029-0.0198			0.002-0.0041 ^c
Iron-T	mg/L	0.3313	0.3852	0.5162	0.364	0.362	1.242	0.1912	0.2876	0.373	0.4348	0.2628	0.2578	0.719	0.2412	0.3415	0.243		1			0.3
Lead-T	mg/L	0.00014	0.00023	0.0007	0.00014	0.00026	0.0007	<5e-05	<5e-05	0.00021	0.00017	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	0.00008	0.00347-0.01	0.0041-0.1841			0.001-0.0072 ^c
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.014	0.87			
Magnesium-T	mg/L	0.66	1.7	1.19	1.02	0.73	6.03	5.49	3.84	0.83	1.12	0.87	3.82	12.11	3	1.26	1.2					
Manganese-T	mg/L	0.025305	0.01802	0.03616	0.02366	0.0212	0.06364	0.08988	0.04528	0.02276	0.01266	0.01784	0.04346	0.035675	0.03865	0.06525	0.015475	0.6468-1.438 ^c	0.6447-2.627 ^c			
Mercury-T	mg/L	0.000015	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<5e-06	<5e-06	<5e-06	0.00002	0.0001			0.000026
Molybdenum-T	mg/L	0.00014	0.00039	0.0001	0.00012	0.00032	0.00031	0.00067	0.00055	0.00024	0.00009	0.00041	0.00058	0.00161	0.00058	0.00085	0.0006	1	2			0.073
Nickel-T	mg/L	0.00047	0.00302	0.00042	0.00041	0.00054	0.0014	0.00039	0.00045	0.00048	0.00043	0.00024	0.00045	0.00151	0.00024	<5e-05	0.00029		0.025-0.150 ^c			0.025-0.155 ^c
Phosphorous-T	mg/L	0.02	0.07	0.02	<0.02	<0.02	1.02	0.06	0.02	0.02	0.02	<0.02	0.02	0.06	0.01	0.05	0.02					
Potassium-T	mg/L	<0.5	<0.5	0.9	<0.5	<0.5	3.8	1	0.9	<0.5	<0.5	<0.5	0.9	1.8	<0.5	<0.5	<0.5					
Selenium-T	mg/L	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	0.00035	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	0.00049	<1e-04	<1e-04	<1e-04	0.002				0.001
Silicon-T	mg/L	4.52	7.05	5.25	4.81	4.78	5.83	5.89	4.89	4.77	5.66	3.85	4.96	18.05	4.02	2.45	4.48					
Silver-T	mg/L	<5e-05	<5e-05	0.00014	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	0.00005-0.0015 ^c	0.0001-0.003 ^c			0.0001
Sodium-T	mg/L	1.7	2.5	3.6	1.8	1.6	23.2	4.2	3.2	1.7	1.9	1.5	3.1	10.5	2.7	2	2.1					
Strontium-T	mg/L	0.02682	0.0519	0.0431	0.02708	0.03366	0.04884	0.1106	0.09314	0.03386	0.0401	0.04216	0.09354	0.304575	0.086125	0.06205	0.04315					
Thallium-T	mg/L	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05		0.0003			0.0008
Tin-T	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04					
Titanium-T	mg/L	0.0095	0.0089	0.0157	0.0089	0.0069	0.0373	0.0019	0.0069	0.0095	0.0122	0.0072	0.0055	0.004	0.0023</							

Physical Tests	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ26	BC MOE Guideline			CCME	
		95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	95 th %ile	30-day	Maximum	Long Term	Short Term	
Dissolved Metals																						
Aluminum-D	mg/L	0.324	0.205	0.244	0.254	0.208	0.231	0.018	0.058	0.265	0.496	0.188	0.074	0.06	0.094	0.072	0.234	0.05 ^b	0.1 ^b			
Antimony-D	mg/L	<5e-05	0.00008	0.0002	<5e-05	0.00007	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05					
Arsenic-D	mg/L	0.0004	0.0006	0.0018	0.0003	0.0007	0.0004	0.0005	0.0005	0.0004	<1e-04	0.0002	0.0005	0.0003	0.0004	0.0004	0.0003					
Barium-D	mg/L	0.0052	0.00415	0.00333	0.00351	0.00708	0.00603	0.00736	0.00712	0.00574	0.00649	0.00598	0.00704	0.02884	0.00794	0.00662	0.00475					
Beryllium-D	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04					
Boron-D	mg/L	<0.001	0.001	0.001	<0.001	<0.001	0.004	0.003	0.002	<0.001	0.002	<0.001	0.002	<0.001	0.007	<0.001	<0.001					
Cadmium-D	mg/L	0.000037	<1.5e-05	0.000121	<1.5e-05	<1.5e-05	0.000044	<1.5e-05	0.000052	<1.5e-05	<1.5e-05	<1.5e-05	0.000066	<1.5e-05	<1.5e-05	<1.5e-05	<1.5e-05					
Calcium-D	mg/L	2.8	7.7	7.2	3.9	4.4	10.5	24.8	17.8	4.2	5.9	5.5	17.2	57.3	13.5	6.3	6.1					
Chromium-D	mg/L	<3e-04	0.0007	<3e-04	0.0005	<3e-04	0.0005	<3e-04	<3e-04	0.0004	0.0005	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04	<3e-04					
Cobalt-D	mg/L	0.00005	0.00006	0.00003	0.00005	0.00005	0.00009	0.00005	0.00004	0.00004	0.00007	0.00003	0.00004	0.00011	<2e-05	<2e-05	0.00003					
Copper-D	mg/L	0.0008	0.0009	0.0015	0.0006	0.0006	0.0081	0.0011	0.007	0.0029	0.0006	0.0006	0.0006	0.0052	0.0003	0.0003	0.0008					
Iron-D	mg/L	0.1892	0.1874	0.1472	0.1636	0.1246	0.1738	0.1104	0.0928	0.1438	0.2202	0.1298	0.0956	0.4912	0.1577	0.1312	0.122	0.35				
Lead-D	mg/L	<5e-05	<5e-05	0.00015	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05					
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001					
Magnesium-D	mg/L	0.61	1.7	1.13	1.02	0.72	2.22	5.39	3.84	0.82	1.12	0.87	3.82	11.32	2.79	1.26	1.17					
Manganese-D	mg/L	0.01505	0.0078	0.01062	0.00498	0.00633	0.01292	0.04164	0.026	0.00453	0.00328	0.00831	0.02474	0.01762	0.01455	0.0054	0.0032					
Mercury-D	mg/L	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	0.000014	0.000014	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06	<8e-06					
Molybdenum-D	mg/L	0.00013	0.00034	0.00009	0.00009	0.00031	0.0003	0.0006	0.00051	0.00024	0.00009	0.00039	0.0005	0.00141	0.0005	0.0007	0.00056					
Nickel-D	mg/L	0.00041	0.00302	0.0004	0.00027	0.00039	0.00213	0.00036	0.00036	0.00032	0.0003	0.00014	0.00033	0.00142	0.0002	<5e-05	0.00029					
Phosphorous-D	mg/L	0.01	0.03	<0.01	<0.01	<0.01	3.1	0.03	0.01	0.02	0.02	<0.01	0.01	0.02	<0.01	<0.01	<0.01					
Potassium-D	mg/L	<0.5	<0.5	0.9	<0.5	<0.5	8.6	0.9	0.9	<0.5	<0.5	<0.5	0.8	0.8	<0.5	<0.5	<0.5					
Selenium-D	mg/L	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<6e-04	<1e-04	<1e-04	<1e-04					
Silicon-D	mg/L	4.38	6.67	5.03	4.62	4.76	4.96	4.84	4.8	4.56	5.5	3.64	4.85	14.6	3.2	2.04	4.34					
Silver-D	mg/L	<5e-05	<5e-05	0.00012	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05					
Sodium-D	mg/L	1.7	2.5	3.6	1.8	1.6	23.2	4	3.2	1.7	1.8	1.5	3.1	4.2	2.7	2	1.9					
Strontium-D	mg/L	0.02381	0.04966	0.04046	0.02504	0.0315	0.04606	0.1246	0.0857	0.03234	0.03892	0.04024	0.0853	0.293025	0.078075	0.0566	0.04065					
Thallium-D	mg/L	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05	<5e-05					
Tin-D	mg/L	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04	<1e-04					
Titanium-D	mg/L	0.0048	0.0041	0.0034	0.0027	0.0028	0.0026	0.0005	0.0012	0.0037	0.0062	0.0029	0.0013	0.0026	0.0014	0.001	0.0032					
Uranium-D	mg/L	0.00019	0.00013	<5e-05	0.00008	0.00023	0.00016	0.0001	0.00011	0.00017	0.00017	0.00022	0.0001	0.00014	0.00018	0.0003	0.00019					
Vanadium-D	mg/L	0.0003	0.00117	0.00014	0.00037	0.0002	0.00052	0.00022	0.00038	0.00034	0.00058	0.00026	0.00035	0.00018	<5e-05	<5e-05	<5e-05					
Zinc-D	mg/L	0.0086	0.0096	0.0551	0.0037	0.0083	0.0327	0.0058	0.0041	0.0054	0.0057	0.006	0.0041	0.0118	0.0024	0.0026	0.0027					
D-Hardness as CaCO ₃	mg/L	9.6	25	18.1	14.5	13.9	49.4	74.9	53.1	13.9	17.9	15.4	53.2	57.9								
Cyanide																						
Cyanide (Total)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.0126	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005					
Cyanide (WAD)	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.01		0.005	
Blackwater – Field Parameters																						
Conductivity (EC)	µS/cm	17.4	60	50.3	28.1	29	51.4	152.2	116.5	32	41.6	36.4	123.6	114	32.6	33	37.8					
DO Saturation %	%	100.8	98.6	94	100.4	103.5	105.9	116	109.3	102.9	105.7	102.3	106.5	95.4	88.7	89.1	101.5					
pH	pH	7.6	8.7	8.4	8.7	8.3	8.7	9	8.5	7.8	7.9	9.4	8.8	8.2	9.8	9.9	8	6.5-9.0			6.5-9.0	
Temperature	°C	5.23	6.4	7.09	8.57	6.8	8.13	13.47	12.58	6.25	6.54	9.68	12.1	12.33	12.89	13	7.48		18			

Notes: (a) pH and temperature dependent. Assume pH ranges from 6.7 to 8.25, and Temperature = 0 to 19°C.
 (b) pH dependent.
 (c) Hardness dependent
 µS/cm = microSiemens per centimetre; mg/L = milligram per litre; °C = degrees Celsius; % = percent

The pattern of weekly 95th percentile exceedances of total aluminum was similar to that of monthly samples. There were more exceedances of copper, including the federal guideline in the weekly samples. The pattern of exceedances of the federal total iron guideline was similar between the weekly and monthly 95th percentile results. Again, silver exceedances occurred at WQ4 close to the deposit. Some of the same exceedances of the 30-day BC total zinc guideline occurred in the weekly samples (WQ1, WQ3, WQ7) but additional exceedances occurred at WQ4 and WQ6, whereas for the monthly samples WQ4 exceeded the maximum BC total zinc guideline. The pattern of exceedances of dissolved aluminum was similar in the two data sets.

The 95th percentile concentrations of TSS exceeded the BC clear water guideline of 5 mg/L at WQ3, WQ4, WQ5, WQ7 – WQ11, WQ13, WQ16, and WQ26, i.e., at most sites at sometime during freshet, an expected result since stream flows are higher during freshet. The monthly TSS 95th percentile results were similar.

In summary, freshet exceedances were generally similar to the full monthly data set. Dissolved iron and manganese, which tend to be indicators of groundwater, were also similar between monthly and weekly data sets, suggesting there is limited influence of groundwater on surface flows at the Project site when averaged over the year.

4.4.3 Minimum and Maximum Results

Minimum and maximum weekly results are listed in **Annex 3**.

4.5 Lake Water Quality

4.5.1 Lakes Selected

Selected Project area lakes were sampled quarterly beginning in June 2012 (Lake 1428 sampling began in September). Sampling will continue until at least one year's quarterly data have been collected. **Figure 2.13-1** shows the locations of lake samples; rationale for choice is provided in **Table 3.1-2**.

4.5.2 Methods

Lake sampling was by boat in June and September and through ice in January to March; no samples were collected in late fall (October to December) or spring (April to March) due to unsafe ice conditions. A Van Dorn bottle was used to collect samples. The Van Dorn was rinsed with to-be-sampled lake water between lakes. Locations in lakes were chosen based on detailed bathymetric surveys where available or spot surveys and local knowledge where not. The deepest location in lakes was used for sampling. Where lakes were greater than 10 m deep, three samples were collected—top, middle, and bottom; where lakes were less

than 10 m deep, samples were collected top and bottom. Lakes were sampled in the summer and fall in 2012; in January, February, and March 2013; and in July 2013.

Table 4.5-1 lists sampled lakes and the number of samples in each profile.

Table 4.5-1: Lake Sample Sites and Sample Profile Numbers

Lake	Water Quality Site	Profile Numbers
Kuyakuz (2012 only)	WQ20	3
Tatelkuz	WQ21	3
Snake	WQ22	2
Lake 1682	WQ23	3
Lake 1538	WQ24	2
Lake 1428	WQ25	2

Table 4.5-2 lists sample times for lakes.

Table 4.5-2: Lake Monitoring Months

Lake	WQ No.	June 2012	Sept 2012	Jan 2013	Feb 2013	Mar 2013
Kuyakuz	WQ20	X	X	-	-	-
Tatelkuz	WQ21	X	X	X	-	-
Snake	WQ22	X	X	-	X	-
Lake 6182	WQ23	X	X	-	-	X
Lake 1538	WQ24	X	X	-	-	X
Lake 1428	WQ25	-	X	-	-	X

4.5.3 Results

4.5.3.1 Depth Variation

When TSS was elevated in hypolimnion (bottom) samples some metals were elevated over epilimnion and metalimnion samples, including total aluminum, arsenic, cobalt, iron, manganese, and molybdenum, as well as dissolved metals aluminum, iron, and manganese. Otherwise water chemistry data show no constant variability with depth for different parameters in the lakes sampled. Differences from bottom to top of the water columns were most evident in metals, with some concentrations being greater at the top and others at the bottom. Major cations and anions (calcium, potassium, magnesium, sodium, sulphate, chloride) showed little variation top to bottom. Dissolved oxygen (DO) and temperature profiles were not collected as part of the water quality program as these data were collected as part of the aquatics programs. Based on the water chemistry profile data, lakes appeared to be relatively well mixed year-round.

4.5.3.2 Seasonal Variation

Seasonal differences were generally relatively small, except for:

- Tatalkuz Lake (WQ21): January 2013 total zinc was 5 to 10 times higher in the metalimnion and hypolimnion samples than in June or September 2012 and above the BC FWG of 0.0075 mg/L (hardness <90 mg/L) at 0.0119 mg/L and 0.0203 mg/L.
- Snake Lake (WQ22): February 2013 nitrate was much higher than in June or September 2012 (0.252 mg/L to 0.311 mg/L versus <0.005 mg/L).
- Lake 1538 (WQ24): both total dissolved solids (TDS) and alkalinity were much higher in June 2012 and March 2013 than in September 2012. Total cadmium was somewhat elevated in September 2012. Lake 1538 is a small headwater lake where surface runoff is relatively small, but where groundwater discharge (possibly causing elevation in alkalinity and TDS) is also small.

Samples for Lake 1428 (WQ25) were collected in September 2012 and March 2013; no seasonal differences were evident.

4.5.3.3 Summary Means

Mean results are presented in **Table 4.5-3** by combining epilimnion, metalimnion, and hypolimnion profile samples. The complete database is attached in **Annex 4**. There are not enough samples per lake to present meaningful 95th percentile results.

Table 4.5-3: Lake Water Quality Summary Means

Legend	Parameter	Unit	WQ20	WQ21	WQ22	WQ23	WQ24	WQ25	BC FWG		CCME	
									30-day	Max.	Long Term	Short Term
No non-detects	pH at 25°C BC-D	pH	7.95	7.91	7.65	7.47	7.5	7.47	6.5-9.0			
In data	Conductivity at 25°C	µS/cm	158.7	147.1	99.5	61	53.2	52.5				
	T-Dissolved Solids at 180°C	mg/L	104.4	102.2	73.3	31.7	22.9	23.3				
Means based on	Total Suspended Solids at 105°C	mg/L	6	2.4	2.3	2.9	2.2	2	5	+10%		
ROS model	Turbidity	NTU	18.37	1.17	2.53	2.41	4.42	1.07	8	+10%		
	Hardness as (CaCO ₃)	mg/L	74	69.7	43.8	24.2	22.4	24.8				
Means based on	Alkalinity as CaCO ₃	mg/L	84.7	75.8	50.8	26.8	31.7	24.6				
Whole DL substitution	Fluoride-D	mg/L	0.09	0.08	0.08	0.05	0.04	0.04	a	a	0.120	
	Sulphate-D	mg/L	2	3.7	0.8	1.9	1.4	1.6	b			
a 0.4 mg/L hardness ≤10 mg/L	Chloride-D	mg/L	0.6	0.4	0.5	0.4	0.4	0.3	150		120	640
[-51.73+92.57 x log{hardness}]x0.01	Ammonia - Nitrogen	mg/L	0.07	0.02	0.02	0.11	0.08	0.02	c		c	
hardness >10 mg/L	Nitrate-N-D	mg/L	0.03	0.047	0.095	0.036	0.04	0.04	3		3	
b 115-410 mg/L	Nitrite-N-D	mg/L	0.003	0.003	0.003	0.003	0.003	0.003	0.002		0.06	
Hardness=0-250 mg/L	Total Kjeldahl Nitrogen (TKN)	mg/L	0.5	0.21	0.44	0.18	0.15	0.18				
c pH/Temp dependent	Phosphorous-Ortho-DLL	mg/L	0.003	0.003	0.003	0.003	0.003					
Refer to Fig. 4.2-1	Phosphorous (Total-Dissolved) LL	mg/L	0.02	0.02	0.01	0.07	0.03	0.01				
d 10e(0.86[log{hardness}]-3.2)	Carbon (Total Organic)	mg/L	13	11.7	17.9	5	5.8	8.8	±20%			
e 10e(0.83[log{hardness}]-1.71)	Carbon (Dissolved Organic)	mg/L	12.3	11.4	16	4.5	5.6	8.6				
f 10e(1.01[log{hardness}]-2.46)	Aluminum-T	mg/L	0.032	0.01	0.014	0.008	0.015	0.02			0.1	
g 0.001 mg/L Cr6+	Antimony-T	mg/L	0.00005	0.00005	0.00006	0.00006	0.00006	0.00005	0.02			
0.0089 mg/L Cr3+	Arsenic-T	mg/L	0.0003	0.0004	0.0003	0.0026	0.0018	0.0002	0.005		0.005	
h 0.001 mg/L CR6+	Barium-T	mg/L	0.01033	0.00602	0.00764	0.00401	0.00435	0.00891				
i 0.002 hardness <50 mg/L	Beryllium-T	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
0.04 x [mean hardness]	Boron-T	mg/L	0.002	0.003	0.002	0.001	0.001	0.001			1.5	29
hardness >50 mg/L	Cadmium-T	mg/L	0.000012	0.000024	0.00002	0.000017	0.000024	0.000032		d (µg/L)	e (µg/L)	f (µg/L)
j (0.094[hardness]) +2	Calcium-T	mg/L	21.6	21.1	12.8	7.7	7.2	8.4				
k 0.002-0.006 mg/L	Chromium-T	mg/L	0.0003	0.0002	0.0003	0.0002	0.0003	0.0003	g		h	
hardness 0->180 mg/L	Cobalt-T	mg/L	0.00003	0.00002	0.00002	0.00004	0.00004	0.00002	0.004	0.110		
l 3.31+e(1.273 ln[mean hardness]-4.704)	Copper-T	mg/L	0.0006	0.0006	0.0004	0.0001	0.0002	0.0002	i (µg/L)	j (µg/L)	k	
m 3(1.273 ln[mean hardness]-1.460)	Iron-T	mg/L	0.1251	0.0226	0.1784	0.7836	0.9066	0.0579		1	0.3	
n 0.001-0.007 mg/L	Lead-T	mg/L	0.00143	0.00079	0.00073	0.00006	0.00006	0.00006	l (µg/L)	m (µg/L)	n	
hardness 0->180 mg/L	Lithium-T	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.014	0.870		
o (0.00044 x hardness)+0.605	Magnesium-T	mg/L	5.85	4.81	3.41	1.34	1.3	1.16				
p (0.1102 x hardness)+0.54	Manganese-T	mg/L	0.115303	0.011469	0.044585	0.111516	0.255154	0.026627	o (µg/L)	p (µg/L)		
q 0.025-0.150 mg/L	Mercury-T	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00002	0.0001		
hardness 0->180 mg/L	Molybdenum-T	mg/L	0.00078	0.00056	0.00031	0.00081	0.00126	0.00066		1	0.073	
r 0.00005 mg/L hardness <100 mg/L	Nickel-T	mg/L	0.00028	0.00025	0.00016	0.00012	0.00005	0.00008	q		q	
0.0015 mg/L hardness >100 mg/L	Phosphorous-T	mg/L	0.04	0.02	0.02	0.07	0.04	0.02	5	15		
	Potassium-T	mg/L	0.9	0.8	1.1	0.5	0.5	0.5				
	Selenium-T	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.002		0.001	
	Silicon-T	mg/L	7.55	4.61	5.21	4.79	1.86	2				
	Silver-T	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	r		0.00001	
	Sodium-T	mg/L	3.5	3.6	3.2	2.4	1.9	1.8				
No non-detects	Strontium-T	mg/L	0.110778	0.101189	0.0718	0.05105	0.047625	0.080883				
In data	Thallium-T	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005		0.00003	0.00008	
	Tin-T	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
Means based on	Titanium-T	mg/L	0.0017	0.0002	0.0003	0.0002	0.0002	0.0002				
ROS model	Uranium-T	mg/L	0.00005	0.00009	0.00005	0.00013	0.00032	0.00013		0.300	0.015	0.033

Table continues...

Legend	Parameter	Unit	WQ20	WQ21	WQ22	WQ23	WQ24	WQ25	BC FWG		CCME	
									30-day	Max.	Long Term	Short Term
	Vanadium-T	mg/L	0.0001	0.0001	0.0001	0.00008	0.00008	0.00007	0.006			
Means based on	Zinc-T	mg/L	0.0048	0.0058	0.0055	0.0021	0.0023	0.0026	s (µg/L)	t (µg/L)	0.030	
Whole DL substitution	T-Hardness as CaCO ₃	mg/L	74.2	68.8	43.5	22.1	18.2	21.7				
	Aluminum-D	mg/L	0.002	0.003	0.01	0.004	0.008	0.014	0.05	0.1		
s 7.5 hardness <90 mg/L	Antimony-D	mg/L	0.00005	0.00005	0.00006	0.00006	0.00006	0.00005				
7.5 + 0.75 x (hardness -90)	Arsenic-D	mg/L	0.0003	0.0004	0.0003	0.0026	0.0017	0.0002				
t 33 hardness <90 mg/L	Barium-D	mg/L	0.00872	0.00555	0.00686	0.0037	0.00388	0.00779				
hardness >90 mg/L	Beryllium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
33+0.75 x (hardness -90)	Boron-D	mg/L	0.003	0.003	0.001	0.001	0.001	0.001				
hardness ≥90 mg/L	Cadmium-D	mg/L	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015				
	Calcium-D	mg/L	20.1	20	12.1	7.5	6.8	8				
	Chromium-D	mg/L	0.0003	0.0002	0.0003	0.0002	0.0003	0.0003				
	Cobalt-D	mg/L	0.00002	0.00002	0.00002	0.00003	0.00004	0.00002				
	Copper-D	mg/L	0.0001	0.0003	0.0002	0.0001	0.0002	0.0002				
	Iron-D	mg/L	0.048	0.0104	0.1174	0.7383	0.8172	0.0389		0.350		
	Lead-D	mg/L	0.00012	0.00031	0.00044	0.00005	0.00005	0.00005				
	Lithium-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001				
	Magnesium-D	mg/L	5.66	4.64	3.29	1.31	1.27	1.12				
	Manganese-D	mg/L	0.08753	0.00055	0.03829	0.10352	0.25306	0.02244				
	Mercury-D	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005				
	Molybdenum-D	mg/L	0.00075	0.00055	0.0003	0.00078	0.00117	0.00065				
	Nickel-D	mg/L	0.00012	0.00017	0.00009	0.00005	0.00005	0.00006				
	Phosphorous-D	mg/L	0.02	0.02	0.01	0.06	0.04	0.01				
	Potassium-D	mg/L	0.9	0.8	1.1	0.5	0.5	0.5				
	Selenium-D	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006				
	Silicon-D	mg/L	7.35	4.52	5.08	4.67	1.83	1.98				
	Silver-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005				
	Sodium-D	mg/L	3.4	3.5	3.2	2.4	1.9	1.7				
	Strontium-D	mg/L	0.1028	0.096611	0.067217	0.049433	0.044375	0.073183				
	Thallium-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005				
	Tin-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				
	Titanium-D	mg/L	0.0002	0.0002	0.0002	0.0003	0.0002	0.0002				
	Uranium-D	mg/L	0.00005	0.00009	0.00005	0.00013	0.00029	0.00012				
	Vanadium-D	mg/L	0.00013	0.0001	0.00008	0.00005	0.00005	0.00005				
	Zinc-D	mg/L	0.0037	0.0051	0.0055	0.0021	0.0023	0.0025				
	D-Hardness as CaCO ₃	mg/L	68.1	64.8	40.2	21	16.8	19.6				
	Cyanide (Total)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005				
	Cyanide (WAD)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005		0.005	0.005	0.010

Notes: µS/cm = microSiemens per centimetre; mg/L = milligram per litre; °C = degrees Celsius; % = percent

4.5.3.4 Specific Results

The parameters discussed in this section are the same as for stream water quality. Box plots were plotted for four of the lakes with June and September 2012 and January to March 2013 data.

Statistical distributions for box plots used all data for each parameter for each lake. Similar to stream box plots, ROS statistical procedures were used to estimate minimums when some data were below detection. For datasets with less than three values above detection, a most probable minimum was not calculated and the minimum set at less than detection.

In box plots, diamonds represent the arithmetic mean, the solid black line represents the median, the box delimits the first and third quartiles, and the whiskers represent the outliers (minimums and maximums). Hollow dots in some of the box plots represent outliers that are more than 1.5 times the median.

pH

Figure 4.5-1 shows spatial and temporal variation among the lake samples.

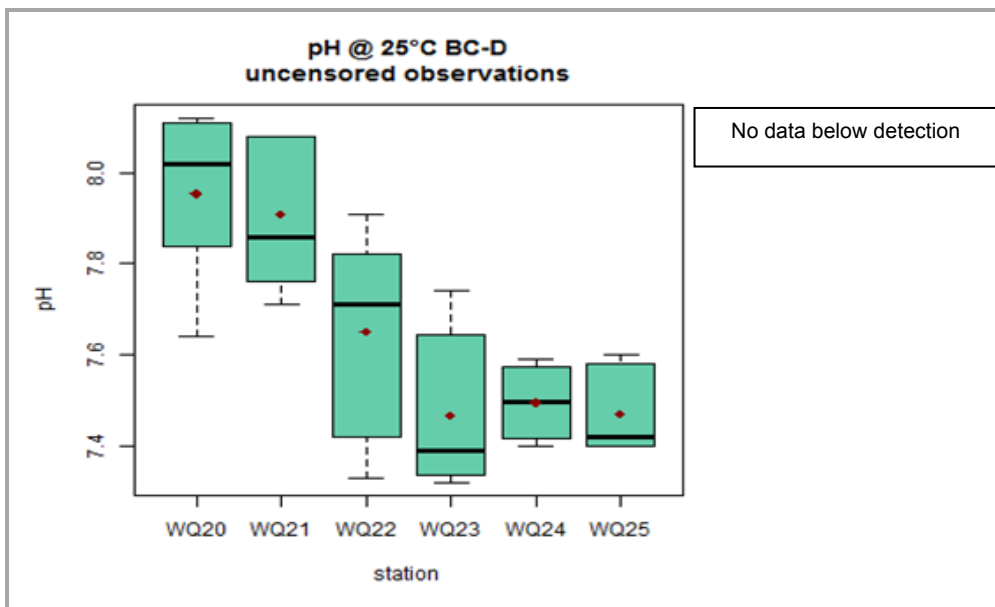


Figure 4.5-1: Spatial and Temporal Variability of Lake pH

All lakes had somewhat alkaline pH with the larger lakes (Kuyakuz WQ20 and Tatelkuz WQ21) being the most alkaline. All pH data were within the BC FWG and CCME EQG of 6.5 to 9.0 (maximum 8.5 for drinking water).

Alkalinity

Figure 4.5-2 shows the spatial and temporal variability of lake alkalinity.

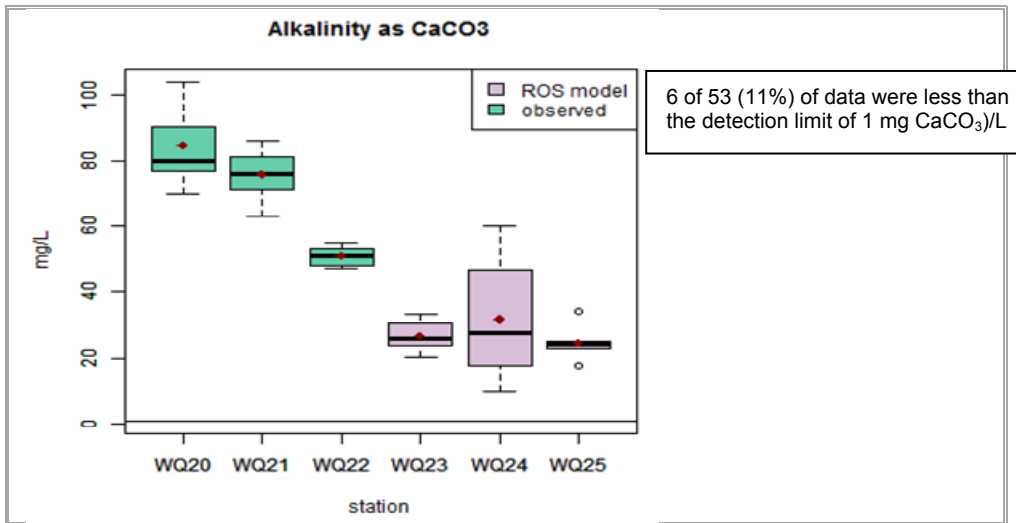


Figure 4.5-2: Spatial and Temporal Variability in Lake Alkalinity

Lake alkalinity showed the same pattern as pH with Kuyakuz and Tatelkuz Lakes being the most alkaline; however, none of the lakes would be classed as alkaline based on the monitoring results. Highest variability was in the two small headwater lakes in the Fawnie Creek watershed (Lake 1538 WQ24 and Lake 1428 WQ25). Alkalinity in lakes ranged from <1 mg CaCO₃/L to 104 mg CaCO₃/L.

Hardness

Figure 4.5-3 shows the spatial and temporal variability in lake hardness.

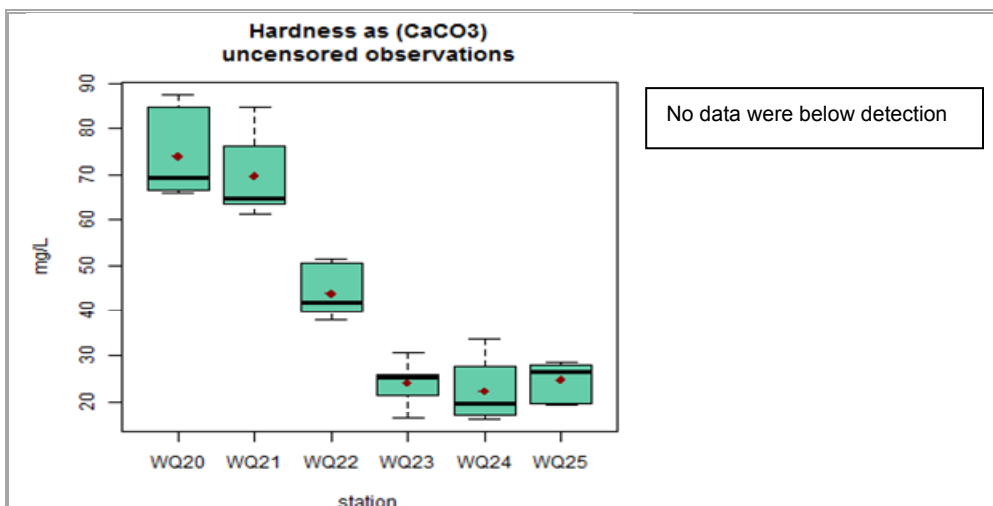


Figure 4.5-3: Spatial and Temporal Variability in Lake Hardness

Lake hardness showed a similar pattern to alkalinity with WQ20 and WQ21 having the hardest water. Temporal variability (as shown by the height of the boxes) was less than for alkalinity. Hardness is determined principally by calcium and magnesium. The small headwater lakes (WQ23 in the Davidson Creek drainage and WQ24 and WQ25 in the Fawnie Creek drainage) had the softest water. None of the lakes had water that would be characterized as hard (hardness >200 mg CaCO₃/L). Hardness ranged from 16.2 mg CaCO₃/L to 87.6 mg CaCO₃/L).

Total Suspended Solids

Figure 4.5-4 shows the spatial and temporal variability in lake TSS.

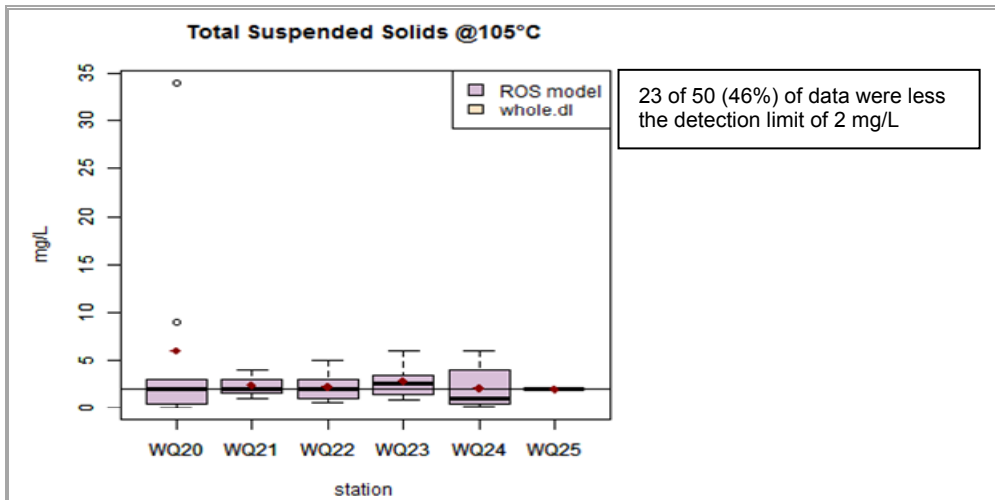


Figure 4.5-4: Spatial and Temporal Variability in Lake TSS

For the most part, TSS was low in lakes as would be expected. WQ20 had one high TSS data point at 34 mg/L and one at 9 mg/L. These were a bottom (hypolimnion) samples and disturbance of bottom sediments was the most probable cause of this high reading. In addition there were four measurements of 6 mg/L and one of 5 mg/L. All other samples were below the clear water BC FWG of 5 mg/L.

Turbidity

Figure 4.5-5 shows the spatial and temporal variability in lake turbidity. One anomalous result of 140 NTU for WQ20 was removed to improve the display; the high turbidity was coincident with elevated TSS in a hypolimnion sample.

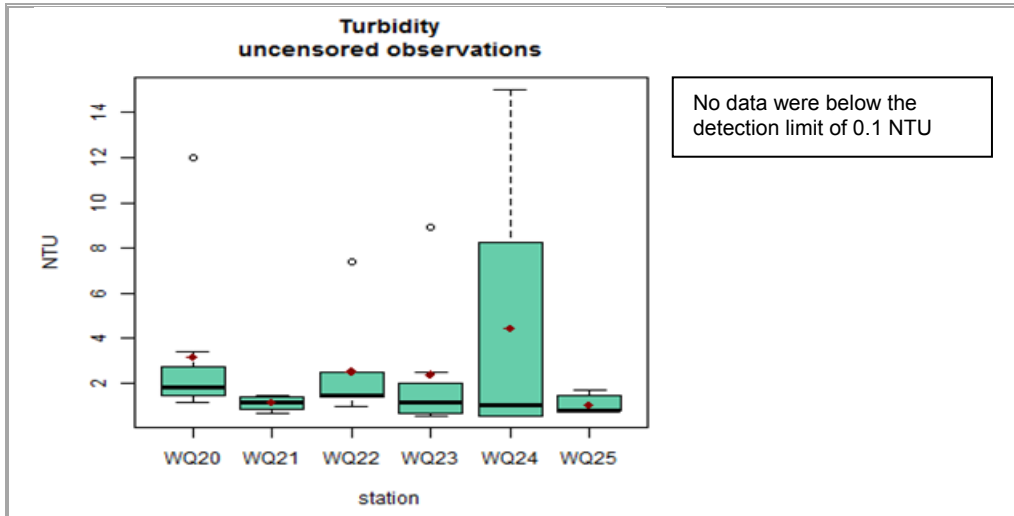


Figure 4.5-5: Spatial and Temporal Variability of Lake Turbidity

Turbidities followed the same pattern as TSS, suggesting a correlation between the two for the lakes sampled. Leaving aside the suspect samples in Lake WQ20, previously discussed under TSS, WQ24 (Lake 1538) had the highest temporal variability, which may have been a sampling artifact since both the highest TSS and turbidity readings in this lake were for bottom samples. Median turbidities for all lakes were similar (as shown by the solid black lines in the boxes). Turbidities in the sampled lakes ranged from 0.6 NTU to 12 NTU. Excluding the two suspect samples, the range dropped to 0.6 NTU to 2.5 NTU.

Sulphate

Figure 4.5-6 shows spatial and temporal variability of lake sulphate. Lake sulphate concentrations were all very low with WQ21 (Tatelkuz Lake) being the highest at a maximum of 4.9 mg/L.

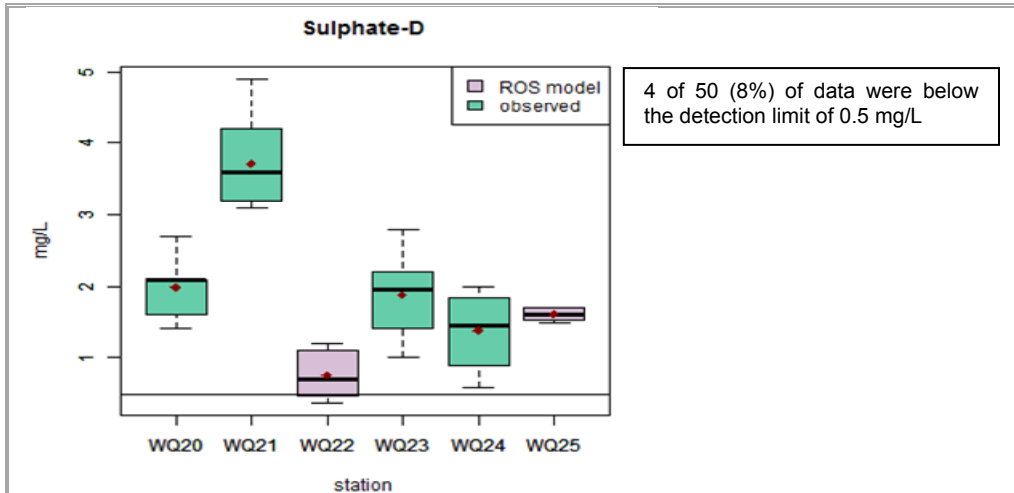


Figure 4.5-6: Spatial and Temporal Variability of Lake Sulphate

Ammonia

Most ammonia concentrations were below the detection limit. Six samples, or 13%, were above detection—four in WQ20 and one in each of WQ23 and WQ24. Results are presented in **Table 4.5-4**.

With no anthropogenic source and an oxidizing environment, ammonia would be expected to be at low concentrations. The highest recorded concentrations were 0.57 mg N/L and 0.53 mg N/L, both from hypolimnion samples. All slightly elevated ammonia results were from winter (ice-covered) hypolimnion samples.

Table 4.5-4: Spatial and Temporal Variation in Lake Ammonia

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
04-Feb-13	Epi	<0.02	28-Jan-13	Epi	<0.02	04-Feb-13	Epi	<0.02
04-Feb-13	Meta	<0.02	28-Jan-13	Meta	<0.02	04-Feb-13	Hypo	<0.02
04-Feb-13	Hypo	0.53	28-Jan-13	Hypo	<0.02	12-Sep-12	Epi	<0.02
12-Sep-12	Epi	0.03	12-Sep-12	Epi	<0.02	12-Sep-12	Hypo	<0.02
12-Sep-12	Meta	0.02	12-Sep-12	Meta	<0.02	26-Jun-12	Epi	<0.02
12-Sep-12	Hypo	0.02	12-Sep-12	Hypo	<0.02	26-Jun-12	Hypo	<0.02
25-Jun-12	Epi	<0.02	25-Jun-12	Epi	<0.02	-	-	-
25-Jun-12	Meta	<0.02	25-Jun-12	Meta	<0.02	-	-	-
25-Jun-12	Hypo	<0.02	25-Jun-12	Hypo	<0.02	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.02	13-Mar-13	Epi	<0.02	13-Mar-13	Epi	<0.02
13-Mar-13	Meta	<0.02	13-Mar-13	Hypo	0.25	13-Mar-13	Hypo	<0.02
13-Mar-13	Hypo	0.57	12-Sep-12	Epi	<0.02	12-Sep-12	Epi	<0.02
12-Sep-12	Epi	<0.02	12-Sep-12	Hypo	<0.02	12-Sep-12	Hypo	<0.02
12-Sep-12	Meta	<0.02	26-Jun-12	Epi	<0.02	-	-	-
12-Sep-12	Hypo	<0.02	26-Jun-12	Hypo	<0.02	-	-	-
26-Jun-12	Epi	<0.02	-	-	-	-	-	-
26-Jun-12	Meta	<0.02	-	-	-	-	-	-
26-Jun-12	Hypo	<0.02	-	-	-	-	-	-

Notes: Concentrations in mg N/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Nitrate

Twenty-three, or 46%, of nitrate results were below the detection limit of 0.005 mg N/L. The highest recorded nitrate concentration was 0.311 mg N/L in Snake Lake (WQ22) for a February 2013 hypolimnion sample. This nitrate concentration was an order of magnitude below the BC FWG. **Figure 4.5-7** shows spatial and temporal variability of lake nitrate.

Results indicate Project area lakes have very low nitrate concentrations, which is normal for oligotrophic lakes with no or little anthropogenic influences.

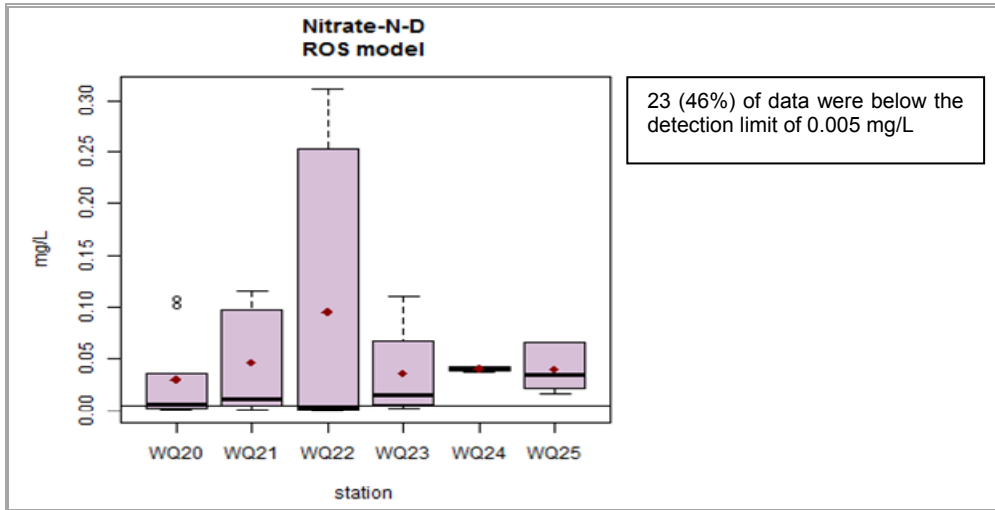


Figure 4.5-7: Spatial and Temporal Variation of Lake Nitrate

Nitrite

All but one sample had nitrite concentrations below the detection limit of 0.003 mg N/L. WQ20 hypolimnion sample February 2013 had a nitrite concentration of 0.005 mg/L. Table 4.5-5 lists the spatial and temporal variations results.

Table 4.5-5: Spatial and Temporal Variation of Lake Nitrite

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
04-Feb-13	Epi	<0.003	28-Jan-13	Epi	<0.003	04-Feb-13	Epi	<0.003
04-Feb-13	Meta	<0.003	28-Jan-13	Meta	<0.003	04-Feb-13	Hypo	<0.003
04-Feb-13	Hypo	0.005	28-Jan-13	Hypo	<0.003	12-Sep-12	Epi	<0.003
12-Sep-12	Epi	<0.003	12-Sep-12	Epi	<0.003	12-Sep-12	Hypo	<0.003
12-Sep-12	Meta	<0.003	12-Sep-12	Meta	<0.003	26-Jun-12	Epi	<0.003
12-Sep-12	Hypo	<0.003	12-Sep-12	Hypo	<0.003	26-Jun-12	Hypo	<0.003
25-Jun-12	Epi	<0.003	25-Jun-12	Epi	<0.003	-	-	-
25-Jun-12	Meta	<0.003	25-Jun-12	Meta	<0.003	-	-	-
25-Jun-12	Hypo	<0.003	25-Jun-12	Hypo	<0.003	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.003	13-Mar-13	Epi	<0.003	13-Mar-13	Epi	<0.003
13-Mar-13	Meta	<0.003	13-Mar-13	Hypo	<0.003	13-Mar-13	Hypo	<0.003
13-Mar-13	Hypo	<0.003	12-Sep-12	Epi	<0.003	12-Sep-12	Epi	<0.003
12-Sep-12	Epi	<0.003	12-Sep-12	Hypo	<0.003	12-Sep-12	Hypo	<0.003
12-Sep-12	Meta	<0.003	26-Jun-12	Epi	<0.003	-	-	-
12-Sep-12	Hypo	<0.003	26-Jun-12	Hypo	<0.003	-	-	-
26-Jun-12	Epi	<0.003	-	-	-	-	-	-
26-Jun-12	Meta	<0.003	-	-	-	-	-	-
26-Jun-12	Hypo	<0.003	-	-	-	-	-	-

Notes: Concentrations in mg N/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Dissolved Aluminum

Figure 4.5-8 shows spatial and temporal variability of lake dissolved aluminum.

All of WQ20 and WQ21 were just above or below detection. In contrast, the smaller lakes had highly variable dissolved aluminum concentrations:

- WQ22: 0.004 – 0.015 mg/L;
- WQ23: <0.002 – 0.013 mg/L;
- WQ24: 0.003 – 0.014 mg/L; and
- WQ25: 0.012 – 0.018 mg/L.

WQ25 (Lake 1428) at the headwaters of Creek 705 which drains into Fawnie Creek had the highest median concentration of dissolved aluminum (0.013 mg/L). Data for all lakes ranged from less than detection to 0.018 mg/L, all below the BC FWG of 0.05 mg/L, 30-day average concentration.

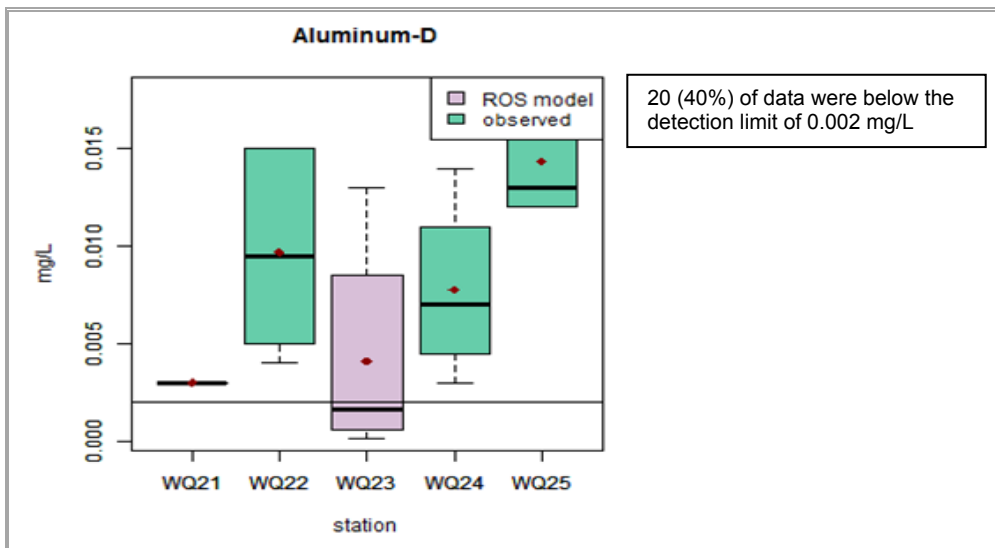


Figure 4.5-8: Spatial and Temporal Variation of Lake Dissolved Aluminum

Total Antimony

Total antimony concentrations were almost all below the detection limit of 0.00005 mg/L. Table 4.5-6 lists results.

Total antimony concentrations were below detection in Kuyakuz Lake (WQ20) and Lake 1428 (WQ25) and below or slightly above detection in other lakes. The working provincial guideline for the protection of freshwater aquatic life is 0.020 mg/L.

Table 4.5-6: Spatial and Temporal Variation of Lake Total Antimony

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
04-Feb-13	Epi	<0.00005	28-Jan-13	Epi	<0.00005	04-Feb-13	Epi	0.00009
04-Feb-13	Meta	<0.00005	28-Jan-13	Meta	0.00006	04-Feb-13	Hypo	<0.00005
04-Feb-13	Hypo	<0.00005	28-Jan-13	Hypo	0.00007	12-Sep-12	Epi	<0.00005
12-Sep-12	Epi	<0.00005	12-Sep-12	Epi	<0.00005	12-Sep-12	Hypo	<0.00005
12-Sep-12	Meta	<0.00005	12-Sep-12	Meta	<0.00005	26-Jun-12	Epi	<0.00005
12-Sep-12	Hypo	<0.00005	12-Sep-12	Hypo	<0.00005	26-Jun-12	Hypo	<0.00005
25-Jun-12	Epi	<0.00005	25-Jun-12	Epi	<0.00005	-	-	-
25-Jun-12	Meta	<0.00005	25-Jun-12	Meta	<0.00005	-	-	-
25-Jun-12	Hypo	<0.00005	25-Jun-12	Hypo	<0.00005	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	0.00007	13-Mar-13	Epi	0.00006	13-Mar-13	Epi	<0.00005
13-Mar-13	Meta	0.00006	13-Mar-13	Hypo	<0.00005	13-Mar-13	Hypo	<0.00005
13-Mar-13	Hypo	<0.00005	12-Sep-12	Epi	0.00007	12-Sep-12	Epi	<0.00005
12-Sep-12	Epi	0.00007	12-Sep-12	Hypo	0.00007	12-Sep-12	Hypo	<0.00005
12-Sep-12	Meta	0.00006	26-Jun-12	Epi	<0.00005	-	-	-
12-Sep-12	Hypo	0.00007	26-Jun-12	Hypo	<0.00005	-	-	-
26-Jun-12	Epi	<0.00005	-	-	-	-	-	-
26-Jun-12	Meta	<0.00005	-	-	-	-	-	-
26-Jun-12	Hypo	<0.00005	-	-	-	-	-	-

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Total Arsenic

Figure 4.5-9 shows the spatial and temporal variability in lake total arsenic.

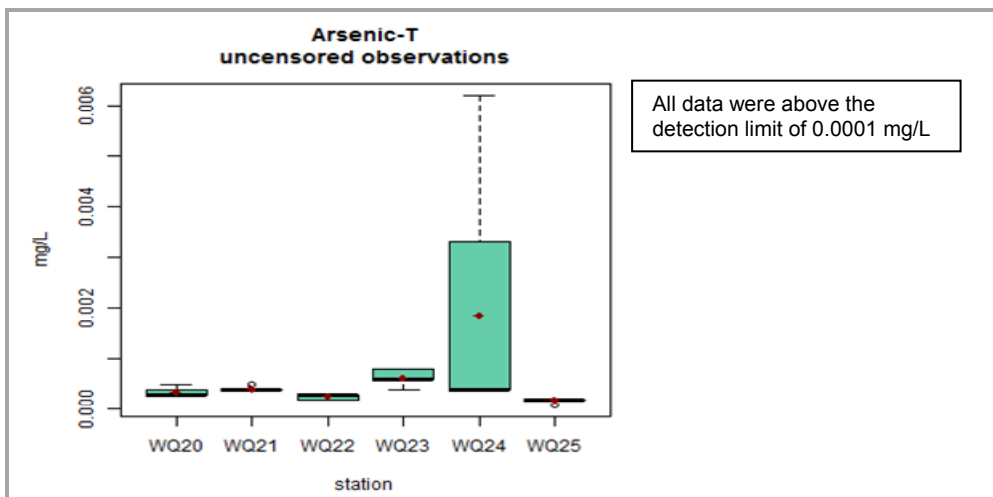


Figure 4.5-9: Spatial and Temporal Variation of Lake Total Arsenic

There is considerable spatial variability in lake total arsenic concentrations but most concentrations are low. WQ23 had the highest concentration and WQ24 the greatest range in concentrations measured. One WQ23 outlier (0.0127 mg/L) was not plotted because it causes the box plots to be too compressed vertically; this outlier was associated with somewhat elevated TSS. WQ23 and WQ24 are close to the deposit and may reflect groundwater leaching naturally from the deposit. The WQ23 outlier was recorded for the March 2013 hypolimnion sample in which TSS was slightly elevated (6 mg/L) and may be associated with suspended solids from bottom sediment in the lake. Total arsenic ranged from 0.0002 mg/L at WQ22 (Snake Lake) to 0.0127 mg/L at WQ23 (Lake 1682). All sampled concentrations (except the one WQ23 outlier) were well below the BC FWG of 0.005 mg/L for total arsenic.

Total Cadmium

Table 4.5-7 lists the spatial and temporal variation in lake total cadmium.

Table 4.5-7: Spatial and Temporal Variation of Lake Total Cadmium

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
13-Mar-13	Epi	<0.000015	28-Jan-13	Epi	<0.000015	04-Feb-13	Epi	<0.000015
13-Mar-13	Meta	<0.000015	28-Jan-13	Meta	<0.000015	04-Feb-13	Hypo	<0.000015
13-Mar-13	Hypo	<0.000015	28-Jan-13	Hypo	0.000122	12-Sep-12	Epi	0.000031
12-Sep-12	Epi	0.000023	12-Sep-12	Epi	0.000028	12-Sep-12	Hypo	0.000026
12-Sep-12	Meta	0.000017	12-Sep-12	Meta	0.000025	26-Jun-12	Epi	<0.000015
12-Sep-12	Hypo	0.000042	12-Sep-12	Hypo	0.000023	26-Jun-12	Hypo	<0.000015
26-Jun-12	Epi	<0.000015	25-Jun-12	Epi	<0.000015	-	-	-
26-Jun-12	Meta	<0.000015	25-Jun-12	Meta	<0.000015	-	-	-
26-Jun-12	Hypo	<0.000015	25-Jun-12	Hypo	<0.000015	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.000015	13-Mar-13	Epi	0.00006	13-Mar-13	Epi	<0.000015
13-Mar-13	Meta	<0.000015	13-Mar-13	Hypo	<0.00005	13-Mar-13	Hypo	<0.000015
13-Mar-13	Hypo	<0.000015	12-Sep-12	Epi	0.00007	12-Sep-12	Epi	0.000052
12-Sep-12	Epi	0.000028	12-Sep-12	Hypo	0.00007	12-Sep-12	Hypo	0.000082
12-Sep-12	Meta	0.000022	26-Jun-12	Epi	<0.00005	-	-	-
12-Sep-12	Hypo	0.000025	26-Jun-12	Hypo	<0.00005	-	-	-
26-Jun-12	Epi	<0.000015	-	-	-	-	-	-
26-Jun-12	Meta	<0.000015	-	-	-	-	-	-
26-Jun-12	Hypo	<0.000015	-	-	-	-	-	-

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Sixty-eight per cent of samples were below the detection limit of 0.000015 mg/L. The highest total cadmium concentration was at WQ21, where the hypolimnion sample for

January 2013 also demonstrated elevated TSS. Detectable total cadmium was fairly closely correlated to detectable TSS (13 of 15 samples had both detectable TSS and detectable total cadmium). The September 2012 samples were almost all above detection ranging from 0.000022 mg/L to 0.000082 mg/L; WQ25 had the highest total cadmium concentrations at that date. Spatial variability was relatively small, except WQ25, which had elevated cadmium for the one set of samples taken in September 2012.

The BC FWG for cadmium is under review. The current (2006) working guideline is hardness-based on the following equation:

$$\text{Total cadmium } (\mu\text{g/L}) = 10^{e(0.86[\log(\text{hardness})]-3.2)}$$

For soft water (20 mg CaCO₃/L) the current provincial working guideline of 0.008 µg/L is below the detection limit for cadmium.

Total Chromium

Table 4.5-8 lists spatial and temporal variation in lake total chromium.

Table 4.5-8: Spatial and Temporal Variation in Lake Total Chromium.

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
13-Mar-13	Epi	<0.0003	28-Jan-13	Epi	<0.0003	04-Feb-13	Epi	<0.0003
13-Mar-13	Meta	<0.0003	28-Jan-13	Meta	<0.0003	04-Feb-13	Hypo	<0.0003
13-Mar-13	Hypo	<0.0003	28-Jan-13	Hypo	<0.0003	12-Sep-12	Epi	<0.0003
12-Sep-12	Epi	0.0004	12-Sep-12	Epi	0.0003	12-Sep-12	Hypo	<0.0003
12-Sep-12	Meta	0.0003	12-Sep-12	Meta	0.0003	26-Jun-12	Epi	<0.0003
12-Sep-12	Hypo	<0.0003	12-Sep-12	Hypo	0.0004	26-Jun-12	Hypo	0.0004
26-Jun-12	Epi	<0.0003	25-Jun-12	Epi	<0.0003	-	-	-
26-Jun-12	Meta	<0.0003	25-Jun-12	Meta	<0.0003	-	-	-
26-Jun-12	Hypo	<0.0003	25-Jun-12	Hypo	<0.0003	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.0003	13-Mar-13	Epi	<0.0003	13-Mar-13	Epi	<0.0003
13-Mar-13	Meta	<0.0003	13-Mar-13	Hypo	<0.0003	13-Mar-13	Hypo	<0.0003
13-Mar-13	Hypo	<0.0003	12-Sep-12	Epi	<0.0003	12-Sep-12	Epi	<0.0003
12-Sep-12	Epi	0.0004	12-Sep-12	Hypo	0.0003	12-Sep-12	Hypo	<0.0003
12-Sep-12	Meta	0.0003	26-Jun-12	Epi	0.0003	-	-	-
12-Sep-12	Hypo	0.0003	26-Jun-12	Hypo	0.0003	-	-	-
26-Jun-12	Epi	0.0003	-	-	-	-	-	-
26-Jun-12	Meta	<0.0003	-	-	-	-	-	-
26-Jun-12	Hypo	<0.0003	-	-	-	-	-	-

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Total chromium in lake samples ranged from less than detection to 0.0004 mg/L, just above detection. Thirteen of 37 (74%) samples were below the detection limit of 0.0003 mg/L. There are no spatial or temporal patterns evident in the data.

Total Cobalt

Table 4.5-9 lists spatial and temporal variations in lake total cobalt. Ten samples (20%) were above the detection limit of 0.0002 mg/L. Data ranged from <0.00002 mg/L to 0.00016 mg/L. The highest concentration was recorded for the March 2013 (winter ice covered) lake bottom sample at WQ23, which also recorded slightly elevated TSS (6 mg/L). It is probable that the elevated cobalt was due to TSS. The June 2012 hypolimnion sample in WQ20 was also anomalous at 0.00013 mg/L and associated with a TSS concentration of 6 mg/L. Other detected cobalt concentrations were near the detection limit.

Table 4.5-9: Spatial and Temporal Variation in Lake Total Cobalt

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
13-Mar-13	Epi	<0.00002	28-Jan-13	Epi	<0.00002	04-Feb-13	Epi	<0.00002
13-Mar-13	Meta	<0.00002	28-Jan-13	Meta	<0.00002	04-Feb-13	Hypo	<0.00002
13-Mar-13	Hypo	0.00003	28-Jan-13	Hypo	<0.00002	12-Sep-12	Epi	0.00002
12-Sep-12	Epi	<0.00002	12-Sep-12	Epi	<0.00002	12-Sep-12	Hypo	<0.00002
12-Sep-12	Meta	<0.00002	12-Sep-12	Meta	<0.00002	26-Jun-12	Epi	<0.00002
12-Sep-12	Hypo	<0.00002	12-Sep-12	Hypo	<0.00002	26-Jun-12	Hypo	<0.00002
26-Jun-12	Epi	<0.00002	25-Jun-12	Epi	<0.00002	-	-	-
26-Jun-12	Meta	<0.00002	25-Jun-12	Meta	<0.00002	-	-	-
26-Jun-12	Hypo	0.00013	25-Jun-12	Hypo	<0.00002	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.00002	13-Mar-13	Epi	<0.00002	13-Mar-13	Epi	<0.00002
13-Mar-13	Meta	<0.00002	13-Mar-13	Hypo	0.00011	13-Mar-13	Hypo	0.00002
13-Mar-13	Hypo	0.00016	12-Sep-12	Epi	<0.00002	12-Sep-12	Epi	<0.00002
12-Sep-12	Epi	0.00004	12-Sep-12	Hypo	<0.00002	12-Sep-12	Hypo	<0.00002
12-Sep-12	Meta	<0.00002	26-Jun-12	Epi	<0.00002	-	-	-
12-Sep-12	Hypo	0.00003	26-Jun-12	Hypo	<0.00002	-	-	-
26-Jun-12	Epi	<0.00002	-	-	-	-	-	-
26-Jun-12	Meta	<0.00002	-	-	-	-	-	-
26-Jun-12	Hypo	<0.00002	-	-	-	-	-	-

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Total Copper

Figure 4.5-10 shows the spatial and temporal variation in lake total copper.

Temporal and spatial variability are generally quite small. The large variability and one exceedance of BC FWG of 0.002 mg/L 30-day average total copper concentration at WQ20 were coincident with a high TSS sample, which probably explains the outlier. Most of the copper concentrations at WQ20 were above the detection limit of 0.0001 mg/L, ranging from 0.0003 mg/L to 0.0005 mg/L, and well below the BC FWG. Samples from other lakes (except the eight below detection) were only slightly above the detection limit.

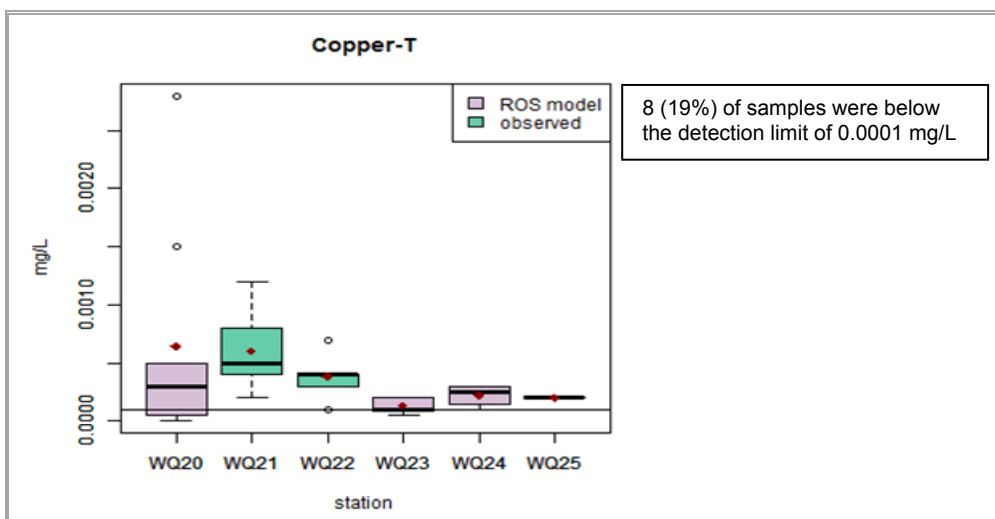


Figure 4.5-10: Spatial and Temporal Variation of Lake Total Copper

Total Iron

Figure 4.5-11 shows the spatial and temporal variation of lake total iron. Two samples (four including duplicates) were higher than the BC FWG of 1 mg/L. High outliers at WQ20, WQ22, and WQ23 were coincident with high TSS in the hypolimnion (lake bottom) samples. One WQ23 outlier at 4.38 mg/L was removed to improve the boxplot display. It was also associated with elevated TSS.

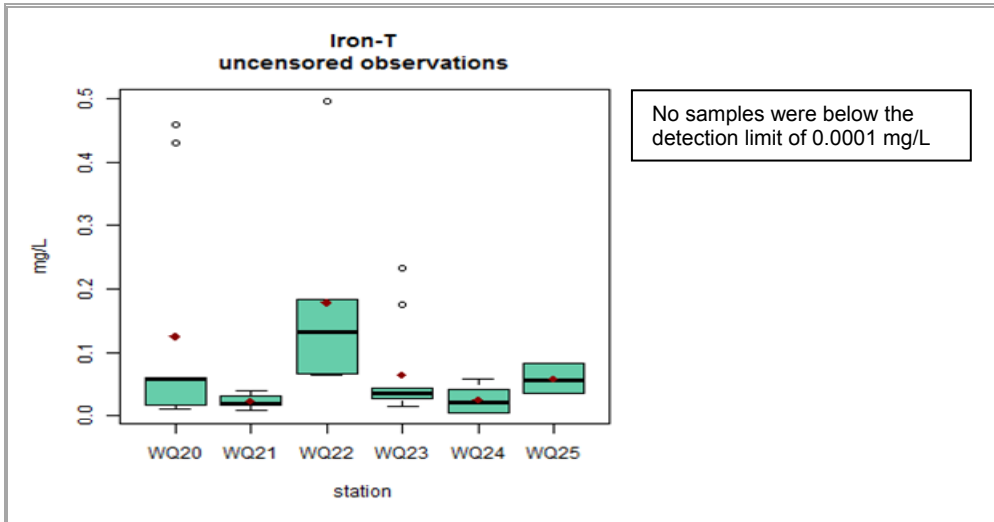


Figure 4.5-11: Spatial and Temporal Variation of Lake Total Iron

Dissolved Iron

Figure 4.5-12 shows the spatial and temporal variation of lake dissolved iron. Dissolved iron followed the same spatial and temporal patterns as total iron and had the same four exceedances, but of the BC FWG of 0.350 mg/L. WQ23 (4.32 mg/L) and WQ24 (3.23 mg/L) data were removed to improve the display. Both total and dissolved iron were sensitive to suspended sediment in the water column.

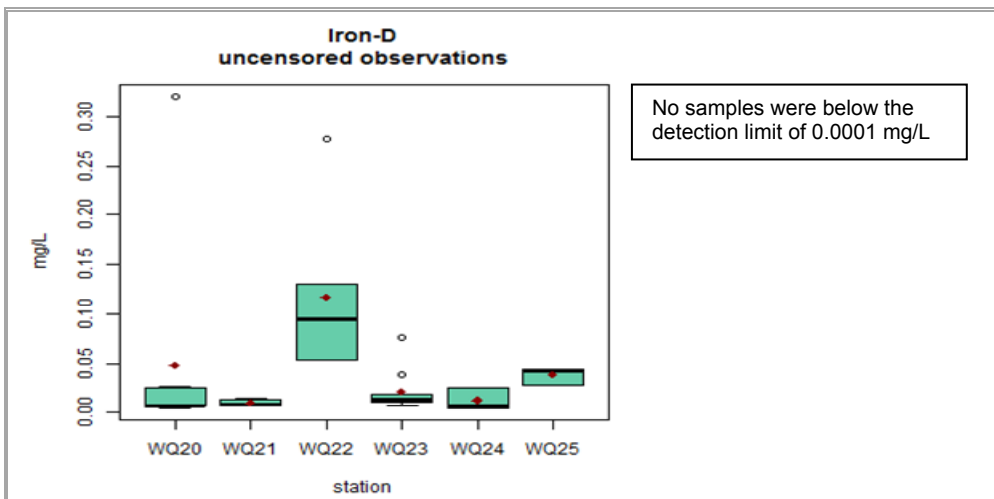


Figure 4.5-12: Spatial and Temporal Variation of Lake Dissolved Iron

Total Lead

Table 4.5-10 lists spatial and temporal variation of lake total lead.

Lead was most variable temporally and highest at WQ20. One sample (June 2012 mid water column (metalimnion)) was 0.010 mg/L or approximately twice the soft water guideline: Contamination is suspected. The lake bottom (hypolimnion) sample was also somewhat elevated coincident with the high TSS concentration. Other WQ20 June 2012 mid water column metal concentrations were not outliers and thus contamination appears the only feasible explanation. The range of concentrations in total lead was <0.00005 mg/L to 0.010 mg/L. Leaving aside Kuyakuz Lake (WQ20), total lead ranged between <0.00005 mg/L and 0.00312 mg/L, the maximum being just below the soft water guideline of approximately 0.004 mg/L. The BC FWG for lead is hardness-dependent based on the regression equation:

$$3.31 + e^{(1.273 \ln [\text{mean hardness}] - 4.704)}$$

For the range of hardness found in the Project area, the BC FWG ranges from about 0.0035 mg/L to 0.005 mg/L.

Table 4.5-10: Spatial and Temporal Variation of Lake Total Lead

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
13-Mar-13	Epi	<0.00005	28-Jan-13	Epi	0.00075	04-Feb-13	Epi	0.00179
13-Mar-13	Meta	<0.00005	28-Jan-13	Meta	0.00141	04-Feb-13	Hypo	0.00178
13-Mar-13	Hypo	<0.00005	28-Jan-13	Hypo	0.00312	12-Sep-12	Epi	0.00011
12-Sep-12	Epi	0.00009	12-Sep-12	Epi	<0.00005	12-Sep-12	Hypo	0.00018
12-Sep-12	Meta	0.00028	12-Sep-12	Meta	0.00030	26-Jun-12	Epi	<0.00005
12-Sep-12	Hypo	0.00054	12-Sep-12	Hypo	0.00031	26-Jun-12	Hypo	0.00048
26-Jun-12	Epi	<0.00005	25-Jun-12	Epi	<0.00005	-	-	-
26-Jun-12	Meta	0.01080	25-Jun-12	Meta	<0.00005	-	-	-
26-Jun-12	Hypo	0.00111	25-Jun-12	Hypo	0.00095	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.00005	13-Mar-13	Epi	<0.00005	13-Mar-13	Epi	<0.00005
13-Mar-13	Meta	<0.00005	13-Mar-13	Hypo	<0.00005	13-Mar-13	Hypo	<0.00005
13-Mar-13	Hypo	<0.00005	12-Sep-12	Epi	<0.00005	12-Sep-12	Epi	<0.00005
12-Sep-12	Epi	<0.00005	12-Sep-12	Hypo	0.00010	12-Sep-12	Hypo	0.00008
12-Sep-12	Meta	0.00007	26-Jun-12	Epi	<0.00005	-	-	-
12-Sep-12	Hypo	0.00011	26-Jun-12	Hypo	<0.00005	-	-	-
26-Jun-12	Epi	<0.00005	-	-	-	-	-	-
26-Jun-12	Meta	<0.00005	-	-	-	-	-	-
26-Jun-12	Hypo	<0.00005	-	-	-	-	-	-

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

Total Manganese

Figure 4.5-13 shows spatial and temporal variation of lake total manganese. Manganese was highly variable both spatially and temporally. Highest temporal variability was at WQ22, followed by WQ20, then WQ23. WQ21 had both low variability and low concentrations of manganese; WQ24 was similar except for one questionable outlier of 1.01 mg/L total manganese (removed to improve the display). Lake total manganese ranged from 0.003 mg/L to 0.564 mg/L; the highest manganese concentration (other than 1.01 mg/L) was coincident with elevated TSS in the hypolimnion sample from WQ20 and was probably due to suspended sediment. There was no consistent seasonal pattern, even in the small lakes where groundwater contribution of manganese would be expected to be higher in early fall when September lake samples were collected.

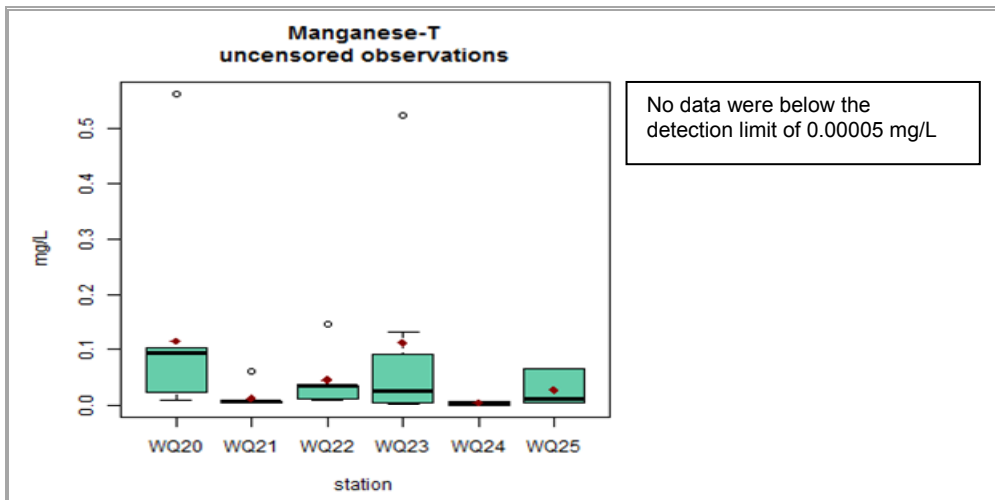


Figure 4.5-13: Spatial and Temporal Variation of Lake Total Manganese

Total Mercury

All lake total mercury data, except two samples, were below the detection limit of 0.000005 mg/L. The two exceptions (WQ23 and WQ24 September lake bottom samples) were only slightly above detection at 0.000007 mg/L. Data suggest very little, if any, mercury is leaching or discharged into lake water.

Total Molybdenum

Figure 4.5-14 shows spatial and temporal variation in lake total molybdenum. WQ22 total molybdenum was lower than the average for the other lakes. Temporal variability at WQ20 was moderate and high at WQ24. Lake total molybdenum ranged from 0.00028 mg/L in the WQ22 June 2012 lake bottom sample to 0.00247 mg/L in the WQ24 March 2013 hypolimnion water sample. TSS was slightly elevated (6 mg/L) coincident with the elevated

total molybdenum. The maximum recorded molybdenum was over 400 times lower than the BC FWG of 1 mg/L.

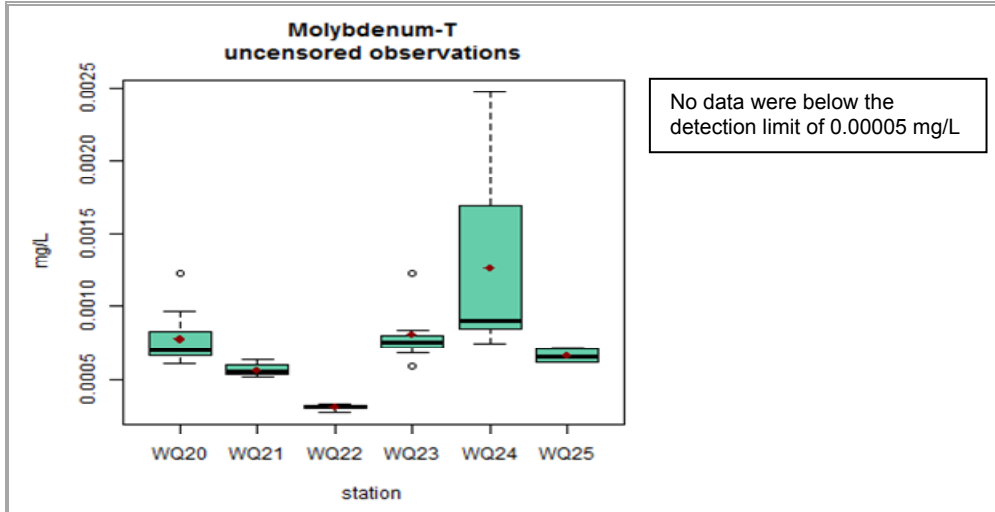


Figure 4.5-14: Spatial and Temporal Variation in Lake Total Molybdenum

Total Nickel

Figure 4.5-15 shows spatial and temporal variation in lake total nickel. Nickel was close to or below the detection limit of 0.00005 mg/L in all the small headwater lakes, with the exception of one outlier sample in the WQ23 September 2012 lake surface sample with a concentration of 0.00125 mg/L. Contamination may have been the cause; the data point was removed from the plot to improve the display information. Other than this one outlier, lake nickel concentrations ranged from <0.00005 mg/L in headwater lakes and Snake Lake to 0.00061 mg/L in the WQ20 June 2012 lake bottom sample, which also had elevated TSS. The temporal variability exhibited at WQ20 appears to have been due to the high TSS sample. The June 2012 lake bottom dissolved nickel concentration was lower at 0.00014 mg/L. All concentrations were well below the BC FWG hardness-adjusted nickel guideline of 0.025 mg/L for water hardness up to 60 mg CaCO₃/L.

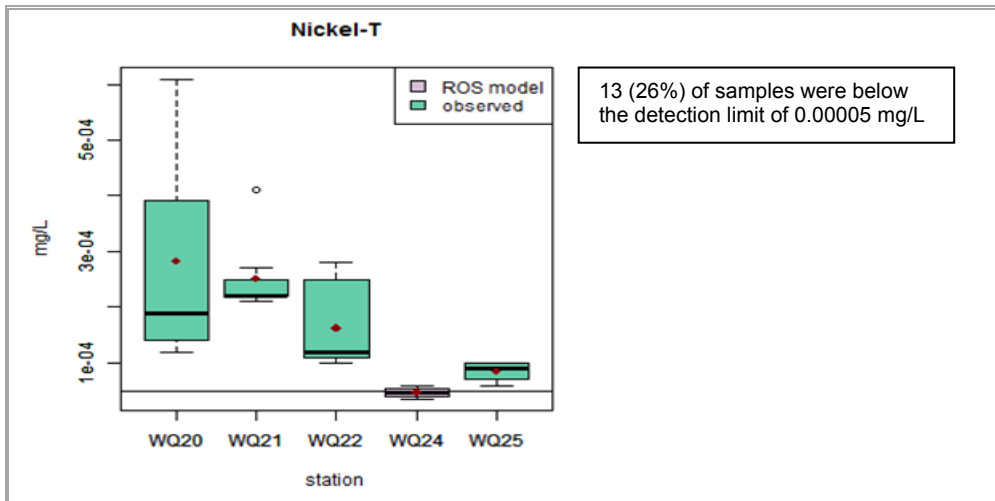


Figure 4.5-15: Spatial and Temporal Variation of Lake Total Nickel

Total Selenium

All total selenium concentrations were below the detection limit of 0.0006 mg/L.

Total Vanadium

Table 4.5-11 lists spatial and temporal variation of lake total vanadium.

Table 4.5-11: Spatial and Temporal Variation of Lake Total Vanadium

Date	Location	WQ20 (mg/L)	Date	Location	WQ21 (mg/L)	Date	Location	WQ22 (mg/L)
13-Mar-13	Epi	<0.0001	28-Jan-13	Epi	<0.0001	04-Feb-13	Epi	<0.0001
13-Mar-13	Meta	<0.0001	28-Jan-13	Meta	<0.0001	04-Feb-13	Hypo	<0.0001
13-Mar-13	Hypo	<0.0001	28-Jan-13	Hypo	<0.0001	12-Sep-12	Epi	0.0001
12-Sep-12	Epi	0.0001	12-Sep-12	Epi	0.0001	12-Sep-12	Hypo	0.0001
12-Sep-12	Meta	0.0002	12-Sep-12	Meta	0.0001	26-Jun-12	Epi	0.0001
12-Sep-12	Hypo	0.0001	12-Sep-12	Hypo	<0.0001	26-Jun-12	Hypo	0.0002
26-Jun-12	Epi	0.0001	25-Jun-12	Epi	0.0001	-	-	-
26-Jun-12	Meta	0.0001	25-Jun-12	Meta	0.0001	-	-	-
26-Jun-12	Hypo	0.0001	25-Jun-12	Hypo	0.0001	-	-	-
Date	Location	WQ23 (mg/L)	Date	Location	WQ24 (mg/L)	Date	Location	WQ25 (mg/L)
13-Mar-13	Epi	<0.00005	13-Mar-13	Epi	<0.00005	13-Mar-13	Epi	<0.00005
13-Mar-13	Meta	<0.00005	13-Mar-13	Hypo	<0.00005	13-Mar-13	Hypo	<0.00005
13-Mar-13	Hypo	<0.00005	12-Sep-12	Epi	<0.0001	12-Sep-12	Epi	<0.0001
12-Sep-12	Epi	<0.0001	12-Sep-12	Hypo	<0.0001	12-Sep-12	Hypo	<0.0001
12-Sep-12	Meta	<0.0001	26-Jun-12	Epi	<0.0001	-	-	
12-Sep-12	Hypo	<0.0001	26-Jun-12	Hypo	<0.0001	-	-	
26-Jun-12	Epi	<0.0001	-	-	-	-	-	
26-Jun-12	Meta	<0.0001	-	-	-	-	-	
26-Jun-12	Hypo	<0.0001	-	-	-	-	-	

Notes: Concentrations in mg/L; Epi = epilimnion (top); Meta = metalimnion (middle); Hypo = hypolimnion (bottom)

The detection limit in 2013 was lowered to 0.00005 mg/L from 0.0001 mg/L. Seventy per cent of data were below the detection limit and the maximum concentrations found were 0.0002 mg/L or 30 times lower than the working BC FWG of 0.006 mg/L. Data suggest vanadium is not leaching or discharging into Project area lakes.

Total Zinc

Figure 4.5-16 shows spatial and temporal variation of lake total zinc.

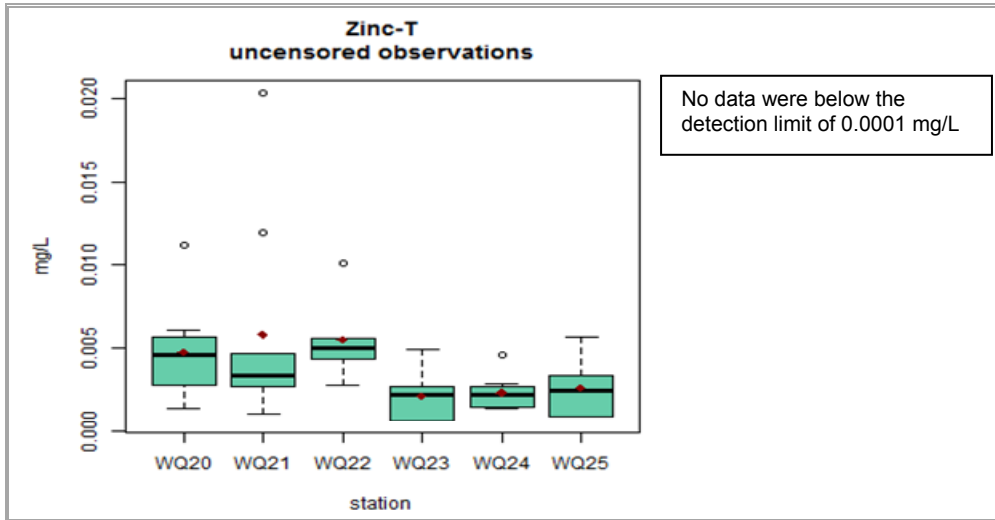


Figure 4.5-16: Spatial and Temporal Variation of Lake Total Zinc

Spatial variation of lake total zinc is fairly low and temporal variation moderate except for outliers coincident with high TSS. Lake total zinc ranged from 0.0020 mg/L to 0.0230 mg/L. All data were below the BC FWG soft water zinc guideline of 0.0075 mg/L, except outliers. Lake zinc data suggest there is some discharge of zinc from bedrock into Project area lakes.

Cyanide

All lake total and weak acid dissociable cyanide samples were below the detection limit of 0.005 mg/L, as expected.

4.5.4 Kluskus-Ootsa FSR, Transmission Line and Transmission Line Temporary Access

Water quality monitoring was not conducted along the Kluskus-Ootsa FSR, transmission line or the transmission line temporary or existing access ROWs. The only potential issue for these areas (aside from accidental spills) would be erosion of upland sediment into water bodies at crossings during construction activities. Streams will be monitored during construction upstream and downstream of disturbance areas which is the only information pertinent to proposed Project effects. A general survey of the ROWs for fish suitability and navigability was conducted in 2013. Results are presented in **Appendix 51.2.6B, Annex 5.8-1**.

4.5.5 Summary

Water quality samples were collected from six lakes beginning in June 2012 on a quarterly basis. Kuyakuz Lake was dropped after February 2013, as the lake was no longer being considered as a makeup water supply for Davidson Creek. Samples could not be collected from some of the lakes in late fall and winter due to safety concerns about thin ice. Results indicated lake water quality was similar to stream water quality for the most part. Mean total cadmium was exceeded in Tatelkuz Lake (WQ21), Snake Lake (WQ22), Lake 1538 (WQ24), and Lake 1428 (WQ25). Mean dissolved iron was exceeded at Lake 1682 (WQ23) and WQ24. Exceedances of guidelines, either by means or grab samples, was highly correlated with elevated total suspended solids, suggesting possible contribution from lake bottom sediments.

4.6 Sediment Chemistry

Stream sediments were collected once in August 2011 and once in August 2012 at water quality sites; two stream sites initiated late in 2012 (WQ15 and WQ16) were sampled in August 2013. At the same time lake water quality sites were also sampled (excluding Kuyakuz Lake—WQ20—which was dropped at the beginning of 2013). Lakes sampled in 2013 include:

- WQ21 – Tatelkuz Lake;
- WQ22 – Snake Lake;
- Lake 1682;
- Lake 1428, and
- Lake 1538.

Splits were analyzed at WQ3, WQ6, WQ7, and WQ12; WQ14 was a composite of five replicates in 2011. Splits were analyzed at WQ3, WQ4, WQ7, and WQ12; WQ14 was a composite of five replicates in 2012. A split of WQ22 was analyzed in 2013 and five replicates were collected from WQ21. At other sites, a single grab sample was analyzed. Samples were collected with a plastic spoon and placed in wide-mouth polyethylene jars. The sampling protocol followed BC MOE 2012 guidelines for orientation surveys.

Assay parameters for sediments are listed in **Table 3.3-1**. Analysis parameters were based on BC MOE metals package for soils; analyses were made by strong acid leaching. The -63 µm fraction is specified in the method based on the assumption that metals (in particular) are adsorbed proportionally to surface area; therefore, the silt and clay fractions are likely to absorb more strong acid extractable metal ions than coarser fractions and thus provide a conservative estimate of metal availability. The pH (1:1 with water (H₂O)), grain size, and total organic carbon (TOC) by LECO furnace were also assayed.

4.7 Sediments

4.7.1 Stream Sediments

Table 4.7-1 provides a summary of stream sediment results from 2011 to 2013. Five replicates were obtained from WQ14 in both 2011 and 2012. Splits were made by the lab as follows:

- 2011: WQ3, WQ6, WQ7, WQ12
- 2012: WQ3, WQ4, WQ7, WQ12, WQ14

Exceedances of CCME Interim Sediment Quality Guidelines (ISQG), and Presumed Effects Level (PEL) guidelines, BC MOE Lowest Effect Level (LEL), and BC MOE Severe Effect Level (SEL) guidelines occurred and are listed in **Table 4.7-2**. Arsenic, iron, and manganese were exceeded the most (eight, five, and eight exceedances, respectively). Results are not atypical for streams, particularly in mineralized areas where sediment guidelines are often exceeded via natural sources. Healthy aquatic populations exist in all area streams and thus exceedances of guidelines do not indicate naturally occurring impairment of aquatic ecosystems. Sediment guidelines are often not a useful indicator of metals exposure for aquatic organisms.

For stations where sampling occurred in 2011 and 2012, there was a reasonably good correspondence between years for metals. For WQ14 where five replicates were collected in both 2011 and 2014, mercury had the highest inter-replicate variability, although recorded concentrations were low—0.02 µg/g to 0.04 µg/g. Zinc was the next most variable (97 µg/g to 150 µg/g).

Table 4.7-1: Blackwater Stream Sediment Summary

Station			CCME		BC MOE Working Guidelines for Sediments		WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	
Number			ISQG	PEL	LEL based on SLC	SEL based on SLC	Mean 2	Mean 4	Mean 4	Mean 2	Mean 3	Mean 4	Mean 2	Mean 2	Mean 2	Mean 4	Mean 2	Mean 11	Mean 1	Mean 1	Mean 1	Mean 1	Mean 1		
Analytical Parameter	Unit	MDL	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)																			
General Parameters																									
Moisture	%	0.5					58	66	13	32	88	28	10	54	42	50	65	50	13	65.2	41.9	26	35	34	
pH (1:1 H2O) BC	pH unit	0.01					6.99	5.97	5.52	5.6	5.27	6.61	6.17	5.7	6.57	6.66	5.41	5.57	7.01	5.37	6.02	6.35	7.28	7.28	
Metals*																									
Aluminum	µg/g (ppm)	1					15200	9215	29600	15400	14633	10775	7565	9760	13200	21100	12000	13425	17133	9040	13300	10200	14500	13100	
Antimony	µg/g (ppm)	0.1					0.9	0.5	3.2	0.5	0.7	0.5	0.3	0.4	0.3	0.2	0.3	0.3	0.15	1.5	< 0.5	0.5	0.4	0.5	
Arsenic	µg/g (ppm)	0.05	5.9	17	5.9	17	16.2	5.8	23.5	7.3	19.4	5.4	2.3	3.4	9.5	5.3	4.4	12.9	19.1	5.4	1.9	11.2	3.99	4.53	
Barium	µg/g (ppm)	0.1					112	81.1	243	104.6	135.3	95.6	56.7	83.3	121	163	109	168	258	161	123	92.5	119	58.9	
Beryllium	µg/g (ppm)	0.1					1	0.475	1.77	0.55	0.8	0.425	0.2	0.3	0.55	0.85	0.425	0.5	0.8	1	1.3	0.4	0.3	0.4	
Bismuth	µg/g (ppm)	0.1					0.1	< 0.1	0.2	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1			0.6	< 0.1	< 0.1	
Boron	µg/g (ppm)	0.5					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.9			< 0.5	0.6	2.1
Cadmium	µg/g (ppm)	0.01	0.6	3.5	0.6	3.5	1	0.3	9.6	0.3	0.6	0.2	0.1	0.1	0.2	0.3	0.1	0.3	0.5	0.6	0.3	0.3	0.2	0.4	
Calcium	µg/g (ppm)	5					3410	5535	7213	4210	3823	4995	7620	4860	4250	6290	4285	8820	10437	7630	5380	4390	4690	17900	
Chromium	µg/g (ppm)	0.05	37.3	90	37.3	90	13.2	26.3	21.2	17.1	12.5	23.1	14.6	18.3	16.4	16.5	16.7	22.2	30	9.4	11.3	20.7	51.6	67.3	
Cobalt	µg/g (ppm)	0.05					3.7	3.77	14.8	5.66	4.46	7.3	3.2	5.5	5.19	6.2	5.37	6.4	6.8	3.2	3	7.9	12.7	10.5	
Copper	µg/g (ppm)	0.01	35.7	197	35.7	197	10.5	9.6	25.8	12.9	12.1	12.8	14.4	11.4	9.3	18.2	11.4	24.7	36.8	37.3	20.8	25.6	15	61.8	
Iron	µg/g (ppm)	5			21200	43766	11800	9733	31267	15600	16400	18875	8875	15250	17950	19900	16900	34450	47050	10900	7300	23600	28700	18800	
Lead	µg/g (ppm)	0.1	35	91.3	35	91.3	10.9	11.2	48.4	10.9	17	7.9	4.5	6	9.8	7.4	6.9	6.1	6.1	19.4	13.7	8.9	3.9	7.2	
Magnesium	µg/g (ppm)	1					1700	1600	2150	2655	2063	3678	2660	3090	2265	2750	2590	3450	3725	1230	1800	2900	6110	7620	
Manganese	µg/g (ppm)	0.1			460	1100	212	400	5370	544	430	462	195	250	494	743	339	1208	1590	1090	95.4	596	454	364	
Mercury	µg/g (ppm)	0.02	0.17	0.486	0.17	0.486	0.11	0.07	0.23	0.06	0.15	0.04	< 0.02	0.03	0.06	0.065	0.048	0.045	0.043	0.22	0.13	0.02	0.06	0.06	
Molybdenum	µg/g (ppm)	0.1					2.7	0.8	5.7	0.7	1.3	0.7	1.2	0.5	1.3	1.2	0.8	1.1	1.2	3.6	1.7	2.1	0.6	0.6	
Nickel	µg/g (ppm)	0.1			16	75	8.5	7.2	20.5	11	11.9	18.3	11.3	13.5	9.3	11	11	21.2	29.8	2.8	7.1	11.1	45.3	16.7	
Phosphorus	µg/g (ppm)	5					812	661	1160	671	739	647	801	633	701	799	718	997	1102	745	438	662	663	1060	
Potassium	µg/g (ppm)	1					459	346	786	439	522	458	473	421	420	566	388	709	944	452	515	675	427	412	
Selenium	µg/g (ppm)	0.01			5	5	0.41	0.96	0.66	0.3	0.61	0.33	0.35	0.31	0.36	0.42	0.3	0.59	0.76	0.6	< 0.5	0.21	0.24	3.69	
Silver	µg/g (ppm)	0.05			0.5	0.5	0.37	0.15	3.62	0.27	0.44	0.13	0.06	0.08	0.17	0.17	0.1	0.14	0.21	0.3	0.2	0.13	0.09	0.18	
Sodium	µg/g (ppm)	1					94	109	105	141	87	199	269	212	124	130	159	187	177	116	113	249	336	364	
Strontium	µg/g (ppm)	0.1					35.7	46.8	63.5	36.7	43.1	41.8	52.6	36.9	36.6	55.2	34.2	63.7	80.2	74.2	42.3	36.2	37.9	70.3	
Thallium	µg/g (ppm)	0.05					0.4	0.1	0.4	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	< 0.5	< 0.5	0.1	< 0.05	0.1	
Tin	µg/g (ppm)	0.1					0.6	1.5	1.2	0.6	0.4	0.6	0.9	0.3	0.4	1	0.4	0.6	0.7	7.6	1.4	1.1	0.5	7.8	
Titanium	µg/g (ppm)	0.5					171	336	201	424	79	704	635	681	318	187	492	403	230	239	137	1220	1650	1400	
Vanadium	µg/g (ppm)	0.05					38.6	28.7	53.2	30.9	26.7	42.8	24.2	34.9	34.2	35.5	33.8	45	56.5	18.4	13.5	55.6	65.9	53	
Zinc	µg/g (ppm)	0.5	123	315	123	315	125	50.4	2913	95.4	98.2	66.4	32.9	51	75.3	57.6	51.1	78.4	127.7	119	42.2	112	74	98	
Organics																									
Inorganic Carbon	%	0.1					<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	<0.10	<0.10	<0.10	<0.10	
Total Organic Carbon	%	0.1					4.09	2.48	7.32	1.33	3.93	0.51	1.95	0.99	0.48	3.84	1.94	0.95	7.24	9.53	2.397	0.66	0.44	3.1	
CaCO ₃ Equivalent	%	0.1					<0.80	<0.80	<0.80	<0.80	0.075	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	0.832	1.34	<0.80	<0.80	<0.80	<0.80	
Total Carbon by Combustion	%	0.1					4.1	2.5	7.3	1.3	3.9	0.5	1.9	1	0.5	3.8	2	1	7.3	9.7	3.0	0.7	0.4	3.1	
Particle Size																									
% Gravel (>2 mm)	%	0.1					0.1	0.1	<0.10	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5.07	7.71	<0.10	<0.10	<0.10	
% Sand (2.00 mm - 1.00 mm)	%	0.1					5.8	6.6	2.7	23	8.5	6.4	15.2	7.7	15.1	26	7.1	10.7	6.4	4.21	14.1	10	1.1	19.8	
% Sand (1.00 mm - 0.50 mm)	%	0.1					14.3	16.6	12	26	14.9	16.6	23.4	12.6	26.2	22.8	17.5	18.5	12.4	5.3	17.8	35.4	16.7	30.6	
% Sand (0.50 mm - 0.25 mm)	%	0.1					23.7	16.1	11.7	17.1	10.8	18.4	28.4	26.8	27.5	14.1	17.6	27.1	6.6	13.3	19.7	24.5	22.1	21	
% Sand (0.25 mm - 0.125 mm)	%	0.1					19.4	27.8	11.4	13.7	22.3	33.4	20.2	26.5	17.9	7.1	25.5	23.5	9.9	23.8	11.9	16.8	37.5	12.3	
% Sand (0.125 mm - 0.063 mm)	%	0.1					11.4	10	3.7	7.6	10.8	8.7	5.1	10.3	5.1	5.3	9.7	8.5	5.7	8.41	5.38	5.2	8.1	3.7	
% Silt (0.063 mm - 0.0312 mm)	%	0.1					13.5	10.7	19.6	4.5	14.8	7.6	2.5	8.7	3.3	7.9	10.1	4.9	24.3	17.5	8.1	2.8	3.9	4.7	
% Silt (0.0312 mm - 0.004 mm)	%	0.1					9.2	10	26.3	2.4	14.9	7.1	1.4	5.2	2.4	4.7	10.2	3.8	28.8	19	10.4	3.5	5.1	5.4	
% Clay (<4 µm)	%	0.1					5.15	2.09	12.6	0.9	3.1	1.9	0.9	2	1.7	1.3	2.4	2.9	5.9	3.42	5.03	1.9	5.6	2.4	

Notes: BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; ISQG = Interim Sediment Quality Guidelines; LEL = Lowest Effect Level; PEL = Presumed Effect Level; SEL = Severe Effect Level; SLC = Screening Level Concentration

Table 4.7-2: Exceedances of CCME and BC MOE Sediment Guidelines in Project Area Streams

Parameter	CCME ISQG	CCME PEL	MOE Lowest Effects SLC	MOE Severe Effects SLC
Arsenic	WQ1, WQ5, WQ10, WQ13, WQ17	WQ4, WQ6, WQ14	WQ1, WQ5, WQ10, WQ13, WQ17	WQ4, WQ6, WQ14
Cadmium	WQ2	WQ4	WQ2	WQ4
Chromium	WQ18, WQ19	-	WQ18, WQ19	-
Copper	WQ15, WQ19	-	WQ15, WQ19	-
Iron	WQ4, WQ13, WQ17, WQ18	WQ14	WQ4, WQ13, WQ17, WQ18	WQ14
Manganese	-	-	WQ5, WQ7, WQ10, WQ11, WQ15, WQ17	WQ4, WQ13, WQ14
Mercury	WQ4, WQ15	-	WQ4, WQ15	-
Nickel	-	-	WQ4, WQ7, WQ18, WQ19	-
Silver	-	-	-	WQ4
Zinc	WQ1, WQ14	WQ4	WQ1, WQ14	WQ4

Notes: BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; ISQG = Interim Sediment Quality Guidelines; LEL = Lowest Effect Level; PEL = Presumed Effect Level; SEL = Severe Effect Level; SLC = Screening Level Concentration.

4.7.2 Lake Sediments

Lake sediments were collected in 2013 in response to the observation that increases in suspended sediments in hypolimnion (lake bottom) water samples often increased metals concentrations reported. The proposed Project will not directly affect lake sediments but background information on lake sediment levels may be useful in interpreting water quality results.

Table 4.7-3 provides summary results; the complete results are provided in **Annex 5**. Only one replicate sample was measured for particle size.

There were few guidelines exceedances (all both ISQG and LEL):

WQ22	Cu, Pb, Hg	WQ24	Hg
WQ23	Hg	WQ25	Hg, Zn

Mercury in lake bottom sediments was slightly above guidelines in all lakes except Tatelkuz. The relatively low concentrations of sediment metals does not correlate with the observed elevation in hypolimnion water samples with increased sediment and suggests metals in lake bottom sediments were only loosely bound and easily leached. Loose binding of metals may have resulted from the relatively low organic content and mostly fine particle size.

Table 4.7-3: Mean Lake Sediment Concentrations

Station			CCME		BC MOE Working Guidelines for Sediments		WQ21 Mean 5	WQ22 Mean 2	WQ23 Mean 1	WQ24 Mean 1	WQ25 Mean 1
Number			ISQG (mg/kg)	PEL (mg/kg)	LEL based on SLC (mg/kg)	SEL based on SLC (mg/kg)					
Analytical Parameter	Units	MDL									
General Parameters											
Moisture	%	0.5					27.2	93.4	90	89.3	88.1
pH (1:1 H2O) BC	pH units	0.01					6.30	5.90	5.72	5.52	5.84
Metals*											
Aluminum	µg/g (ppm)	1					8,212	5,500	9,610	12,400	8,970
Antimony	µg/g (ppm)	0.1					< 0.5	0.7	3.1	1.4	0.6
Arsenic	µg/g (ppm)	0.05	5.9	17	5.9	17	4.84	4.35	13.6	18	4.1
Barium	µg/g (ppm)	0.1					74.2	59	80	83	96
Beryllium	µg/g (ppm)	0.1					0.22	0.2	0.9	1.1	0.7
Bismuth	µg/g (ppm)	0.1									
Boron	µg/g (ppm)	0.5									
Cadmium	µg/g (ppm)	0.01	0.6	3.5	0.6	3.5	0.1	0.4	0.4	0.6	0.4
Calcium	µg/g (ppm)	5					4,050	10,300	3,970	3,450	3,510
Chromium	µg/g (ppm)	0.05	37.3	90	37.3	90	26.66	22.9	18.3	14.3	9.2
Cobalt	µg/g (ppm)	0.05					5.32	3.2	2.7	3	2.7
Copper	µg/g (ppm)	0.01	35.7	197	35.7	197	28.74	46.9	20	28.2	17.5
Iron	µg/g (ppm)	5			21200	43766	13,460	8,025	7,100	9,630	6,730
Lead	µg/g (ppm)	0.1	35	91.3	35	91.3	18.72	44.55	16.4	23	18.1
Magnesium	µg/g (ppm)	1					3,628	2,815	1,220	1,350	764
Manganese	µg/g (ppm)	0.1			460	1100	264	262	158	254	464
Mercury	µg/g (ppm)	0.02	0.17	0.486	0.17	0.486	0.08	0.455	0.38	0.36	0.29
Molybdenum	µg/g (ppm)	0.1					1.24	2.5	4.8	7.3	3.5
Nickel	µg/g (ppm)	0.1			16	75	15.5	15.1	6.3	7.3	5.7
Phosphorus	µg/g (ppm)	5					720.2	603.5	615	733	962
Potassium	µg/g (ppm)	1					533	483.5	529	492	347
Selenium	µg/g (ppm)	0.01			5	5	0.8	1.1	0.9	0.8	< 0.5
Silver	µg/g (ppm)	0.05			0.5	0.5	0.1	0.2	0.3	0.3	0.2

Tables continues...

Station			CCME		BC MOE Working Guidelines for Sediments		WQ21 Mean 5	WQ22 Mean 2	WQ23 Mean 1	WQ24 Mean 1	WQ25 Mean 1
Number			ISQG (mg/kg)	PEL (mg/kg)	LEL based on SLC (mg/kg)	SEL based on SLC (mg/kg)					
Analytical Parameter	Units	MDL									
Sodium	µg/g (ppm)	1					249	791	125	102	79.6
Strontium	µg/g (ppm)	0.1					30.1	59.8	36.4	35	44.8
Thallium	µg/g (ppm)	0.05					<0.5	<0.5	<0.5	<0.5	<0.5
Tin	µg/g (ppm)	0.1					15.5	44.2	4.6	3.4	19
Titanium	µg/g (ppm)	0.5					839	205	198	157	97.4
Vanadium	µg/g (ppm)	0.05					33.24	26.5	21.5	26	16.4
Zinc	µg/g (ppm)	0.5	123	315	123	315	58	101	77	94	140
Organics											
Inorganic Carbon	%	0.1					<0.10	<0.10	<0.10	<0.10	<0.10
Total Organic Carbon	%	0.1					0.53	27.3	12.7	11.1	10.4
CaCO ₃ Equivalent	%	0.1					<0.80	<0.80	<0.80	<0.80	<0.80
Total Carbon by Combustion	%	0.1					0.5	27.3	12.7	11.1	10.4
Particle Size											
% Gravel (>2 mm)	%	0.1					12	<0.10	<0.10	<0.10	<0.10
% Sand (2.00 mm to 1.00 mm)	%	0.1					11.9	<0.10	<0.10	<0.10	<0.10
% Sand (1.00 mm to 0.50 mm)	%	0.1					15.8	0.19	<0.10	<0.10	<0.10
% Sand (0.50 mm to 0.25 mm)	%	0.1					32.9	0.29	0.12	<0.10	<0.10
% Sand (0.25 mm to 0.125 mm)	%	0.1					14.3	0.91	0.47	<0.10	<0.10
% Sand (0.125 mm to 0.063 mm)	%	0.1					7.19	2.76	1.64	0.39	<0.10
% Silt (0.063 mm to 0.0312 mm)	%	0.1					3.59	39.4	31.7	23.1	27.8
% Silt (0.0312 mm to 0.004 mm)	%	0.1					2.22	47.5	50.6	56	51.3
% Clay (<4 µm)	%	0.1					0.13	8.87	15.4	20.3	20.8

Notes: BC MOE = British Columbia Ministry of Environment; CCME = Canadian Council of Ministers of the Environment; ISQG = Interim Sediment Quality Guidelines; LEL = Lowest Effect Level; PEL = Presumed Effect Level; SEL = Severe Effect Level; SLC = Screening Level Concentration.

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ANNEXES



Annex 1

Number of Samples Collected at Stations

Parameters	Unit	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MoE Guideline		CCME		
		Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min	30-day	Maximum	Long Term	Short Term
Dissolved Metals																									
Aluminum-D	mg/L	0.079	0.003	0.035	0.031	0.015	0.001116194	0.000400561	0.000575124	0.007	0.025	0.02	0.000933406	0.002	0.014	0.005	0.015	0.000231735	0.002	0.005		0.027-0.05 ^b	0.057-0.1 ^b		
Antimony-D	mg/L	4.51072E-06	3.2E-05	4.9E-05	0.00005	3.0595E-05	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	1.91701E-05	0.00005	0.00005	0.00005	0.00005					
Arsenic-D	mg/L	0.0001	0.000218	0.0002	0.0001	0.0002	0.0001	0.0002	0.0002	0.0001	3.66E-06	3.48E-05	0.0002	8.95E-05	5.09924E-05	7.55507E-05	0.0003	0.0004	0.0004	5.79E-05					
Barium-D	mg/L	0.00216	0.00302	0.00149	0.00248	0.00358	0.00396	0.00441	0.0058	0.00371	0.0048	0.0045	0.00423	0.00578	0.00641	0.00253	0.0033	0.00378	0.00844	0.00283					
Beryllium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Boron-D	mg/L	1.08043E-05	2.8E-05	0.000135	2.54557E-05	0.001	1.96977E-06	7.03797E-05	0.000128388	0.001	4.35E-06	0.001	0.000189214	5.09E-05	7.93414E-06	4.72859E-05	0.001	0.001	0.001	1.47E-08					
Cadmium-D	mg/L	1.3593E-06	0.000015	2.02E-06	0.000015	0.000015	1.85731E-07	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015	0.000015					
Calcium-D	mg/L	1.5	3.9	4	2.4	3	4.2	15.1	13.3	2.9	3.8	3.8	4.8	10.6	6	5.1	3.7	9.2	28.5	4.2					
Chromium-D	mg/L	5.77174E-05	0.000252	0.0003	7.74163E-05	0.0003	0.0003	0.0003	0.0003	0.0003	0.00125	0.0003	0.0003	0.003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003					
Cobalt-D	mg/L	1.50743E-05	4.65E-06	9.05E-06	1.80002E-05	5.24747E-06	1.28035E-05	1.6383E-06	1.03044E-05	6.29E-06	1.04E-05	1.11E-05	1.51785E-05	3.67E-06	0.00002	5.47977E-06	0.00003	1.45752E-05	0.00002	7.04E-06					
Copper-D	mg/L	3.60435E-05	1.44E-05	6.74E-05	6.7873E-05	6.14248E-05	2.12534E-05	3.17495E-05	4.18985E-05	1.8E-05	6.05E-05	3.59E-05	3.63056E-05	4.44E-06	4.55924E-05	3.34598E-05	0.000134958	0.0001	0.0001	7.78E-05					
Iron-D	mg/L	0.0764	0.0174	0.0164	0.0789	0.0464	0.0472	0.0036	0.0596	0.0115	0.0072	0.0721	0.0626	0.0763	0.0317	0.0132	0.0397	0.104	0.0114	0.0193		0.35			
Lead-D	mg/L	0.00005	0.00005	1.09E-06	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Lithium-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001					
Magnesium-D	mg/L	0.30963893	0.93	0.61	0.63	0.356484911	0.89	3.81	2.97	0.53	0.7	0.6	0.96	2.23	0.77	0.84	0.87	5.32	3.5	0.92					
Manganese-D	mg/L	0.00105	0.00057	0.00117	0.00024	0.00096	0.00345	0.00059	0.00466	0.00057	0.00025	0.00146	0.00233	0.00106	0.00327	0.00194	0.00335	0.00185	0.00066	0.00103					
Mercury-D	mg/L	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005					
Molybdenum-D	mg/L	1.34538E-05	0.000102	1.6E-05	2.21884E-05	0.00008	7.73113E-05	0.00013	0.00011	4.24E-05	1.64E-05	0.0001	0.00009	0.00022	0.00015	0.00034	0.00024	0.00052	0.00061	0.000108					
Nickel-D	mg/L	8.54785E-05	5.02E-06	0.0001	9.37924E-05	4.62083E-05	2.54683E-05	0.00009	0.000113053	2.95E-05	7.87E-05	3.89E-05	0.0001	3.61E-05	1.81992E-05	2.14683E-05	3.80044E-05	0.00037	0.00005	5.2E-05					
Phosphorous-D	mg/L	0.000526392	0.008185	0.01	0.01	4.78969E-08	0.001383256	0.002718274	0.01	0.001343	0.01	0.00189214	0.01	0.01	0.000884229	0.01	0.03	0.01	0.01						
Potassium-D	mg/L	0.5	0.322843	0.137949	0.5	0.5	0.017056432	0.57918855	0.529063248	0.5	0.222341	0.5	0.477182379	0.261283	0.5	0.5	0.5	1.6	0.5	0.326561					
Selenium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0006	0.0006	0.0006	0.0001					
Silicon-D	mg/L	3.16	4.1	3.29	3.03	3.19	3.38	2.53	2.91	3.26	3.62	2.44	2.97	3.79	0.9	0.74	4.4	8.5	5.06	1.42					
Silver-D	mg/L	0.00005	0.00005	2.67E-06	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Sodium-D	mg/L	0.77708798	1.363019	0.9	0.947450165	0.967602551	0.7461432	0.8	2.24547093	0.878355	0.911142	0.980315	0.5	2.2	1.089804286	1.400375584	1.9	4.2	2.7	0.967577					
Strontium-D	mg/L	0.010859302	0.0237	0.0164	0.010462979	0.00733	0.0176	0.0753	0.0635	0.00657	0.0147	0.0191	0.0357	0.053	0.0447	0.0186	0.0229	0.0469	0.116	0.0131					
Thallium-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Tin-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Titanium-D	mg/L	0.0007	7.11E-05	0.0004	0.0007	0.0004	5.85646E-05	3.93529E-05	5.63609E-05	5.98E-05	0.0004	0.0003	8.3995E-05	5.19E-05	9.37113E-05	6.64207E-05	0.0002	0.0003	0.0002	5.92E-05					
Uranium-D	mg/L	0.00007	0.00009	0.00005	3.84625E-05	4.41964E-05	0.00009	0.00006	0.00007	0.0001	0.0001	0.00008	0.00006	1.62E-05	0.00008	0.00013	0.00006	0.00006	0.00025	0.00013					
Vanadium-D	mg/L	2.53157E-05	0.000414	1.36E-05	3.61531E-05	5.47883E-06	5.01904E-05	1.4516E-05	4.66149E-05	2.51E-05	4.96E-05	5.48E-06	4.69413E-05	1.57E-05	0.00005	0.00005	4.14898E-05	0.001	0.00031	0.00005					
Zinc-D	mg/L	0.0007	0.000223	0.0247	0.000339003	0.000372369	0.000100936	0.000194984	0.000264931	0.000325	0.000284	0.000323	0.000144064	6.77E-05	0.000635219	0.000573808	0.000438769	0.0006	0.0006	0.0006					
D-Hardness as CaCO3	mg/L	4.565461875	13.6	12.4	8.7	9.5	14.1	59.7	45.7	9.4	12.5	11.9	48.9	35.6	23.3	17.6	12.8	45	85.6	62					
Cyanide																									
Cyanide (Total)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005					
Cyanide (WAD)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
Cyanate	mg/L	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	0.2				0.2					
Thiocyanate (SCN)	mg/L	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.052	0.05	0.05	0.05	0.5	0.5				0.5					
Blackwater - Field Parameters																									
Conductivity (EC)	us/cm	8	24	22	8	15	21	30	48	14	8	16	71	62	27	22	8	7	108	18					
DO Saturation %	%	79	80.2	70.4	9.59	79.7	35.5	25	44	31	9.33	21	80.2	68.8	72.8	50.6	60	84.6	72	84.2					
pH	pH	5.23	6.09	6.22	5.2	5.94	6.54	6.1	7.05	6.59	6.69	5	6.05	6.7	6.67	6.68	6.76	7.4	7.38	6.33	6.5-9.0				6.5-9.0
Temp	deg c	-0.73	0	-0.67	-0.67	-0.67	-0.08	0.19	-0.1	0	-0.23	-0.21	-0.21	0	0.04	0.04	-0.1	-0.24	1.1	-0.23	18				

Parameters	Units	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MoE Guideline			CCME		
		Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	30-day	Maximum	Long Term	Short Term	
Physical Tests																										
pH @ 25°C BC-D	pH	7.12	7.88	7.5	7.56	7.55	8.14	8.25	8.23	8.14	8.21	7.79	8.22	8.17	7.44	7.5	7.8	8.17	8.22	7.88		6.5-9.0			6.5-9.0	
Conductivity @ 25°C	uS/cm	36	149	132	98	59	131	173	158	115	159	66	162	214	118	52	92	172	206	131						
T-Dissolved Solids180°C	mg/L	76	100	100	100	80	152	240	132	96	108	124	160	180	244	188	68	104	148	96						
Total Suspended Solids @105°C	mg/L	5	19	20	22	4	73	38	15	8	17	8	40	29	5	25	2	70	3	7						
Turbidity	NTU	10	8.3	22	3.9	6.9	24	50	5.3	7.6	5.2	7.1	5.8	3.5	2.6	9.8	1	44	0.9	3.5		8				
T-Hardness as CaCO ₃	mg/L	11.7	77	54	43	25.8	78.8	82.9	79.1	54	84.3	27.9	80	571	52.8	24.8	40	73.4	110	64.8						
Dissolved Anions																										
Total Alkalinity as CaCO ₃	mg/L	12	80	30	50	30	70	200	82	60	90	39	80	105	30	27	42	90	101	70						
Fluoride-D	mg/L	0.07	0.09	0.09	0.07	0.07	0.08	0.11	0.1	0.08	0.07	0.08	0.09	0.1	0.07	0.05	0.06	0.15	0.07	0.08			0.47-2.03 ^c		0.12	
Sulphate-D	mg/L	3.9	5.6	39	3.5	2.8	4	6.2	5.5	4.1	3.4	4.7	5.8	6.4	3.8	2.1	4.2	2.4	3.9	3.8			115-270 ^c			
Chloride-D	mg/L	2.7	2.1	2.9	1.5	1.5	2	1.8	1.4	1.6	1.7	2	12.2	2.3	0.6	0.4	0.3	2.4	1.6	0.4			150	120	640	
Nutrients																										
Ammonia - Nitrogen	mg/L	0.04	0.67	0.06	0.03	0.05	0.04	0.04	0.03	0.03	0.04	0.03	0.03	0.02	0.02	0.02	0.03	0.1	0.02	0.02			0.942-1.95 ^a	4.9-16.9 ^a	0.02-189.97 ^a	
Nitrate-N-D	mg/L	0.038	0.108	0.039	0.158	0.055	0.086	0.102	0.112	0.106	0.08	0.074	0.077	0.073	0.079	0.065	0.094	0.153	0.318	0.054			3	31.3	13	550
Nitrite-N-D	mg/L	0.015	0.022	0.016	0.012	0.014	0.011	0.012	0.019	0.011	0.013	0.012	0.014	0.013	0.004	0.004	0.003	0.003	0.008	0.003			0.02	0.06		0.06
Total Kjeldahl Nitrogen (TKN)	mg/L	0.99	1.75	1.9	0.89	1.23	0.76	0.75	0.67	0.64	0.75	0.55	1.02	0.69	0.64	0.66	0.69	1.68	0.1	0.18						
Phosphorous-Ortho-DLL	mg/L	0.026	0.039	0.034	0.03	0.04	0.071	0.019	0.061	0.05	0.047	0.032	0.072	0.083			0.003	0.031	0.003							
Phosphorous (Total-Dissolved) LL	mg/L	0.05	0.05	0.02	0.02	0.03	15.4	0.05	0.05	0.02	0.02	0.02	0.02	0.03	0.02	0.04	0.01	0.05	0.01	0.02						
Organic Parameters																										
Carbon (Total Organic)	mg/L	27.4	24.3	18.5	22.8	20.7	17.2	32.6	25.1	21.8	30.8	19.7	42.3	24.3	16	11	12	18.1	19.3	12.8						
Carbon (Dissolved Organic)	mg/L	22	19.2	18.6	22.1	20	22.7	20.4	20	19.8	29.6	18.7	23.9	24.3	12.5	10.4	11.7	18.1	17.3	12.8						
Total Metals																										
Aluminum-T	mg/L	0.708	0.575	1.19	0.596	0.576	1.2	0.147	0.208	0.738	0.84	0.576	0.224	0.742	0.116	0.408	0.217	1	0.009	0.328						0.1 ^b
Antimony-T	mg/L	0.00038	0.00009	0.00041	0.00005	0.00008	0.00089	0.00006	0.00006	0.00007	0.00008	0.00005	0.00006	0.00737	0.00006	0.00009	0.00005	0.00015	0.00005	0.00006				0.02		
Arsenic-T	mg/L	0.0016	0.0023	0.0069	0.0017	0.0011	0.0012	0.0017	0.0007	0.0016	0.0022	0.0012	0.0007	0.0016	0.0013	0.0012	0.0006	0.0014	0.0005	0.0037			0.005			0.005
Barium-T	mg/L	0.00876	0.0106	0.0138	0.0103	0.011	0.0175	0.0132	0.0102	0.0124	0.0172	0.0114	0.092	0.0951	0.0131	0.00891	0.00771	0.04193	0.00924	0.0216			1	5		
Beryllium-T	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001				0.0053	
Boron-T	mg/L	0.009	0.008	0.007	0.007	0.006	0.012	0.007	0.005	0.004	0.011	0.004	0.009	0.022	0.003	0.002	0.001	0.002	0.002	0.024				1.2	1.5	29
Cadmium-T	mg/L	0.000062	0.000045	0.001284	0.000105	0.000042	0.000122	0.000024	0.000058	0.000038	0.000069	0.000044	0.000221	0.000082	0.000015	0.000126	0.000015	0.000655	0.000015	0.000016	0.0000523-0.000148 ^e					0.0000523-0.000148 ^e
Calcium-T	mg/L	3.5	22	17	12	8.1	19.7	25.4	23.2	16.3	25.1	9	23.2	186	16.3	7.5	11	16	35	19.2						
Chromium-T	mg/L	0.0009	0.0019	0.0008	0.0006	0.0005	0.0016	0.0005	0.0005	0.0006	0.0006	0.0247	0.0005	0.0012	0.0003	0.0005	0.0003	0.0068	0.0003	0.0003				0.001-0.0089		0.001-0.0089
Cobalt-T	mg/L	0.00058	0.00045	0.00039	0.0004	0.0001	0.00053	0.00009	0.00011	0.00016	0.00015	0.00018	0.00012	0.00031	0.00005	0.00012	0.00006	0.00171	0.00002	0.00008			0.004			0.11
Copper-T	mg/L	0.0086	0.0073	0.0031	0.001	0.0009	0.0363	0.0045	0.0019	0.001	0.0091	0.0025	0.0023	0.0182	0.0011	0.0007	0.0007	0.0054	0.0001	0.0009			0.002-0.0228 ^c	0.0031-0.0557 ^f		0.002-0.0105 ^c
Iron-T	mg/L	0.814	0.642	0.899	0.5	0.482	1.49	0.444	0.34	0.613	0.45	0.628	0.9446	1.8	0.263	0.639	0.962	3.7001	0.0241	0.257				1		0.3
Lead-T	mg/L	0.00045	0.00084	0.00341	0.00035	0.00055	0.00094	0.00074	0.00014	0.00044	0.00043	0.00018	0.00028	0.00069	0.00005	0.0004	0.00005	0.00036	0.00005	0.00009			0.00352-0.0326 ^c	0.0053-0.7501 ^c		0.001-0.0292 ^f
Lithium-T	mg/L	0.001	0.001	0.001	0.001	0.001	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.002	0.001	0.001	0.001	0.001	0.001	0.001			0.014			0.87
Magnesium-T	mg/L	0.82	5.11	2.95	3.42	1.4	23.5	6.35	5.28	3.25	5.27	1.57	5.59	36.9	3.66	1.46	3.15	9.69	4.87	4.08						
Manganese-T	mg/L	0.0344	0.03729	0.18178	0.2965	0.0342	0.0914	0.147	0.0896	0.0446	0.0205	0.144	0.0857	0.155	0.0412	0.103	0.0137	0.37	0.00224	0.0162			0.656-3.117 ^f	0.669-6.832 ^f		
Mercury-T	mg/L	0.000017	0.000013	0.000014	0.000016	0.000015	0.000042	0.000008	0.000008	0.000017	0.000014	0.000008	0.000008	0.000008	0.000005	0.000005	0.000008	0.000009	0.000005	0.000005			0.00002	0.0001		0.000026
Molybdenum-T	mg/L	0.00037	0.0009	0.00021	0.00037	0.00058	0.00087	0.00071	0.0007	0.00095	0.00039	0.00069	0.00071	0.00484	0.0007	0.00108	0.00252	0.00078	0.00075	0.00089			1	2		0.073
Nickel-T	mg/L	0.00068	0.00392	0.0006	0.00054	0.00066	0.00148	0.00078	0.00048	0.00062	0.0005	0.00045	0.00047	0.00456	0.0003	0.00033	0.00025	0.0057	0.00007	0.0003				0.025-0.150 ^c		0.025-0.359 ^c
Phosphorous-T	mg/L	0.05	0.2	0.05	0.02	0.03	4.88	0.09	0.05	0.02	0.02	0.02	0.04	0.17	0.02	0.06	0.02	0.29	0.02	0.02						
Potassium-T	mg/L	0.7	0.9	1.1	0.5	0.7	15.4	1.1	1.3	0.7	0.7	0.8	1.4	4.4	0.7	0.5	0.5	3.8	0.7	0.7						
Selenium-T	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0009	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0011	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006			0.002			0.001
Silicon-T	mg/L	6.93	10.5	7.61	7.87	6.26	7.74	6.75	6.17	7.81	7.54	6.95	6.5	53.4	4.43	2.62	7.12	16.2	6.87	7.14						
Silver-T	mg/L	0.00005	0.00005	0.00016	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00008	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005			0.00005-0.0015 ^c	0.0001-0.003 ^c		0.0001
Sodium-T	mg/L	3.6	4.2	5.6	3.5	2.9	107	4.2	4	3.8	4.4	2.6	4.2	31.7	3	2.3	3.8	7.7	3	4.1						
Strontium-T	mg/L	0.034	0.1034	0.08363	0.06889	0.0565	0.112	0.141	0.																	

Parameters	Units	WQ1	WQ3	WQ4	WQ5	WQ6	WQ7	WQ8	WQ9	WQ10	WQ11	WQ12	WQ13	WQ14	WQ15	WQ16	WQ17	WQ18	WQ19	WQ26	BC MoE Guideline		CCME		
		Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	30-day	Maximum	Long Term	Short Term
Vanadium-T	mg/L	0.001	0.0024	0.0015	0.001	0.0007	0.0032	0.0006	0.0007	0.0011	0.001	0.0008	0.0006	0.0024	0.00042	0.00026	0.0002	0.0069	0.0008	0.00017			0.006-0.01		
Zinc-T	mg/L	0.0104	0.0124	0.0882	0.0281	0.0221	0.133	0.0116	0.0049	0.0119	0.007	0.012	0.0582	0.0416	0.0042	0.009	0.0036	0.1463	0.0024	0.004		0.0075-0.3683 ^c	0.033-0.3938 ^c		0.03
Dissolved Metals																									
Aluminum-D	mg/L	0.39	0.219	0.292	0.256	0.218	0.334	0.018	0.066	0.29	0.498	0.224	0.171	0.062	0.098	0.077	0.153	0.039	0.006	0.241		0.05 ^b	0.1 ^b		
Antimony-D	mg/L	0.00013	0.00008	0.0003	0.00005	0.00007	0.00089	0.00006	0.00006	0.00007	0.00008	0.00005	0.00006	0.00737	0.00005	0.00008	0.00005	0.00008	0.00005	0.00005					
Arsenic-D	mg/L	0.0012	0.0023	0.0025	0.0017	0.0008	0.0006	0.0017	0.0006	0.0016	0.0022	0.0012	0.0006	0.0004	0.0013	0.0012	0.0006	0.0005	0.0005	0.0037					
Barium-D	mg/L	0.00589	0.0106	0.00433	0.0103	0.00895	0.0096	0.0132	0.00908	0.0124	0.0172	0.0114	0.01144	0.0866	0.0131	0.00891	0.00749	0.00738	0.00956	0.0216					
Beryllium-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Boron-D	mg/L	0.004	0.006	0.002	0.005	0.002	0.012	0.007	0.002	0.004	0.011	0.003	0.002	0.019	0.003	0.002	0.001	0.002	0.001	0.024					
Cadmium-D	mg/L	0.000054	0.000042	0.000824	0.000057	0.000028	0.000122	0.000015	0.000058	0.00002	0.000069	0.000044	0.000221	0.000057	0.000015	0.000037	0.000015	0.000481	0.000015	0.000015					
Calcium-D	mg/L	3.5	22	17	12	8.1	23.5	25.4	23.2	16.2	25.1	8.6	23	173	15.6	7.5	11	15	35	19.2					
Chromium-D	mg/L	0.0005	0.001	0.0004	0.0005	0.0004	0.0007	0.0003	0.0003	0.0005	0.0006	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0005	0.0003	0.0003					
Cobalt-D	mg/L	0.00006	0.00007	0.00003	0.00006	0.00006	0.0001	0.00007	0.00006	0.00006	0.00007	0.00006	0.00004	0.00029	0.00002	0.00003	0.00004	0.00007	0.00002	0.00003					
Copper-D	mg/L	0.0013	0.0011	0.0031	0.0008	0.0006	0.0363	0.0033	0.0019	0.0008	0.0091	0.0007	0.001	0.0182	0.0011	0.0005	0.0006	0.0035	0.0001	0.0009					
Iron-D	mg/L	0.434	0.201	0.237	0.189	0.159	0.193	0.365	0.246	0.179	0.237	0.437	0.212	1.14	0.175	0.143	0.0809	0.164	0.0162	0.128			0.35		
Lead-D	mg/L	0.00045	0.00007	0.00043	0.00007	0.00024	0.00094	0.00013	0.00014	0.00019	0.00043	0.00005	0.00005	0.00069	0.00005	0.0004	0.00005	0.00005	0.00005	0.00005					
Lithium-D	mg/L	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.001					
Magnesium-D	mg/L	0.74	5.11	2.86	3.41	1.4	4.88	5.89	5.28	3.25	5.27	1.54	5.34	34	3.38	1.46	3.15	9.21	4.87	4.07					
Manganese-D	mg/L	0.0227	0.03381	0.0392	0.01835	0.0123	0.02546	0.103	0.062	0.00886	0.00513	0.0182	0.0593	0.0772	0.0279	0.0553	0.0137	0.00801	0.00157	0.00409					
Mercury-D	mg/L	0.000017	0.00001	0.000008	0.000016	0.000008	0.000012	0.000008	0.000008	0.000014	0.000015	0.000011	0.000008	0.000008	0.000005	0.000005	0.000008	0.000008	0.000005	0.000005					
Molybdenum-D	mg/L	0.00037	0.00083	0.0002	0.00037	0.00058	0.00083	0.00063	0.00067	0.00088	0.00038	0.00062	0.00069	0.00422	0.00069	0.00084	0.00213	0.00078	0.00075	0.00089					
Nickel-D	mg/L	0.00054	0.00392	0.00044	0.00029	0.0004	0.0084	0.00055	0.00038	0.00033	0.0003	0.00017	0.00035	0.00456	0.00024	0.00008	0.00025	0.00118	0.00005	0.0003					
Phosphorous-D	mg/L	0.05	0.05	0.01	0.01	0.01	15.4	0.05	0.02	0.02	0.02	0.01	0.02	0.03	0.01	0.02	0.01	0.05	0.01	0.01					
Potassium-D	mg/L	0.7	0.8	1.1	0.5	0.6	40.3	1.1	1.2	0.6	0.7	0.7	1.4	1.9	0.7	0.5	0.5	3.7	0.7	0.7					
Selenium-D	mg/L	0.0006	0.0006	0.0006	0.0006	0.0006	0.0009	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006	0.0006					
Silicon-D	mg/L	6.75	10.2	6.55	7.87	6.26	7.28	5.41	6.11	7.43	7.54	4.16	6.33	39.6	3.33	2.08	6.77	13.5	6.87	7.14					
Silver-D	mg/L	0.00005	0.00005	0.00014	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Sodium-D	mg/L	3.6	4.2	5.5	3.5	2.9	107	4.2	4	3.7	4.4	2.6	4.2	6.6	3	2.3	3.8	7.7	3	4.1					
Strontium-D	mg/L	0.0334	0.1024	0.08363	0.06711	0.056	0.11	0.127	0.11	0.0983	0.129	0.0661	0.116	0.894	0.0835	0.0626	0.06286	0.06402	0.124	0.107					
Thallium-D	mg/L	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00011	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005					
Tin-D	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.0014	0.0001	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001					
Titanium-D	mg/L	0.005	0.0041	0.0045	0.0029	0.003	0.0027	0.0006	0.0016	0.0038	0.0067	0.0037	0.0019	0.0063	0.0015	0.0011	0.001	0.0021	0.0002	0.0035					
Uranium-D	mg/L	0.00026	0.00021	0.00007	0.00009	0.00026	0.00028	0.0001	0.00015	0.00032	0.00035	0.00023	0.00017	0.00033	0.00018	0.00031	0.0001	0.00013	0.00035	0.00027					
Vanadium-D	mg/L	0.0005	0.00164	0.0002	0.00046	0.00029	0.00062	0.00043	0.0004	0.00044	0.00064	0.00038	0.00039	0.00026	0.00005	0.00005	0.00021	0.00146	0.00084	0.00005					
Zinc-D	mg/L	0.0104	0.0098	0.0617	0.0126	0.0221	0.133	0.006	0.0049	0.0076	0.007	0.012	0.0103	0.0186	0.0041	0.0059	0.0036	0.1187	0.0024	0.0029					
D-Hardness as CaCO3	mg/L	11.7	77	54	43	25	78.8	81.3	78	54	77	27.9	80	120	28	22	40	73.4	110	62					
Cyanide																									
Cyanide (Total)	mg/L	0.0175	0.0137	0.0111	0.018	0.0126	0.0148	0.0055	0.016	0.0201	0.026	0.0158	0.0141	0.0129	0.005	0.005	0.005	0.005	0.005	0.005					
Cyanide (WAD)	mg/L	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005		0.005	0.01		0.005
Cyanate	mg/L	0.36	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				0.2					
Thiocyanate (SCN)	mg/L	0.62	0.5	0.55	0.67	0.5	0.72	0.5	0.62	0.5	1.22	0.71	0.61	0.7	0.5	0.5				0.5					
Blackwater - Field Parameters																									
Conductivity (EC)	us/cm	28	113	69	89	60	140	216	187	114	151	62	195	253	55	52	96	152	132	128					
DO Saturation %	%	105	146.3	97.1	126.9	148	151	118	144.1	149.7	148	123	130.5	110.9	126.3	112.8	188.2	161.7	89.4	229.4					
pH	pH	8.4	8.9	8.8	9.3	8.5	9.2	10	8.9	9	8.4	10.4	9.3	10.2	10.1	10.1	8.8	8	9.9	8.8		6.5-9.0			6.5-9.0
Temp	deg c	9.5	7.3	10.1	10.66	12.21	12.5	18.77	16.35	9.66	10.5	14.4	15.66	14.42	13.31	13.41	6.46	13.39	8.68	8.05			18		

Notes:

(a) pH and temperature dependent. Assume pH ranges from 6.7 to 12, and Temperature = 0 to 19°C

(b) pH dependent

(c) Hardness dependent

Annex 2

Analysis Methods and Detection Limits

Analytical Parameter	Units	Reference MDL Method
Physical Tests		
pH @ 25°C BC-D	pH units	0.01 APHA 4500H
Conductivity @ 25°C	µS/cm	1 APHA 2510 B
T-Dissolved Solids180°C	mg/L (ppm)	4 APHA 2540 C
Total Suspended Solids @105°C	mg/L (ppm)	2 APHA 2540-d
Turbidity	NTU	0.1 APHA 2130-b
Dissolved Anions		
Alkalinity as CaCO3	mg/L (ppm)	1 APHA 2320
Chloride-D	mg/L (ppm)	0.1 APHA 4110
Fluoride-D	mg/L (ppm)	0.02 APHA 4500F-c
Sulphate-D	mg/L (ppm)	0.5 APHA 4110
Nutrients		
Ammonia - Nitrogen	mg/L (ppm)	0.02 APHA 4500NH3-G
Nitrate-N-D	mg/L (ppm)	0.005 APHA 4110
Nitrite-N-D	mg/L (ppm)	0.003 APHA 4110
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.08 APHA 4500N-d
Phosphorus-Ortho-DLL	mg/L (ppm)	0.003 APHA 4110
Phosphorus (Total-Dissolved) LL	mg/L (ppm)	0.001 APHA 3030 E/3125 B
Organic Parameters		
Carbon (Total Organic)	mg/L (ppm)	0.1 APHA 5310 B
Carbon (Dissolved Organic)	mg/L (ppm)	0.1 APHA 5310 B
Total Metals		
Aluminum-T	mg/L (ppm)	0.002 APHA 3030 E/3125 B
Antimony-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Arsenic-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Barium-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Beryllium-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Boron-T	mg/L (ppm)	0.001 APHA 3030 E/3125 B
Cadmium-T	mg/L (ppm)	0.000015 APHA 3030 E/3125 B
Calcium-T	mg/L (ppm)	0.5 APHA 3030 E/3125 B
Chromium -T	mg/L (ppm)	0.0003 APHA 3030 E/3125 B
Cobalt-T	mg/L (ppm)	0.00002 APHA 3030 E/3125 B
Copper-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Iron-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Lead-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Lithium-T	mg/L (ppm)	0.001 APHA 3030 E/3125 B
Magnesium-T	mg/L (ppm)	0.5 APHA 3030 E/3125 B
Manganese-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Mercury-T	mg/L (ppm)	0.000008 APHA 3112
Molybdenum-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Nickel-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Phosphorus-T	mg/L (ppm)	0.02 APHA 3030 E/3125 B
Potassium-T	mg/L (ppm)	0.5 APHA 3030 E/3125 B
Selenium-T	mg/L (ppm)	0.0006 APHA 3030 E/3125 B
Silicon-T	mg/L (ppm)	0.01 APHA 3030 E/3125 B
Silver-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Sodium-T	mg/L (ppm)	0.5 APHA 3030 E/3125 B
Strontium-T	mg/L (ppm)	0.000005 APHA 3030 E/3125 B
Thallium-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Tin-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Titanium-T	mg/L (ppm)	0.0002 APHA 3030 E/3125 B
Uranium-T	mg/L (ppm)	0.00005 APHA 3030 E/3125 B
Vanadium-T	mg/L (ppm)	0.0001 APHA 3030 E/3125 B
Zinc-T	mg/L (ppm)	0.0005 APHA 3030 E/3125 B
T-Hardness as CaCO3	mg/L (ppm)	6 Calculation

Dissolved Metals

Aluminum-D	mg/L (ppm)	0.002 APHA 3125 B
Antimony-D	mg/L (ppm)	0.00005 APHA 3125 B
Arsenic-D	mg/L (ppm)	0.0001 APHA 3125 B
Barium-D	mg/L (ppm)	0.00005 APHA 3125 B
Beryllium-D	mg/L (ppm)	0.0001 APHA 3125 B
Boron-D	mg/L (ppm)	0.001 APHA 3125 B
Cadmium-D	mg/L (ppm)	0.000015 APHA 3125 B
Calcium-D	mg/L (ppm)	0.5 APHA 3125 B
Chromium-D	mg/L (ppm)	0.0003 APHA 3125 B
Cobalt-D	mg/L (ppm)	0.00002 APHA 3125 B
Copper-D	mg/L (ppm)	0.0001 APHA 3125 B
Iron-D	mg/L (ppm)	0.0001 APHA 3125 B
Lead-D	mg/L (ppm)	0.00005 APHA 3125 B
Lithium-D	mg/L (ppm)	0.001 APHA 3125 B
Magnesium-D	mg/L (ppm)	0.5 APHA 3125 B
Manganese-D	mg/L (ppm)	0.00005 APHA 3125 B
Mercury-D	mg/L (ppm)	0.000008 APHA 3112
Molybdenum-D	mg/L (ppm)	0.00005 APHA 3125 B
Nickel-D	mg/L (ppm)	0.00005 APHA 3125 B
Phosphorus-D	mg/L (ppm)	0.01 APHA 3125 B
Potassium-D	mg/L (ppm)	0.5 APHA 3125 B
Selenium-D	mg/L (ppm)	0.0006 APHA 3125 B
Silicon-D	mg/L (ppm)	0.01 APHA 3125 B
Silver-D	mg/L (ppm)	0.00005 APHA 3125 B
Sodium-D	mg/L (ppm)	0.5 APHA 3125 B
Strontium-D	mg/L (ppm)	0.000005 APHA 3125 B
Thallium-D	mg/L (ppm)	0.00005 APHA 3125 B
Tin-D	mg/L (ppm)	0.0001 APHA 3125 B
Titanium-D	mg/L (ppm)	0.0002 APHA 3125 B
Uranium-D	mg/L (ppm)	0.00005 APHA 3125 B
Vanadium-D	mg/L (ppm)	0.00005 APHA 3125 B
Zinc-D	mg/L (ppm)	0.0005 APHA 3125 B
D-Hardness as CaCO3	mg/L (ppm)	6 Calculation

Cyanide

Cyanide, Total	mg/L (ppm)	0.005 APHA 4500-CN Cyanide
Cyanide, Weak Acid Diss	mg/L (ppm)	0.005 APHA 4500-CN Cyanide



Annex 3

Maxima and Minima Summaries

Streams

Replicate Percent Differences

Stream surface water quality monitoring quality assurance is provided in the following tables. Relative percent differences (RPDs) are listed as:

- laboratory duplicates RPDs
 - 2011 – Table 1
 - 2012 – Table 2
 - 2013 – Table 3
- field duplicates RPDs
 - 2011 – Table 4
 - 2012 – Table 5
 - 2013 – Table 6

Individual parameter RPDs were only calculated for those comparisons where both analyses were above detection. Parameter RPDs for 2011 laboratory duplicates ranged from 0% to 49% for individual duplicates; the largest RPD was for dissolved zinc. Mean parameter RPDs for all duplicates ranged from 0% to 13% and the overall average RPD for the 2011 data set was 3%. Parameter RPDs for 2012 laboratory duplicates ranged from 0% to 67% for individual duplicates. Mean parameter RPDs for all duplicates ranged from 0% to 31%; the largest RPD was for dissolved cadmium—all but one set of dissolved cadmium concentrations were below detection. Mean parameter RPDs for all duplicates ranged from 0% to 31% and the overall average RPD for the 2012 data set was 5%. Parameter RPDs for 2013 laboratory duplicates ranged from 0% to 77% for total cadmium where all concentrations were close to the detection limit. Mean RPDs had the same range because there was only one pair of duplicate total cadmium above detection.

Parameter RPDs for 2011 field duplicates ranged from 0% to 91% for individual duplicates; the largest RPD was for total aluminum. Mean parameter RPDs for all duplicates ranged from 0% to 50%; the largest mean parameter RPD was for dissolved zinc. The overall average RPD for the 2011 data set was 12%. Parameter RPDs for 2012 field duplicates ranged from 0 to 172%; the largest individual parameter RPD was for total barium. Mean parameter RPDs for all duplicates ranged from 0% to 117%; the largest mean RPD was for dissolved lead. The overall average RPD for the 2012 data set was 17%. Parameter RPDs for 2013 field duplicates ranged from 0% to 84% for total cadmium. The mean RPDs for 2013 field duplicates ranged from 0% to 84% for the same reason as lab duplicate RPDs. Overall the mean laboratory precision did not change significantly among years; the variation in field precision was about 24% less overall in 2012 than other years. However, 2012 had a full year's data whereas 2011 was from March through December and 2013 from January through June. Results are listed below:

	Lab Duplicates (RPD)			Field Duplicates (RPD)		
	2011	2012	2013	2011	2012	2013
	3%	5.4%	5%	12%	17%	13%

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Lab No.	Units	2	3		10	11		22	23		39	40		64			64	65	
Physical Tests																			
pH @ 25°C BC-T	pH units	8.23	8.23	0%	8.14	8.15	0%	6.3	6.3	0%	6.17	6.17	0%	6.85	6.87	0%	7.7	---	
Conductivity @ 25°C	mS/cm	157	159	1%	131	131	0%	27	27	0%	26	26	0%	27	27	0%	98		
T-Dissolved Solids180°C	mg/L (ppm)	92	92	0%	112	104	7%	44	48	8%	64	56	13%	44	---		76	---	
Total Suspended Solids @105°C	mg/L (ppm)	3	3	0%	< 2	---		< 2	< 2		< 2	< 2		5	---		4	---	
Turbidity	NTU	1.5	1.5	0%	0.7	0.7	0%	0.9	1	10%	1	1	0%	3	---		2.9	---	
Dissolved Anions																			
Alkalinity as CaCO3	mg/L (ppm)	82	81	1%	67	67	0%	4	4	0%	3	3	0%	7	7	0%	43	---	
Fluoride-D	mg/L (ppm)	0.09	0.08	11%	0.07	0.07	0%	0.4	0.4	0%	1.2	1.2	0%	< 0.1	< 0.1		0.2	---	
Sulphate-D	mg/L (ppm)	4.7	4.6	2%	3.1	3	3%	0.03	0.03	0%	0.03	0.03	0%	0.04	0.04	0%	0.08	---	
Chloride-D	mg/L (ppm)	0.3	0.3	0%	0.2	0.2	0%	1.9	1.9	0%	1.5	1.5	0%	2.4	2.4	0%	5.1	---	
Nutrients																			
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	---		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	---		< 0.02	---	
Nitrate-N-D	mg/L (ppm)	0.069	0.068	1%	0.04	0.04	0%	0.007	0.007	0%	0.007	0.007	0%	0.006	0.006	0%	< 0.005	---	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.011	0.011	0%	0.019	---	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.28	0.27	4%	0.76	0.71	7%	0.26	0.28	7%	0.34	0.36	6%	0.64	---		0.58	---	
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	---	
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.012	0.01	17%	0.009	0.008	11%	0.021	0.022	5%	0.014	0.015	7%	0.013	0.014	7%	0.013	0.014	7%
Organic Parameters																			
Carbon (Total Organic)	mg/L (ppm)	5.9	5.9	0%	2.7	2.7	0%	21.2	21.8	3%	19.5	19.1	2%	25.1	24.8	1%	25.1	24.8	1%
Carbon (Dissolved Organic)	mg/L (ppm)	5.5	5.5	0%	2.2	2.3	4%	22	22.5	2%	21.4	21.6	1%	12.1	12.1	0%	12.1	12.1	0%
Total Metals																			
Aluminum	mg/L (ppm)	0.042	0.0431	3%	0.011	0.012	8%	0.346	0.345	0%	0.364	0.356	2%	0.172	0.174	1%	0.172	0.174	1%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	< 0.0002	< 0.0002		0.0007	0.0006	14%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0005	0.0005	0%
Barium	mg/L (ppm)	0.00806	0.00798	1%	0.00882	0.00898	2%	0.00707	0.00709	0%	0.00527	0.0053	1%	0.0077	0.00776	1%	0.0077	0.00776	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	0.001	0.001	0%	0.001	0.001	0%	< 0.001	< 0.001		0.001	0.001	0%	0.002	0.002	0%	0.002	0.002	0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.00006	0.00006	0%	0.000047	0.000045	4%	< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	21.7	21.6	0%	17.2	17.4	1%	3	3	0%	2.7	2.7	0%	13.7	13.7	0%	13.7	13.7	0%
Chromium	mg/L (ppm)	< 0.0005	< 0.0005		< 0.0005	< 0.0005		0.0003	0.0003	0%	0.0003	0.0003	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	< 0.00005	0.00005		< 0.00005	< 0.00005		0.00007	0.00007	0%	0.00006	0.00006	0%	0.00007	0.00007	0%	0.00007	0.00007	0%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0002	0.0002	0%	0.0007	0.0007	0%	0.0007	0.0006	14%	0.0007	0.0007	0%	0.0007	0.0007	0%
Iron	mg/L (ppm)	0.199	0.198	1%	0.172	0.172	0%	0.306	0.308	1%	0.226	0.227	0%	0.193	0.187	3%	0.193	0.187	3%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.005	< 0.005		< 0.005	< 0.005		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	4.89	4.87	0%	4.07	4.05	0%	0.65	0.65	0%	0.54	0.54	0%	3.19	3.18	0%	3.19	3.18	0%
Manganese	mg/L (ppm)	0.0292	0.029	1%	0.0265	0.0264	0%	0.0344	0.0345	0%	0.0183	0.0184	1%	0.0101	0.0101	0%	0.0101	0.0101	0%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		0.000017	0.000019	11%	0.000015	0.000014	7%	< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00067	0.00069	3%	0.00087	0.00086	1%	0.00005	0.00005	0%	< 0.00005	< 0.00005		0.0005	0.0005	0%	0.0005	0.0005	0%
Nickel	mg/L (ppm)	0.0002	0.0003	33%	0.00015	0.00013	13%	0.00056	0.00056	0%	0.00046	0.00046	0%	0.00045	0.00052	13%	0.00045	0.00052	13%
Phosphorus	mg/L (ppm)	0.02	0.02	0%	< 0.02	< 0.02		0.04	0.04	0%	< 0.02	< 0.02		0.02	0.02	0%	0.02	0.02	0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.6	0.6	0%	0.7	0.7	0%	< 0.5	< 0.5		0.9	0.9	0%	0.9	0.9	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	5.16	5.09	1%	6.66	6.95	4%	4.03	4.04	0%	3.64	3.58	2%	4.58	4.64	1%	4.58	4.64	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	3.7	3.7	0%	3.9	3.9	0%	1.4	1.4	0%	1.3	1.3	0%	2.6	2.6	0%	2.6	2.6	0%
Strontium	mg/L (ppm)	0.112	0.113	1%	0.109	0.11	1%	0.0275	0.0278	1%	0.0217	0.0216	0%	0.0735	0.0731	1%	0.0735	0.0731	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0024	0.0022	8%	0.0005	0.0005	0%	0.0035	0.0033	6%	0.0034	0.0031	9%	0.0042	0.0043	2%	0.0042	0.0043	2%
Uranium	mg/L (ppm)	0.00014	0.00014	0%	0.00033	0.00031	6%	0.00015	0.00014	7%	0.00018	0.00017	6%	0.00011	0.00011	0%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		0.0004	0.0004	0%	< 0.0001	< 0.0001		0.0004	0.0004	0%	0.0004	0.0004	0%
Zinc	mg/L (ppm)	0.004	0.004	0%	0.0017	0.0019	11%	0.0093	0.0092	1%	0.0068	0.0065	4%	0.0049	0.005	2%	0.0049	0.005	2%
T-Hardness as CaCO3	mg/L (ppm)	74.3	73.9	1%	59.7	60.1	1%	10.2	10.2	0%	8.9	8.9	0%	47.4	47.2	0%	47.4	47.2	0%

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Dissolved Metals																			
Aluminum	mg/L (ppm)	< 0.002	0.002		0.005	0.005	0%	0.295	0.307	4%	0.364	0.329	10%	0.066	0.065	2%	0.066	0.065	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	< 0.0001	< 0.0001		0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.00733	0.00756	3%	0.00829	0.00839	1%	0.00589	0.00604	2%	0.00487	0.00515	5%	0.00661	0.0067	1%	0.00661	0.0067	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	0.001	0%	0.002	0.002	0%	0.002	0.002	0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.000054	0.000049	9%	0.000034	0.000037	8%	< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	21.3	21.6	1%	16.3	16.4	1%	2.9	2.9	0%	2.4	2.4	0%	13.3	13.2	1%	13.3	13.2	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		0.0003	0.0003	0%	0.0004	0.0003	25%	< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00004	0.00004	0%	0.00006	0.00006	0%	0.00005	0.00005	0%	0.00004	0.00004	0%	0.00004	0.00004	0%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0001	0.0001	0%	0.0007	0.0007	0%	0.0007	0.0006	14%	0.0008	0.0008	0%	0.0008	0.0008	0%
Iron	mg/L (ppm)	0.0851	0.0856	1%	0.132	0.126	5%	0.213	0.216	1%	0.176	0.171	3%	0.0845	0.085	1%	0.0845	0.085	1%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	4.83	4.83	0%	4.07	3.89	4%	0.64	0.63	2%	0.52	0.5	4%	3.01	2.99	1%	3.01	2.99	1%
Manganese	mg/L (ppm)	0.0219	0.0219	0%	0.0248	0.0236	5%	0.0227	0.0227	0%	0.0137	0.0132	4%	0.00475	0.00481	1%	0.00475	0.00481	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		0.000017	0.000014	18%	0.000012	0.000012	0%	< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00061	0.00063	3%	0.00073	0.00075	3%	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.0004	0.00041	2%	0.0004	0.00041	2%
Nickel	mg/L (ppm)	0.0002	0.00021	5%	0.0001	0.0001	0%	0.00041	0.00042	2%	0.0004	0.00039	3%	0.00033	0.00033	0%	0.00033	0.00033	0%
Phosphorus-D	mg/L (ppm)	0.01	0.01	0%	< 0.01	< 0.01		0.02	0.02	0%	0.01	0.01	0%	0.01	0.01	0%	0.01	0.01	0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.6	0.6	0%	0.7	0.7	0%	< 0.5	< 0.5		0.8	0.8	0%	0.8	0.8	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	5.07	5.01	1%	6.66	6.95	4%	4.03	3.91	3%	3.41	3.36	1%	4.13	4.18	1%	4.13	4.18	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	3.6	3.6	0%	3.9	3.7	5%	1.4	1.4	0%	1.2	1.2	0%	2.5	2.4	4%	2.5	2.4	4%
Strontium	mg/L (ppm)	0.107	0.108	1%	0.1	0.101	1%	0.0236	0.0242	2%	0.0207	0.0212	2%	0.068	0.0675	1%	0.068	0.0675	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0003	0.0003	0%	0.0004	0.0003	25%	0.0022	0.0024	8%	0.0028	0.0025	11%	0.001	0.001	0%	0.001	0.001	0%
Uranium	mg/L (ppm)	0.00012	0.00012	0%	0.00028	0.00028	0%	0.00012	0.00013	8%	0.00016	0.00017	6%	0.00011	0.0001	9%	0.00011	0.0001	9%
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.0003	0.00033	9%	< 0.00005	< 0.00005		0.00024	0.00022	8%	0.00024	0.00022	8%
Zinc	mg/L (ppm)	0.0039	0.0077	49%	0.0018	0.0015	17%	0.0085	0.0088	3%	0.0068	0.0065	4%	0.0049	0.005	2%	0.0049	0.005	2%
D-Hardness as CaCO3	mg/L (ppm)	73	73.9	1%	57.4	57	1%	9.8	9.9	1%	8.1	8.1	0%	45.7	45.3	1%	45.7	45.3	1%

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Lab No.	Units	78	79		95	96		123	124		131	132		148	149		174	175	
Physical Tests																			
pH @ 25°C BC-T	pH units	6.37	6.4	0%	6.23	---		7.18	7.19	0%	6.78	6.85	1%	6.8	6.9	1%	7.55	7.57	0%
Conductivity @ 25°C	mS/cm	17	16	6%	16	16	0%	36	35	3%	20	19	5%	23	23	0%	90	90	0%
T-Dissolved Solids180°C	mg/L (ppm)	52	48	8%	64	68	6%	52	---		16	12	25%	20	16	20%	100	---	
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2		< 2	< 2		< 2	---		< 2	< 2		< 2	---		< 2	---	
Turbidity	NTU	1.1	1.1	0%	0.6	0.6	0%	0.8	---		2	2.2	9%	1.4	1.3	7%	1	1	0%
Dissolved Anions																			
Alkalinity as CaCO3	mg/L (ppm)	3	3	0%	4	3	25%	15	15	0%	7	7	0%	8	8	0%	43	43	0%
Fluoride-D	mg/L (ppm)	0.2	0.2	0%	0.03	0.03	0%	0.04	0.04	0%	0.1	0.1	0%	0.02	0.02	0%	0.04	0.04	0%
Sulphate-D	mg/L (ppm)	0.03	0.03	0%	1.1	1.1	0%	0.2	0.2	0%	0.02	0.02	0%	0.6	0.6	0%	1.7	1.7	0%
Chloride-D	mg/L (ppm)	1.6	1.5	6%	0.1	< 0.1		0.5	0.5	0%	0.7	0.7	0%	0.1	0.1	0%	0.2	0.2	0%
Nutrients																			
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		0.02	---		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	---	
Nitrate-N-D	mg/L (ppm)	0.006	0.006	0%	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.46	0.45	2%	0.24	0.25	4%	< 0.08	---		0.09	0.08	11%	0.19	0.19	0%	< 0.08	---	
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.026	0.025	4%	0.071	0.071	0%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.01	0.009	10%	0.009	0.01	10%	0.004	0.004	0%	0.004	0.005	20%	0.005	0.005	0%	0.006	0.005	17%
Organic Parameters																			
Carbon (Total Organic)	mg/L (ppm)	11.9	11.8	1%	9.7	9.6	1%	10.4	10.3	1%	6.7	6.8	1%	5.1	5.1	0%	5.2	5.2	0%
Carbon (Dissolved Organic)	mg/L (ppm)	10.7	11.3	5%	9.7	9.7	0%	10	10.2	2%	6.7	6.8	1%	5.1	5.1	0%	5.2	5.2	0%
Total Metals																			
Aluminum	mg/L (ppm)	0.302	0.303	0%	0.234	0.231	1%	0.166	0.167	1%	0.177	0.173	2%	0.098	0.097	1%	0.031	0.03	3%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0002	0.0002	0%	0.0006	0.0006	0%	0.0005	0.0005	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.00319	0.00323	1%	0.0024	0.00244	2%	0.00674	0.00654	3%	0.00287	0.00273	5%	0.00229	0.00231	1%	0.00693	0.00684	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.006	0.005	17%
Cadmium	mg/L (ppm)	0.000027	0.00003	10%	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	1.5	1.5	0%	5.3	5.3	0%	2.2	2.2	0%	2.4	2.4	0%	12.4	12.4	0%
Chromium	mg/L (ppm)	0.0003	0.0003	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00005	0.00005	0%	0.00004	0.00004	0%	0.00003	0.00002	33%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0005	0.0005	0%	0.0025	0.0026	4%	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0002	0.0001	50%
Iron	mg/L (ppm)	0.152	0.152	0%	0.108	0.108	0%	0.136	0.136	0%	0.143	0.14	2%	0.128	0.126	2%	0.128	0.127	1%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00014	0.00012	14%	0.00007	0.00008	13%	< 0.00005	< 0.00005		0.00009	0.00009	0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		< 0.50	< 0.50		0.82	0.82	0%	< 0.50	< 0.50		0.53	0.51	4%	2.8	2.77	1%
Manganese	mg/L (ppm)	0.0113	0.0114	1%	0.00467	0.00469	0%	0.00905	0.00895	1%	0.0102	0.0101	1%	0.0153	0.0151	1%	0.0164	0.0162	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00009	0.00008	11%	0.00008	0.00009	11%	0.00037	0.00033	11%	0.00016	0.00015	6%	0.00022	0.00022	0%	0.00051	0.0005	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00027	0.00028	4%	0.00011	0.00014	21%	0.00019	0.0002	5%	< 0.00005	< 0.00005		0.00013	0.00013	0%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5	
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.45	3.39	2%	3.72	3.69	1%	3.93	3.65	7%	5.47	5.43	1%	5.72	5.71	0%	6.3	6.33	0%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.1	1.1	0%	1.6	1.6	0%	1.8	1.8	0%	1.9	2	5%	2.9	2.9	0%
Strontium	mg/L (ppm)	0.0147	0.0148	1%	0.0139	0.0138	1%	0.042	0.0421	0%	0.0193	0.0191	1%	0.0212	0.0211	0%	0.0713	0.0713	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0041	0.0043	5%	0.0019	0.0019	0%	0.0027	0.0028	4%	0.0022	0.0018	18%	0.0008	0.0009	11%	0.0008	0.0007	13%
Uranium	mg/L (ppm)	0.00017	0.00018	6%	0.00019	0.0002	5%	0.00023	0.00023	0%	0.00011	0.00012	8%	0.00008	0.00008	0%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	0.0002	0.0002	0%	0.0002	0.0002	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	< 0.0001	< 0.0001		0.0002	0.0002	0%
Zinc	mg/L (ppm)	0.0047	0.0048	2%	0.0028	0.0028	0%	0.0022	0.0048	54%	0.0024	0.0024	0%	0.0018	0.0019	5%	< 0.0005	< 0.0005	
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		< 6.0	< 6.0		16.5	16.5	0%	7.3	7.2	1%	8.1	8.1	0%	42.4	42.2	0%

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Dissolved Metals																			
Aluminum	mg/L (ppm)	0.241	0.241	0%	0.216	0.215	0%	0.12	0.118	2%	0.128	0.129	1%	0.079	0.079	0%	0.019	0.019	0%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.0028	0.00284	1%	0.00229	0.00224	2%	0.00589	0.00574	3%	0.00223	0.00223	0%	0.00227	0.00231	2%	0.00656	0.00668	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	0.001	0%
Cadmium	mg/L (ppm)	0.000027	0.000025	7%	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	1.5	1.5	0%	5	5	0%	2	2	0%	2.3	2.4	4%	11.5	11.6	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00004	0.00004	0%	0.00004	0.00003	25%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0003	0.0003	0%	< 0.0001	< 0.0001	
Iron	mg/L (ppm)	0.105	0.106	1%	0.0815	0.0816	0%	0.0882	0.0886	0%	0.0845	0.0852	1%	0.098	0.0982	0%	0.1	0.1	0%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00009	0.00009	0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		< 0.50	< 0.50		0.77	0.76	1%	< 0.50	< 0.50		< 0.50	< 0.50		2.74	2.71	1%
Manganese	mg/L (ppm)	0.00633	0.00628	1%	0.00281	0.00266	5%	0.00344	0.00344	0%	0.00613	0.00614	0%	0.0137	0.0137	0%	0.0148	0.0148	0%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005		0.00008	0.00008	0%	0.00032	0.00029	9%	0.00011	0.00012	8%	0.00019	0.00019	0%	0.0005	0.00049	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00027	0.00028	4%	0.00011	0.00014	21%	0.00017	0.00017	0%	< 0.00005	< 0.00005		0.00013	0.00013	0%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5	
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.17	3.27	3%	3.58	3.58	0%	3.48	3.55	2%	5.02	5.27	5%	5.72	5.71	0%	6.17	6.25	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1.1	9%	1.1	1.1	0%	1.5	1.5	0%	1.7	1.7	0%	1.8	2	10%	2.9	2.9	0%
Strontium	mg/L (ppm)	0.0145	0.0142	2%	0.0134	0.0135	1%	0.0404	0.0399	1%	0.0183	0.0182	1%	0.021	0.0211	0%	0.0713	0.0713	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0018	0.0018	0%	0.0013	0.0014	7%	0.0012	0.0013	8%	0.001	0.001	0%	0.0007	0.0007	0%	0.0003	0.0003	0%
Uranium	mg/L (ppm)	0.00015	0.00016	6%	0.00016	0.00016	0%	0.00023	0.00022	4%	0.0001	0.0001	0%	0.00007	0.00006	14%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	0.00011	0.00011	0%	0.00013	0.00013	0%	0.00017	0.00017	0%	0.00013	0.00012	8%	< 0.00005	< 0.00005		0.0002	0.0002	0%
Zinc	mg/L (ppm)	0.0044	0.004	9%	0.0028	0.0028	0%	0.0022	0.0048	54%	0.0024	0.0024	0%	0.0018	0.0019	5%	< 0.0005	< 0.0005	
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		< 6.0	< 6.0		15.7	15.6	1%	6.6	6.6	0%	7.9	7.9	0%	40	40.1	0%

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Lab No.	Units	197	198		214	215		
Physical Tests								
pH @ 25°C BC-T	pH units	7.09	7.08	0%	7.4	7.48	1%	0%
Conductivity @ 25°C	mS/cm	45	45	0%	105	105	0%	1%
T-Dissolved Solids180°C	mg/L (ppm)	60	56	7%	76	72	5%	10%
Total Suspended Solids @105°C	mg/L (ppm)	< 2	---		11	14	21%	11%
Turbidity	NTU	0.7	0.7	0%	4.4	4.8	8%	3%
Dissolved Anions								
Alkalinity as CaCO3	mg/L (ppm)	20	21	5%	50	50	0%	2%
Fluoride-D	mg/L (ppm)	0.2	0.2	0%	0.05	0.05	0%	1%
Sulphate-D	mg/L (ppm)	0.03	0.03	0%	2.1	2.1	0%	0%
Chloride-D	mg/L (ppm)	0.8	0.8	0%	0.3	0.2	33%	3%
Nutrients								
Ammonia - Nitrogen	mg/L (ppm)	< 0.01	---		< 0.02	< 0.02		
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005		0.01	0.01	0%	0%
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	---		0.11	0.13	15%	6%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		2%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	8%
Organic Parameters								
Carbon (Total Organic)	mg/L (ppm)	6.5	6.5	0%	3.7	---		1%
Carbon (Dissolved Organic)	mg/L (ppm)	6.5	6.5	0%	3.4	---		1%
Total Metals								
Aluminum	mg/L (ppm)	0.073	0.073	0%	0.229	0.226	1%	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0002	0.0002	0%	0.0006	0.0007	14%	2%
Barium	mg/L (ppm)	0.00553	0.00557	1%	0.0126	0.0126	0%	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		2%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		0.000029	0.000033	12%	7%
Calcium	mg/L (ppm)	6	6	0%	14.7	14.8	1%	0%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		0.0005	0.0005	0%	0%
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00017	0.00016	6%	3%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0008	0.0009	11%	6%
Iron	mg/L (ppm)	0.14	0.14	0%	0.506	0.501	1%	1%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		0.00013	0.00013	0%	7%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	1.01	1.01	0%	3.45	3.43	1%	1%
Manganese	mg/L (ppm)	0.0126	0.0127	1%	0.0529	0.0529	0%	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		9%
Molybdenum	mg/L (ppm)	0.00045	0.00047	4%	0.0007	0.00071	1%	4%
Nickel	mg/L (ppm)	0.00011	0.00011	0%	0.00045	0.00043	4%	8%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		0.02	0.02	0%	0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		0.6	0.5	17%	3%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	3.67	3.67	0%	6.58	6.54	1%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	1.8	1.8	0%	3.4	3.4	0%	0%
Strontium	mg/L (ppm)	0.0476	0.0481	1%	0.0901	0.0902	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0016	0.0015	6%	0.0098	0.0101	3%	6%
Uranium	mg/L (ppm)	0.00017	0.00016	6%	0.0002	0.0002	0%	3%
Vanadium	mg/L (ppm)	0.0001	0.0001	0%	0.0009	0.0009	0%	0%
Zinc	mg/L (ppm)	0.0015	0.0016	6%	0.0112	0.0112	0%	7%
T-Hardness as CaCO3	mg/L (ppm)	19.1	19.2	1%	50.9	51.1	0%	0%

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Dissolved Metals								
Aluminum	mg/L (ppm)	0.05	0.051	2%	0.01	0.01	0%	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0002	0.0002	0%	0.0004	0.0004	0%	0%
Barium	mg/L (ppm)	0.00513	0.0052	1%	0.0086	0.00854	1%	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		8%
Calcium	mg/L (ppm)	5.9	6	2%	14.7	14.8	1%	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		13%
Cobalt	mg/L (ppm)	0.00003	0.00002	33%	0.00003	0.00003	0%	4%
Copper	mg/L (ppm)	0.0002	0.0001	50%	0.0003	0.0003	0%	5%
Iron	mg/L (ppm)	0.102	0.102	0%	0.0851	0.0859	1%	1%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	1.01	1.01	0%	3.38	3.42	1%	1%
Manganese	mg/L (ppm)	0.0111	0.0111	0%	0.0207	0.021	1%	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		9%
Molybdenum	mg/L (ppm)	0.00045	0.00046	2%	0.00068	0.00066	3%	3%
Nickel	mg/L (ppm)	0.00009	0.00009	0%	0.00006	0.00005	17%	4%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		< 0.01	< 0.01		0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	3.67	3.67	0%	6.53	6.54	0%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	1.8	1.8	0%	3.3	3.3	0%	2%
Strontium	mg/L (ppm)	0.047	0.0481	2%	0.0901	0.0901	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0008	0.0008	0%	0.0002	0.0002	0%	4%
Uranium	mg/L (ppm)	0.00015	0.00016	6%	0.00015	0.00016	6%	5%
Vanadium	mg/L (ppm)	0.0001	0.0001	0%	0.00018	0.00021	14%	5%
Zinc	mg/L (ppm)	0.0015	0.0016	6%	0.009	0.0079	12%	13%
D-Hardness as CaCO3	mg/L (ppm)	18.9	19.1	1%	50.6	51	1%	1%

3% Mean of means

2012 Lab Duplicates RPDs

Analytical Parameter	Unit	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD			
		Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
		Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753			
		23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12				
pH @ 25°C BC-D	pH	6.73	6.88	2.20%	6.89	6.82	1.02%	6.78	6.73	0.74%	6.45	6.81	5.43%	6.94	7	0.86%	6.98	7.06	1.14%				
Conductivity @ 25°C	uS/cm	26	27	3.77%	26	25	3.92%	18	18	0.00%	19	18	5.41%	23	22	4.44%	36	35	2.82%				
T-Dissolved Solids180°C	mg/L	56	64	13.33%	48	44	8.70%	40	50	22.22%	27	32	16.95%	60	52	14.29%	76	64	17.14%				
Total Suspended Solids @105°C	mg/L	<2	<2		2	2	0.00%	<2	<2		<2	2		<2	<2		5	5	0.00%				
Turbidity	NTU	3.1	3.1	0.00%	2.4	2.3	4.26%	3.3	3.3	0.00%	2.6	2.7	3.77%	3.1	3.2	3.17%	10	10	0.00%				
Alkalinity as CaCO3	mg/L	5	5	0.00%	3	6	66.67%	4	5	22.22%	4	5	22.22%	8	8	0.00%	12	12	0.00%				
Fluoride-D	mg/L	0.07	0.07	0.00%	0.05	0.12	82.35%	0.03	0.03	0.00%	0.03	0.03	0.00%	0.05	0.05	0.00%	<0.02	<0.02					
Sulphate-D	mg/L	1.4	1.6	13.33%	0.8	0.7	13.33%	1.2	1.1	8.70%	0.7	0.8	13.33%	0.8	0.8	0.00%	<0.5	<0.5					
Chloride-D	mg/L	1.4	1.4	0.00%	2.7	2.6	3.77%	0.6	0.6	0.00%	0.5	0.5	0.00%	0.6	0.5	18.18%	0.2	0.2	0.00%				
Ammonia - Nitrogen	mg/L	<0.02	<0.02		0.04	0.03	28.57%	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02					
Nitrate-N-D	mg/L	<0.005	<0.005		0.014	0.014	0.00%	<0.005	<0.005		0.005	0.005	0.00%	0.01	0.011	9.52%	<0.005	<0.005					
Nitrite-N-D	mg/L	0.003	0.003	0.00%	0.004	0.004	0.00%	<0.003	<0.003		<0.003	<0.003		<0.003	0.004		<0.003	<0.003					
Total Kjeldahl Nitrogen (TKN)	mg/L	0.37	0.34	8.45%	0.24	0.28	15.38%	0.2	0.21	4.88%	0.16	0.13	20.69%	0.15	0.18	18.18%	0.99	0.99	0.00%				
Phosphorous-Ortho-DLL	mg/L	0.018	0.018	0.00%	<0.003	<0.003					<0.003	<0.003		<0.003	<0.003		<0.003	<0.003					
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.01	0.00%	0.01	0.01	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.05	0.05	0.00%				
Carbon (Total Organic)	mg/L	16	16.2	1.24%	14	14	0.00%	11	11	0.00%	9	9	0.00%	7	7	0.00%	12.9	13	0.77%				
Carbon (Dissolved Organic)	mg/L	16	16.2	1.24%	13.6	13.9	2.18%	11	11	0.00%	8.5	8.7	2.33%	6.6	6.7	1.50%	12.9	13	0.77%				
Aluminum-T	mg/L	0.458	0.463	1.09%	0.328	0.323	1.54%	0.34	0.337	0.89%	0.31	0.349	11.84%	0.286	0.274	4.29%	0.708	0.7	1.14%				
Antimony-T	mg/L	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		0.00005	<0.00005		0.00013	0.00014	7.41%				
Arsenic-T	mg/L	0.0005	0.0005	0.00%	0.0004	0.0004	0.00%	0.0005	0.0004	22.22%	0.0004	0.0003	28.57%	0.0005	0.0005	0.00%	0.0016	0.0015	6.45%				
Barium-T	mg/L	0.00542	0.00542	0.00%	0.00384	0.00386	0.52%	0.00391	0.00379	3.12%	0.00298	0.00302		0.0032	0.00323	0.93%	0.00876	0.00886	1.14%				
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001					
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.003	0.00%				
Cadmium-T	mg/L	<0.000015	<0.000015		0.00005	0.000051	1.98%	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		0.000062	0.000064	3.17%				
Calcium-T	mg/L	2.6	2.7	3.77%	2.1	2.1	0.00%	1.9	1.9	0.00%	1.7	1.6	6.06%	2.1	2	4.88%	3.5	3.4	2.90%				
Chromium-T	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		0.0009	0.001	10.53%				
Cobalt-T	mg/L	0.00003	0.00004	28.57%	0.00058	0.00053	9.01%	0.00006	0.00007	15.38%	<0.00002	<0.00002		<0.00002	<0.00002		0.0001	0.0001	0.00%				
Copper-T	mg/L	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0003	0.0003	0.00%	<0.0001	<0.0001		0.0013	0.0013	0.00%	0.0002	0.0002	0.00%				
Iron-T	mg/L	0.294	0.298	1.35%	0.211	0.211	0.00%	0.242	0.2417	0.12%	0.159	0.16	0.63%	0.171	0.172	0.58%	0.814	0.817	0.37%				
Lead-T	mg/L	0.00006	0.00006	0.00%	0.00009	0.0001	10.53%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00021	0.00021	0.00%				
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001					
Magnesium-T	mg/L	0.59	0.6	1.68%	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		0.82	0.87	5.92%				
Manganese-T	mg/L	0.0115	0.0117	1.72%	0.0111	0.0111	0.00%	0.007	0.00709	1.28%	0.00501	0.005	0.20%	0.0085	0.00851	0.12%	0.0211	0.0214	1.41%				
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005					
Molybdenum-T	mg/L	0.00006	0.00006	0.00%	0.00007	0.00006	15.38%	0.00008	0.00008	0.00%	0.00037	0.00019	64.29%	0.00034	0.00025	30.51%	0.00033	0.00033	0.00%				

Analytical Parameter	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753
Unit	23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Nickel-T	mg/L	0.00022	0.00022	0.00%	<0.00005	<0.00005		0.00025	0.00026	3.92%	0.00034	0.00023	38.60%	0.00024	0.00023	4.26%	0.00068	0.00066	2.99%
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		0.05	0.05	0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	4.52	4.43	2.01%	4.03	4.04	0.25%	4.48	4.43	1.12%	4.38	4.28	2.31%	6.2	5.91	4.79%	6.93	7.03	1.43%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	1.7	1.7	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	1.2	1.2	0.00%	1.8	1.8	0.00%	3.6	3.6	0.00%
Strontium-T	mg/L	0.0239	0.0241	0.83%	0.0195	0.0196	0.51%	0.01797	0.01805	0.44%	0.016	0.0149	7.12%	0.0199	0.0192	3.58%	0.034	0.0343	0.88%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0078	0.0081	3.77%	0.0048	0.0049	2.06%	0.0065	0.0065	0.00%	0.0047	0.0046	2.15%	0.0062	0.0063	1.60%	0.0173	0.0172	0.58%
Uranium-T	mg/L	0.00013	0.00013	0.00%	0.00018	0.00018	0.00%	0.00018	0.00018	0.00%	0.00026	0.00019	31.11%	0.00014	0.00012	15.38%	0.0002	0.0002	0.00%
Vanadium-T	mg/L	0.0003	0.0003	0.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0004	0.0003	28.57%	0.001	0.0011	9.52%
Zinc-T	mg/L	0.0047	0.0048	2.11%	0.0068	0.0067	1.48%	0.0026	0.0026	0.00%	0.0042	0.004	4.88%	0.0031	0.003	3.28%	0.0104	0.0104	0.00%
T-Hardness as CaCO3	mg/L	9.1	9.1	0.00%	7.1	7.1	0.00%	6.3	6.3	0.00%	<6.0	<6.0		7	6.6	5.88%	12.1	12.1	0.00%
Aluminum-D	mg/L	0.288	0.284	1.40%	0.275	0.273	0.73%	0.219	0.217	0.92%	0.207	0.209	0.96%	0.171	0.177	3.45%	0.39	0.389	0.26%
Antimony-D	mg/L	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00009	0.00009	0.00%
Arsenic-D	mg/L	0.0004	0.0004	0.00%	0.0004	0.0003	28.57%	0.0003	0.0002	40.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0012	0.0012	0.00%
Barium-D	mg/L	0.00413	0.00402	2.70%	0.00345	0.00344	0.29%	0.00259	0.00261	0.77%	0.0024	0.00222	7.79%	0.00274	0.0026	5.24%	0.00503	0.00492	2.21%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.003	0.00%
Cadmium-D	mg/L	<0.000015	<0.000015		0.00003	0.000041	30.99%	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	0.00002	
Calcium-D	mg/L	2.6	2.6	0.00%	2.1	2.1	0.00%	1.8	1.8	0.00%	1.7	1.6	6.06%	2.1	1.9	10.00%	3.5	3.4	2.90%
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		0.0005	0.0005	0.00%
Cobalt-D	mg/L	<0.00002	<0.00002		<0.00002	<0.00002		0.00002	0.00002	0.00%	<0.00002	<0.00002		<0.00002	<0.00002		0.00005	0.00006	18.18%
Copper-D	mg/L	0.0003	0.0004	28.57%	0.0006	0.0005	18.18%	0.0003	0.0003	0.00%	<0.0001	<0.0001		0.0001	0.0001	0.00%	<0.0001	<0.0001	
Iron-D	mg/L	0.157	0.158	0.63%	0.135	0.134	0.74%	0.1038	0.1045	0.67%	0.0773	0.0801	3.56%	0.112	0.112	0.00%	0.434	0.43	0.93%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00021	0.00021	0.00%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.57	0.57	0.00%	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		0.74	0.73	1.36%
Manganese-D	mg/L	0.00674	0.00673	0.15%	0.0053	0.0053	0.00%	0.00303	0.00301	0.66%	0.00397	0.00287	32.16%	0.0056	0.00537	4.19%	0.00941	0.00943	0.21%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	
Molybdenum-D	mg/L	0.00006	0.00005	18.18%	<0.00005	<0.00005		0.00007	0.00007	0.00%	0.00037	0.00019	64.29%	<0.00005	0.00025		0.00033	0.00033	0.00%
Nickel-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		0.00025	0.00026	3.92%	0.00034	0.00023	38.60%	0.00018	0.0002	10.53%	0.00054	0.00055	1.83%
Phosphorous-D	mg/L	0.01	0.01	0.00%	0.01	0.01	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.05	0.05	0.00%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	4.52	4.43	2.01%	4.03	4.04	0.25%	4.18	4.37	4.44%	3.93	3.97	1.01%	5.51	5.24	5.02%	6.56	6.85	4.33%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	1.7	1.7	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	1.4	1.3	7.41%	1.8	1.8	0.00%	3.6	3.6	0.00%
Strontium-D	mg/L	0.0225	0.0225	0.00%	0.0195	0.0196	0.51%	0.01687	0.01665	1.31%	0.016	0.0149	7.12%	0.0199	0.019	4.63%	0.0334	0.0339	1.49%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0024	0.0025	4.08%	0.0026	0.0027	3.77%	0.0022	0.0021	4.65%	0.002	0.0018	10.53%	0.0034	0.0032	6.06%	0.005	0.0052	3.92%
Uranium-D	mg/L	0.00011	0.00011	0.00%	0.00018	0.00018	0.00%	0.00014	0.00014	0.00%	0.00026	0.00019	31.11%	0.00014	0.00012	15.38%	0.00014	0.00014	0.00%
Vanadium-D	mg/L	0.00026	0.00021	21.28%	0.0001	0.0001	0.00%	<0.00005	<0.00005		0.00031	0.00031	0.00%	0.00026	0.00027	3.77%	0.0005	0.0005	0.00%

	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753
Analytical Parameter	Unit	23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Zinc-D	mg/L	0.0056	0.0056	0.00%	0.0068	0.0067	1.48%	0.0023	0.0023	0.00%	0.0042	0.004	4.88%	0.0031	0.003	3.28%	0.0104	0.0103	0.97%
D-Hardness as CaCO3	mg/L	8.7	8.7	0.00%	7	7	0.00%	<6.0	<6.0		<6.0	<6.0		7.2	6.5	10.22%	11.7	11.6	0.86%

2012 Lab Duplicates RPDs

Analytical Parameter	Unit	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
		Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
		Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
		17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12	
pH @ 25°C BC-D	pH	7.12	7.15	0.42%	6.98	7.02	0.57%	6.89	7.01	1.73%	7.46	7.57	1.46%	7.83	7.88	0.64%	7.87	7.95	1.01%	
Conductivity @ 25°C	uS/cm	35	32	8.96%	32	32	0.00%	33	33	0.00%	108	104	3.77%	103	103	0.00%	105	106	0.95%	
T-Dissolved Solids180°C	mg/L	64	56	13.33%	40	40	0.00%	30	40	28.57%	68			56	48	15.38%	68			
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	<2		<2			4	5	22.22%	<2			
Turbidity	NTU	1.4	1.7	19.35%	1.7			1	1	0.00%	1.3	1.3	0.00%	2.2	1.7	25.64%	1	1.1	9.52%	
Alkalinity as CaCO3	mg/L	11	11	0.00%	10	10	0.00%	10	10	0.00%	52	51	1.94%	51	52	1.94%	53	53	0.00%	
Fluoride-D	mg/L	0.05	0.05	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.07	0.07	0.00%	0.07	0.07	0.00%	0.07	0.07	0.00%	
Sulphate-D	mg/L	2	2	0.00%	2.7	2.7	0.00%	3.9	3.8	2.60%	1.5	1.5	0.00%	1.6	1.5	6.45%	1.7	1.8	5.71%	
Chloride-D	mg/L	0.3	<0.1		0.4	0.4	0.00%	0.5	0.6	18.18%	0.2	0.2	0.00%	0.2	0.2	0.00%	0.2	0.1	66.67%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.01	<0.01		<0.02	<0.02		
Nitrate-N-D	mg/L	<0.005	<0.005		0.031	0.015	69.57%	0.011	0.01	9.52%	0.03	0.031	3.28%	0.02	0.019	5.13%	0.02	0.019	5.13%	
Nitrite-N-D	mg/L	<0.003	<0.003		<0.003	<0.003		0.015	0.016	6.45%	0.005	0.005	0.00%	0.007	0.006	15.38%	<0.003	<0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L	0.17	0.16	6.06%	0.12	0.14	15.38%	<0.08	<0.08		<0.08	<0.08		0.13	0.15	14.29%	<0.08	<0.08		
Phosphorous-Ortho-DLL	mg/L										0.037	0.037	0.00%	0.039	0.04	2.53%	0.037	0.034	8.45%	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.04	0.04	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	
Carbon (Total Organic)	mg/L	10.9	10.7	1.85%	6.1	6	1.65%	4.9	5	2.02%	1.9	1.9	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	
Carbon (Dissolved Organic)	mg/L	9.5	10.5	10.00%	6.1	6	1.65%	4.9	5	2.02%	1.9	1.9	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	
Aluminum-T	mg/L	0.131	0.131	0.00%	0.12	0.119	0.84%	0.121	0.12	0.83%	0.043	0.043	0.00%	0.157	0.163	3.75%	0.021	0.022	4.65%	
Antimony-T	mg/L	0.00009	0.00008	11.76%	0.00013	0.00012	8.00%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Arsenic-T	mg/L	0.0008	0.0007	13.33%	0.0005	0.0005	0.00%	0.0006	0.0006	0.00%	0.0011	0.0011	0.00%	0.0013	0.0014	7.41%	0.0011	0.0011	0.00%	
Barium-T	mg/L	0.00305	0.00313	2.59%	0.00323	0.0032	0.93%	0.00304	0.00288	5.41%	0.00531	0.00529	0.38%	0.00618	0.00651	5.20%	0.00477	0.00533	11.09%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.002	40.00%	<0.001	<0.001		0.003	0.002	40.00%	
Cadmium-T	mg/L	0.000016	0.000016	0.00%	<0.000015	<0.000015		<0.000015	<0.000015		0.000032	0.000036	11.76%	<0.000015	<0.000015		<0.000015	<0.000015		
Calcium-T	mg/L	3	2.9	3.39%	2.9	2.8	3.51%	3	3.1	3.28%	12.7	12.8	0.78%	13.1	13	0.77%	13.3	13.6	2.23%	
Chromium-T	mg/L	<0.0003	<0.0003		0.0003	0.0003	0.00%	<0.0003	<0.0003		0.0009	0.0009	0.00%	0.0012	0.0013	8.00%	0.0009	0.0009	0.00%	
Cobalt-T	mg/L	0.00004	0.00004	0.00%	0.00004	0.00003	28.57%	0.00005	0.00005	0.00%	0.00002	0.00002	0.00%	0.00006	0.00006	0.00%	<0.00002	<0.00002		
Copper-T	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		0.0002	0.0002	0.00%	0.0073	0.0074	1.36%	0.0001	0.0002	66.67%	<0.0001	<0.0001		
Iron-T	mg/L	0.202	0.205	1.47%	0.181	0.1814	0.22%	0.2259	0.2284	1.10%	0.0944	0.0948	0.42%	0.283	0.286	1.05%	0.0615	0.0604	1.80%	
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00084	0.00084	0.00%	0.00007	0.00007	0.00%	<0.00005	<0.00005		
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.001	0.00%	<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	0.65	0.64	1.55%	0.66	0.66	0.00%	0.76	0.77	1.31%	3	3.03	1.00%	3.03	3.07	1.31%	3.22	3.19	0.94%	
Manganese-T	mg/L	0.0138	0.0138	0.00%	0.0116	0.01146	1.21%	0.02055	0.0204	0.73%	0.00655	0.0066	0.76%	0.0208	0.0222	6.51%	0.00438	0.00433	1.15%	
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000008	<0.000008		
Molybdenum-T	mg/L	0.00024	0.00024	0.00%	0.00014	0.00012	15.38%	0.0002	0.00018	10.53%	0.00078	0.00076	2.60%	0.00083	0.00083	0.00%	0.00088	0.001	12.77%	

Analytical Parameter	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
Unit	17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12
Nickel-T	mg/L	0.00033	0.00033	0.00%	0.00021	0.00019	10.00%	0.00019	0.00018	5.41%	0.00008	0.00008	0.00%	0.0001	0.00012	18.18%	<0.00005	<0.00005	
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		0.04	0.04	0.00%	0.06	0.06	0.00%	0.04	0.04	0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.6	0.6	0.00%	0.6	0.6	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	6.66	6.27	6.03%	6.75	6.25	7.69%	6.47	6.29	2.82%	10.5	10.8	2.82%	8.61	8.59	0.23%	9.62	9.75	1.34%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	2.4	2.4	0.00%	2.3	2.3	0.00%	2.3	2.4	4.26%	3.6	3.6	0.00%	3.5	3.6	2.82%	3.8	3.8	0.00%
Strontium-T	mg/L	0.0271	0.0269	0.74%	0.02472	0.02455	0.69%	0.02684	0.02675	0.34%	0.0866	0.0866	0.00%	0.0865	0.0869	0.46%	0.086	0.0972	12.23%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0017	0.0016	6.06%	0.0014	0.0015	6.90%	0.0013	0.0013	0.00%	0.0013	0.0014	7.41%	0.0055	0.0057	3.57%	0.0007	0.0007	0.00%
Uranium-T	mg/L	0.00009	0.00008	11.76%	0.00008	0.00008	0.00%	0.00008	0.00008		0.00018	0.00018	0.00%	0.00027	0.00027	0.00%	0.00021	0.00023	9.09%
Vanadium-T	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		<0.0001	<0.0001		0.0016	0.0016	0.00%	0.0022	0.0023	4.44%	0.0016	0.0016	0.00%
Zinc-T	mg/L	0.0042	0.0043	2.35%	0.0039	0.0038	2.60%	0.0049	0.0048	2.06%	0.0124	0.0126	1.60%	<0.0005	<0.0005		0.0016	0.0016	0.00%
T-Hardness as CaCO3	mg/L	10.1	10	1.00%	10	9.8	2.02%	11	11	0.00%	44	44.4	0.90%	45.1	45.2	0.22%	46.6	47.1	1.07%
Aluminum-D	mg/L	0.116	0.114	1.74%	0.118	0.116	1.71%	0.096	0.098	2.06%	0.006	0.006	0.00%	0.004	0.004	0.00%	0.006	0.006	0.00%
Antimony-D	mg/L	0.00009	0.00008	11.76%	0.00013	0.00012	8.00%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-D	mg/L	0.0008	0.0007	13.33%	0.0005	0.0005	0.00%	0.0005	0.0005	0.00%	0.0011	0.0011	0.00%	0.0011	0.0011	0.00%	0.001	0.001	0.00%
Barium-D	mg/L	0.00305	0.00297	2.66%	0.00306	0.00306	0.00%	0.00304	0.00288	5.41%	0.00485	0.0048	1.04%	0.00451	0.00453	0.44%	0.00427	0.00409	4.31%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.001	0.00%	<0.001	<0.001	
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-D	mg/L	3	2.9	3.39%	2.8	2.8	0.00%	3	3.1	3.28%	12.7	12.6	0.79%	12.6	12.6	0.00%	12.5	12.2	2.43%
Chromium-D	mg/L	<0.0003	<0.0003		0.0003	0.0003	0.00%	<0.0003	<0.0003		0.0009	0.0009	0.00%	0.0009	0.0009	0.00%	0.0006	0.0006	0.00%
Cobalt-D	mg/L	<0.00002	<0.00002		0.00004	0.00003	28.57%	0.00003	0.00003	0.00%	0.00002	0.00002	0.00%	<0.00002	<0.00002		<0.00002	<0.00002	
Copper-D	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		0.0002	0.0002	0.00%	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Iron-D	mg/L	0.164	0.165	0.61%	0.1447	0.1468	1.44%	0.1422	0.1463	2.84%	0.0271	0.0275	1.47%	0.0174	0.0176	1.14%	0.0191	0.019	0.52%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.64	0.63	1.57%	0.67	0.66	1.50%	0.74	0.77	3.97%	3.06	3.07		2.98	2.98	0.00%	2.82	2.78	1.43%
Manganese-D	mg/L	0.0131	0.0129	1.54%	0.01089	0.01076	1.20%	0.01536	0.01591	3.52%	0.00451	0.00447	0.89%	<0.00005	<0.00005		0.00248	0.00246	0.81%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000008	<0.000008	
Molybdenum-D	mg/L	0.00023	0.00022	4.44%	0.00014	0.00012	15.38%	0.00014	0.00014	0.00%	0.00076	0.00076	0.00%	0.00071	0.00072	1.40%	0.00067	0.00067	0.00%
Nickel-D	mg/L	0.00033	0.00032	3.08%	0.00014	0.00013	7.41%	0.00013	0.00013	0.00%	0.00009	0.0001	10.53%	<0.00005	<0.00005		<0.00005	<0.00005	
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.04	0.04	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.5	0.5	0.00%	0.5	0.5	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	6.66	6.09	8.94%	6.75	6.25	7.69%	6.45	6.29	2.51%	10.2	10.2	0.00%	8.54	8.52	0.23%	9.56	9.15	4.38%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	2.4	2.3	4.26%	2.3	2.3	0.00%	2.3	2.4	4.26%	3.6	3.6	0.00%	3.5	3.5	0.00%	3.5	3.4	2.90%
Strontium-D	mg/L	0.0271	0.0265	2.24%	0.02352	0.02379	1.14%	0.02611	0.02611	0.00%	0.0866	0.0866	0.00%	0.0827	0.0825	0.24%	0.0738	0.0717	2.89%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0015	0.0014	6.90%	0.001	0.0011	9.52%	0.0009	0.0009	0.00%	0.0002	0.0003	40.00%	<0.0002	<0.0002		0.0002	<0.0002	
Uranium-D	mg/L	0.00008	0.00007	13.33%	0.00008	0.00008	0.00%	0.00007	0.00006	15.38%	0.00016	0.00016	0.00%	0.00018	0.00018	0.00%	0.00017	0.00017	0.00%
Vanadium-D	mg/L	0.00021	0.00021	0.00%	<0.00005	<0.00005		<0.00005	<0.00005		0.0015	0.0015	0.00%	0.00142	0.0014	1.42%	0.00118	0.00115	2.58%

	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12
Zinc-D	mg/L	0.0042	0.0043	2.35%	0.0039	0.0038	2.60%	0.0049	0.0048	2.06%	0.0087	0.0087	0.00%	<0.0005	<0.0005		0.0016	0.0016	0.00%
D-Hardness as CaCO3	mg/L	10	9.8	2.02%	9.7	9.7	0.00%	10	11	9.52%	44.2	44.2	0.00%	43.8	43.8	0.00%	42.7	41.8	2.13%

2012 Lab Duplicates RPDs

Analytical Parameter	Unit	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
		Type	F	LD		F	LD		F	LD		F	LD		
		Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
		16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12		
pH @ 25°C BC-D	pH	7.88	7.88	0.00%	7.76	7.66	1.30%	7.43	7.41	0.27%	7.87	7.84	0.38%	1.20%	
Conductivity @ 25°C	uS/cm	100	101	1.00%	64	60	6.45%	48	48	0.00%	101	102	0.99%	2.65%	
T-Dissolved Solids180°C	mg/L	80	68	16.22%	36	36	0.00%	48	56	15.38%	36	40	10.53%	13.72%	
Total Suspended Solids @105°C	mg/L	2	2	0.00%	13	12	8.00%	10	8	22.22%	<2	<2		8.74%	
Turbidity	NTU	1.2	1.2	0.00%	4.3	4.2	2.35%	2.1	2.2	4.65%	1.5	1.3	14.29%	5.80%	
Alkalinity as CaCO3	mg/L	52	53	1.90%	31	29	6.67%	20	24	18.18%	55	53	3.70%	9.09%	
Fluoride-D	mg/L	0.08	0.08	0.00%	0.07	0.07	0.00%	0.06	0.06	0.00%	0.08	0.07	13.33%	6.38%	
Sulphate-D	mg/L	1.4	1.5	6.90%	0.9	0.9	0.00%	1	1	0.00%	1.8	1.8	0.00%	4.69%	
Chloride-D	mg/L	0.1	0.2	66.67%	0.9	0.8	11.76%	0.7	0.6	15.38%	<0.1	<0.1		14.33%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		28.57%	
Nitrate-N-D	mg/L	<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		0.014	0.01	33.33%	15.05%	
Nitrite-N-D	mg/L	0.003	0.003	0.00%	<0.003	<0.003		0.004	0.004	0.00%	<0.003	<0.003		3.12%	
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08		0.18	0.18	0.00%	0.23			<0.08			10.33%	
Phosphorous-Ortho-DLL	mg/L	0.029	0.028	3.51%	<0.003	<0.003		0.039	0.04	2.53%				2.84%	
Phosphorous (Total-Dissolved) LL	mg/L	0.05	0.04	22.22%	0.02	0.02	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	2.22%	
Carbon (Total Organic)	mg/L	2.5	2.6	3.92%	10.5	10.6	0.95%	11	11.3	2.69%	11.3	10.8	4.52%	1.23%	
Carbon (Dissolved Organic)	mg/L	2.5	2.5	0.00%	10.5	10.6	0.95%	10.9	11.3	3.60%	11.3	10.8	4.52%	1.92%	
Aluminum-T	mg/L	0.028	0.029	3.51%	0.221	0.211	4.63%	0.247	0.247	0.00%	0.031	0.032	3.17%	2.63%	
Antimony-T	mg/L	0.00007	0.00006	15.38%	<0.00005	0.00006		0.00005	0.00006	18.18%	<0.00005	<0.00005		10.12%	
Arsenic-T	mg/L	0.0011	0.0012	8.70%	0.0006	0.0007	15.38%	0.0006	0.0006	0.00%	0.0011	0.0011	0.00%	6.38%	
Barium-T	mg/L	0.00512	0.00506	1.18%	0.00708	0.00727	2.65%	0.00506	0.0051	0.79%	0.00481	0.00485	0.83%	2.45%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001			
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		0.001	<0.001		<0.001	<0.001		26.67%	
Cadmium-T	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		4.23%	
Calcium-T	mg/L	13.6	13.5	0.74%	7.1	7.2	1.40%	6.1	6.1	0.00%	12.8	13	1.55%	2.20%	
Chromium-T	mg/L	0.0008	0.0008	0.00%	0.0007	0.0006	15.38%	0.0006	0.0006	0.00%	0.0009	0.0009	0.00%	3.77%	
Cobalt-T	mg/L	<0.00002	<0.00002		0.00009	0.0001	10.53%	0.00006	0.00006	0.00%	0.00002	0.00002	0.00%	7.67%	
Copper-T	mg/L	<0.0001	<0.0001		0.0005	0.0005	0.00%	0.0005	0.0005	0.00%	<0.0001	<0.0001		6.18%	
Iron-T	mg/L	0.0788	0.08	1.51%	0.321	0.322	0.31%	0.32	0.32	0.00%	0.0889	0.0916	2.99%	0.87%	
Lead-T	mg/L	<0.00005	<0.00005		0.00017	0.00016	6.06%	0.0001	0.00011	9.52%	<0.00005	<0.00005		3.73%	
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.00%	
Magnesium-T	mg/L	3.25	3.29	1.22%	1.58	1.59	0.63%	1.47	1.48	0.68%	3.02	3.02	0.00%	1.35%	
Manganese-T	mg/L	0.00444	0.00452	1.79%	0.0145	0.0148	2.05%	0.0123	0.0122	0.82%	0.00697	0.00716	2.69%	1.40%	
Mercury-T	mg/L	<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005			
Molybdenum-T	mg/L	0.0007	0.0007	0.00%	0.00029	0.00025	14.81%	0.00029	0.00029	0.00%	0.00081	0.00081	0.00%	10.39%	

Analytical Parameter	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
	Type	F	LD		F	LD		F	LD		F	LD		
	Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
Unit	16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12		
Nickel-T	mg/L	0.00006	0.00005	18.18%	0.00029	0.00031	6.67%	0.00007	0.00008	13.33%	<0.00005	<0.00005	9.35%	
Phosphorous-T	mg/L	0.05	0.05	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.00%
Potassium-T	mg/L	0.7	0.7	0.00%	0.5	0.5	0.00%	<0.5	<0.5		0.6	0.6	0.00%	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-T	mg/L	8.78	8.64	1.61%	6.06	5.91	2.51%	5.54	5.45	1.64%	8.28	8.05	2.82%	2.59%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-T	mg/L	3.7	3.8	2.67%	2.4	2.3	4.26%	2.1	2.1	0.00%	4.2	3.9	7.41%	1.34%
Strontium-T	mg/L	0.0769	0.0772	0.39%	0.0507	0.0509	0.39%	0.0418	0.0418	0.00%	0.0837	0.0847	1.19%	1.86%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-T	mg/L	0.0007	0.0006	15.38%	0.0058	0.0058	0.00%	0.0068	0.0067	1.48%	0.0012	0.001	18.18%	4.32%
Uranium-T	mg/L	0.00017	0.00017	0.00%	0.00018	0.00018	0.00%	0.00017	0.00017	0.00%	0.00019	0.00019	0.00%	4.49%
Vanadium-T	mg/L	0.0018	0.0018	0.00%	0.0014	0.0014	0.00%	0.0012	0.0012	0.00%	0.0016	0.0016	0.00%	3.04%
Zinc-T	mg/L	<0.0005	<0.0005		0.0027	0.0027	0.00%	0.0095	0.0092	3.21%	0.0027	0.0026	3.77%	1.95%
T-Hardness as CaCO3	mg/L	47.3	47.2	0.21%	24.3	24.5	0.82%	21.3	21.4	0.47%	44.4	44.9	1.12%	0.91%
Aluminum-D	mg/L	0.01	0.01	0.00%	0.108	0.105	2.82%	0.119	0.119	0.00%	0.014	0.013	7.41%	1.47%
Antimony-D	mg/L	0.00007	0.00006	15.38%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		7.03%
Arsenic-D	mg/L	0.0011	0.0012	8.70%	0.0006	0.0006	0.00%	0.0005	0.0004	22.22%	0.0011	0.0011	0.00%	7.05%
Barium-D	mg/L	0.0049	0.00489	0.20%	0.00408	0.00404	0.99%	0.0039	0.00376	3.66%	0.00438	0.0043	1.84%	2.47%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.00%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		30.99%
Calcium-D	mg/L	13.4	13.5	0.74%	6.8	6.7	1.48%	5.8	5.6	3.51%	12.3	12.1	1.64%	2.26%
Chromium-D	mg/L	0.0008	0.0008	0.00%	0.0004	0.0004	0.00%	0.0005	0.0004	22.22%	0.0009	0.0009	0.00%	2.47%
Cobalt-D	mg/L	<0.00002	<0.00002		0.00005	0.00004	22.22%	0.00003	0.00004	28.57%	<0.00002	<0.00002		13.94%
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		0.0006	0.0006	0.00%	<0.0001	<0.0001		6.68%
Iron-D	mg/L	0.0404	0.0417	3.17%	0.14	0.14	0.00%	0.134	0.132	1.50%	0.0473	0.0449	5.21%	1.53%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-D	mg/L	3.22	3.24	0.62%	1.56	1.54	1.29%	1.29	1.28	0.78%	3.02	3	0.66%	1.20%
Manganese-D	mg/L	0.00339	0.00343	1.17%	0.00456	0.00453	0.66%	0.00391	0.00402	2.77%	0.0044	0.00438	0.46%	3.36%
Mercury-D	mg/L	<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-D	mg/L	0.00064	0.00069	7.52%	0.00028	0.00025	11.32%	0.00012	0.00012	0.00%	0.00069	0.00069	0.00%	8.75%
Nickel-D	mg/L	<0.00005	<0.00005		0.00021	0.00021	0.00%	0.00019	0.00022	14.63%	<0.00005	<0.00005		9.05%
Phosphorous-D	mg/L	0.05	0.04	22.22%	0.02	0.02	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	2.22%
Potassium-D	mg/L	0.6	0.6	0.00%	0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-D	mg/L	8.22	7.93	3.59%	5.19	5.19	0.00%	5.54	5.45	1.64%	8.06	8.05	0.12%	2.89%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-D	mg/L	3.7	3.7	0.00%	2.4	2.3	4.26%	2	2	0.00%	4.2	3.9	7.41%	1.90%
Strontium-D	mg/L	0.0769	0.0772	0.39%	0.0507	0.0509	0.39%	0.0388	0.0381	1.82%	0.0798	0.0785	1.64%	1.61%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-D	mg/L	<0.0002	<0.0002		0.0021	0.002	4.88%	0.002	0.0022	9.52%	0.0003	0.0004	28.57%	10.19%
Uranium-D	mg/L	0.00017	0.00017	0.00%	0.00012	0.00011	8.70%	0.00009	0.00009	0.00%	0.00017	0.00017	0.00%	5.24%
Vanadium-D	mg/L	0.00159	0.00157	1.27%	0.00103	0.00108	4.74%	0.00086	0.00082	4.76%	0.00161	0.0015	7.07%	3.61%

	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
	Type	F	LD		F	LD		F	LD		F	LD		
	Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
Analytical Parameter	Unit	16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12	
Zinc-D	mg/L	<0.0005	<0.0005		0.0027	0.0027	0.00%	0.0095	0.0092	3.21%	0.0027	0.0026	3.77%	1.76%
D-Hardness as CaCO3	mg/L	46.8	47	0.43%	23.3	23.1	0.86%	19.7	19.4	1.53%	43.2	42.6	1.40%	2.07%

5.45% Mean

2013 Lab Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914
	sample name	WQ17	WQ17	% Diff	WQ6	WQ6	% Diff	WQ6	WQ6	% Diff	WQ26	WQ26	% Diff	WQ3	WQ3
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	13-Jan-13	13-Jan-13		15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		12-Feb-13	12-Feb-13		11-Mar-13	11-Mar-13
Units															
Physical Tests															
pH @ 25°C BC-D	pH	7.37	7.21	2%	7.22	7.2	0%	7.4	7.4	0%	7.82	7.8	0%	7.82	7.79
Conductivity @ 25°C	uS/cm	91	92	1%	55	56	2%	59	59	0%	125	127	2%	106	106
T-Dissolved Solids180°C	mg/L (ppm)	50	50	0%		60	-		8	-	56	64	13%	48	52
Total Suspended Solids @ 105°C	mg/L (ppm)	<2	<2	-		<2	-		<2	-	<2	<2	-	2	2
Turbidity	NTU	1	1	0%	1	1.2	17%	0.7	0.7	0%	0.5	0.5	0%	1.3	1.4
Hardness as (CaCO3)	mg/L (ppm)	40	40	0%		23	-		22.7	-	60.6	60.9	0%	47.9	49.1
Dissolved Anions															
Alkalinity as CaCO3	mg/L (ppm)	40	40	0%	30	30	0%	29	28	3%	66	66	0%	58	57
Fluoride-D	mg/L (ppm)	0.06	0.06	0%	0.04	0.04	0%	0.05	0.05	0%	0.08	0.08	0%	0.08	0.08
Sulphate-D	mg/L (ppm)	4.2	4.2	0%	2.3	2.2	4%	2.2	2.2	0%	3.4	3.4	0%	2	2
Chloride-D	mg/L (ppm)	0.2	0.3	33%	0.2	0.2	0%	0.3	0.3	0%	0.4	0.4	0%	0.2	0.2
Nutrients															
Ammonia - Nitrogen	mg/L (ppm)	<0.02	<0.02	-		<0.02	-		<0.02	-	<0.02	<0.02	-	<0.02	<0.02
Nitrate-N-D	mg/L (ppm)	0.095	0.094	1%	0.023	0.025	8%	0.032	0.031	3%	0.031	0.029	6%	0.037	0.037
Nitrite-N-D	mg/L (ppm)	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	0.003	-	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	<0.08	<0.08	-	<0.08	<0.08	-		<0.08	-	<0.08	<0.08	-	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L (ppm)			-			-			-			-		
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	<0.01	<0.01	-		<0.01	-		<0.001	-	0.005	0.006	17%	0.05	0.05
Organic Parameters															
Carbon (Total Organic)	mg/L (ppm)	3.5	3.5	0%		3.3	-		2.6	-	2.2	2.2	0%	1.3	1.4
Carbon (Dissolved Organic)	mg/L (ppm)	3.5	3.5	0%		3.3	-		2.6	-	2.2	2.2	0%	1.3	1.4
Total Metals															
Aluminum-T	mg/L (ppm)	0.018	0.021	14%		0.035	-		0.019	-	0.007	0.007	0%	0.034	0.035
Antimony-T	mg/L (ppm)	<0.00005	<0.00005	-		0.00006	-		<0.00005	-	<0.00005	<0.00005	-	0.00005	0.00006
Arsenic-T	mg/L (ppm)	0.0003	0.0003	0%		0.0004	-		0.0003	-	0.0004	0.0003	25%	0.0012	0.0012
Barium-T	mg/L (ppm)	0.00766	0.00771	1%		0.00615	-		0.00554	-	0.00795	0.00811	2%	0.00446	0.00457
Beryllium-T	mg/L (ppm)	<0.0001	<0.0001	-		<0.0001	-		<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Boron-T	mg/L (ppm)	<0.001	<0.001	-		<0.001	-		<0.001	-	<0.001	<0.001	-	<0.001	<0.001
Cadmium-T	mg/L (ppm)	<0.000015	<0.000015	-		<0.000015	-		<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015
Calcium-T	mg/L (ppm)	11	11	0%		7	-		7	-	17.9	17.9	0%	14.3	14.6
Chromium-T	mg/L (ppm)	<0.0003	<0.0003	-		<0.0003	-		<0.0003	-	<0.0003	<0.0003	-	0.001	0.001
Cobalt-T	mg/L (ppm)	0.00005	0.00005	0%		0.00002	-		<0.00002	-	<0.00002	<0.00002	-	0.00002	0.00002
Copper-T	mg/L (ppm)	0.0006	0.0005	17%		0.0002	-		<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Iron-T	mg/L (ppm)	0.077	0.0762	1%		0.0946	-		0.0797	-	0.0236	0.0248	5%	0.0833	0.0844
Lead-T	mg/L (ppm)	<0.00005	<0.00005	-		<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Lithium-T	mg/L (ppm)	<0.001	<0.001	-		<0.001	-		<0.001	-	<0.001	<0.001	-	<0.001	<0.001
Magnesium-T	mg/L (ppm)	3.15	3.15	0%		1.29	-		1.24	-	3.85	3.91	2%	3.35	3.35
Manganese-T	mg/L (ppm)	0.01107	0.01104	0%		0.00759	-		0.00511	-	0.00369	0.00376	2%	0.00546	0.00545
Mercury-T	mg/L (ppm)	<0.000005	<0.000005	-		<0.000005	-		<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005
Molybdenum-T	mg/L (ppm)	0.00246	0.00243	1%		0.0005	-		0.00055	-	0.00084	0.00082	2%	0.00087	0.0009
Nickel-T	mg/L (ppm)	0.00008	0.00008	0%		0.00007	-		<0.00005	-	<0.00005	<0.00005	-	0.00007	0.00006
Phosphorous-T	mg/L (ppm)	<0.02	<0.02	-		<0.02	-		<0.001	-	0.005	0.006	17%	0.05	0.05
Potassium-T	mg/L (ppm)	<0.5	<0.5	-		<0.5	-		<0.5	-	0.6	0.6	0%	0.6	0.6
Selenium-T	mg/L (ppm)	<0.0006	<0.0006	-		<0.0006	-		<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006
Silicon-T	mg/L (ppm)	6.33	6.19	2%		6.26	-		6.26	-	7.57	6.52	14%	7.58	7.57
Silver-T	mg/L (ppm)	<0.00005	<0.00005	-		<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Sodium-T	mg/L (ppm)	3.8	3.8	0%		2.7	-		2.6	-	3.9	4	3%	4.1	4.1

2013 Lab Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914
	sample name	WQ17	WQ17	% Diff	WQ6	WQ6	% Diff	WQ6	WQ6	% Diff	WQ26	WQ26	% Diff	WQ3	WQ3
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	13-Jan-13	13-Jan-13		15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		12-Feb-13	12-Feb-13		11-Mar-13	11-Mar-13
Strontium-T	mg/L (ppm)	0.06428	0.06448	0%	0.05109	0.0514	-	0.101	0.102	1%	0.0855	0.0873		0.0855	0.0873
Thallium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Tin-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Titanium-T	mg/L (ppm)	0.0004	0.0004	0%	0.0008	0.0005	-	0.0002	0.0002	0%	0.0011	0.0012		0.0011	0.0012
Uranium-T	mg/L (ppm)	0.00009	0.00009	0%	0.00008	0.00006	-	0.00022	0.00022	0%	0.00021	0.00021		0.00021	0.00021
Vanadium-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	0.00141	0.00145		0.00141	0.00145
Zinc-T	mg/L (ppm)	0.0025	0.0023	8%	0.003	0.0024	-	0.0039	0.004	3%	0.0037	0.0038		0.0037	0.0038
T-Hardness as CaCO3	mg/L (ppm)	40	40	0%	23	23	-			-					
Dissolved Metals															
Aluminum-D	mg/L (ppm)	0.018	0.021	14%	0.035	0.019	-	0.007	0.007	0%	0.008	0.013		0.008	0.013
Antimony-D	mg/L (ppm)	<0.00005	<0.00005	-	0.00006	<0.00005	-	<0.00005	<0.00005	-	0.00005	0.00006		0.00005	0.00006
Arsenic-D	mg/L (ppm)	0.0003	0.0003	0%	0.0004	0.0002	-	0.0003	0.0003	0%	0.0012	0.0012		0.0012	0.0012
Barium-D	mg/L (ppm)	0.00761	0.00749	2%	0.00584	0.00554	-	0.00794	0.00811	2%	0.00368	0.00381		0.00368	0.00381
Beryllium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001		<0.0001	<0.0001
Boron-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001		<0.001	<0.001
Cadmium-D	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015		<0.000015	<0.000015
Calcium-D	mg/L (ppm)	11	11	0%	7	7	-	17.9	17.9	0%	13.6	14.2		13.6	14.2
Chromium-D	mg/L (ppm)	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	0.0009	0.0009		0.0009	0.0009
Cobalt-D	mg/L (ppm)	0.00005	0.00004	20%	0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002		<0.00002	<0.00002
Copper-D	mg/L (ppm)	0.0006	0.0005	17%	0.0002	0.0002	-	0.0001	0.0002	50%	0.0001	0.0001		0.0001	0.0001
Iron-D	mg/L (ppm)	0.0509	0.0502	1%	0.0738	0.0574	-	0.0206	0.0208	1%	0.0287	0.0288		0.0287	0.0288
Lead-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Lithium-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001		<0.001	<0.001
Magnesium-D	mg/L (ppm)	3.15	3.15	0%	1.29	1.24	-	3.85	3.91	2%	3.35	3.35		3.35	3.35
Manganese-D	mg/L (ppm)	0.00938	0.0094	0%	0.00622	0.00511	-	0.00369	0.00376	2%	0.00237	0.00237		0.00237	0.00237
Mercury-D	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005		<0.000005	<0.000005
Molybdenum-D	mg/L (ppm)	0.00221	0.00212	4%	0.0005	0.00047	-	0.00068	0.00064	6%	0.0008	0.00083		0.0008	0.00083
Nickel-D	mg/L (ppm)	0.00008	0.00008	0%	0.00007	<0.00005	-	<0.00005	<0.00005	-	0.00006	0.00005		0.00006	0.00005
Phosphorous-D	mg/L (ppm)	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	0.05	0.05		0.05	0.05
Potassium-D	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0.6	0.6	0%	0.6	0.6		0.6	0.6
Selenium-D	mg/L (ppm)	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006		<0.0006	<0.0006
Silicon-D	mg/L (ppm)	6.33	6.19	2%	6.26	6.26	-	7.57	6.52	14%	7.52	7.34		7.52	7.34
Silver-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Sodium-D	mg/L (ppm)	3.8	3.8	0%	2.7	2.6	-	3.9	4	3%	4.1	4.1		4.1	4.1
Strontium-D	mg/L (ppm)	0.0638	0.06286	1%	0.04984	0.0514	-	0.101	0.102	1%	0.0816	0.0873		0.0816	0.0873
Thallium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Tin-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001		<0.0001	<0.0001
Titanium-D	mg/L (ppm)	0.0002	0.0002	0%	0.0007	0.0004	-	<0.0002	<0.0002	-	0.0003	0.0003		0.0003	0.0003
Uranium-D	mg/L (ppm)	0.00009	0.00009	0%	0.00008	<0.00005	-	0.00021	0.00021	0%	0.00019	0.0002		0.00019	0.0002
Vanadium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005		-			-	0.00124	0.00127		0.00124	0.00127
Zinc-D	mg/L (ppm)	0.0025	0.0023	8%	0.003		-			-	0.0018	0.0019		0.0018	0.0019
D-Hardness as CaCO3	mg/L (ppm)	40	40	0%	23	23	-			-					
Cyanide															
Cyanide (Total)	mg/L (ppm)			-		<0.0050	-	<0.0050	<0.0050	-					
Cyanide (WAD)	mg/L (ppm)			-		<0.0050	-	<0.0050	<0.0050	-					
Cyanate	mg/L (ppm)			-	<0.20		-			-					
Thiocyanate (SCN)	mg/L (ppm)			-			-			-					

2013 Lab Duplicates	Lab file #		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181
	sample name	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ3
	type		LD	F		LD	F		LD	F		LD	F		LD
	date		12-Mar-13	12-Mar-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13
Physical Tests	Units														
pH @ 25°C BC-D	pH	0%	7.37	7.32	1%	7.82	7.79	0%	7.37	7.32	1%	7.66	7.7	1%	7.21
Conductivity @ 25°C	uS/cm	0%	60	59	2%	106	106	0%	60	59	2%	99	98	1%	44
T-Dissolved Solids180°C	mg/L (ppm)	8%	32	28	13%	48	52	8%	32	28	13%	44	52	15%	52
Total Suspended Solids @ 105°C	mg/L (ppm)	0%	2	2	0%	2	2	0%	<2	<2	-	<2	<2	-	4
Turbidity	NTU	7%	0.7	0.8	13%	1.3	1.4	7%	0.7	0.8	13%	2.4	2.5	4%	1.7
Hardness as (CaCO3)	mg/L (ppm)	2%	26.2	25.8	2%	49.6	50.2	1%	26.2	25.8	2%	42	41.9	0%	19.7
Dissolved Anions															
Alkalinity as CaCO3	mg/L (ppm)	2%	26	26	0%	58	57	2%	26	26	0%	48	48	0%	22
Fluoride-D	mg/L (ppm)	0%	0.05	0.05	0%	0.08	0.08	0%	0.05	0.05	0%	0.07	0.07	0%	0.06
Sulphate-D	mg/L (ppm)	0%	2.4	2.4	0%	2	2	0%	2.4	2.4	0%	1.8	1.9	5%	1.4
Chloride-D	mg/L (ppm)	0%	0.2	0.2	0%	0.2	0.2	0%	0.2	0.2	0%	0.2	0.2	0%	0.3
Nutrients															
Ammonia - Nitrogen	mg/L (ppm)	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02
Nitrate-N-D	mg/L (ppm)	0%	0.031	0.031	0%	0.037	0.037	0%	0.031	0.031	0%	0.029	0.024	17%	0.019
Nitrite-N-D	mg/L (ppm)	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	-	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	<0.08	-	0.2
Phosphorous-Ortho-DLL	mg/L (ppm)	-			-			-			-			-	
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0%	<0.01	<0.01	-	0.057	0.053	7%	0.027	0.032	16%	0.044	0.043	2%	0.014
Organic Parameters															
Carbon (Total Organic)	mg/L (ppm)	7%	2.4	2.8	14%	1.3	1.4	7%	2.4	2.8	14%	2.4	2.4	0%	12.2
Carbon (Dissolved Organic)	mg/L (ppm)	7%	2.4	2.8	14%	1.3	1.4	7%	2.4	2.8	14%	2.3	2.4	4%	12.2
Total Metals															
Aluminum-T	mg/L (ppm)	3%	0.026	0.027	4%	0.034	0.035	3%	0.026	0.027	4%	0.124	0.128	3%	0.191
Antimony-T	mg/L (ppm)	17%	0.00005	0.00005	0%	0.00005	0.00006	17%	0.00005	0.00005	0%	0.00007	0.00008	13%	0.00007
Arsenic-T	mg/L (ppm)	0%	0.0003	0.0003	0%	0.0012	0.0012	0%	0.0003	0.0003	0%	0.0023	0.0023	0%	0.0005
Barium-T	mg/L (ppm)	2%	0.00553	0.00558	1%	0.00446	0.00457	2%	0.00553	0.00558	1%	0.0106	0.0106	0%	0.00382
Beryllium-T	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-T	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	0.006	0.006	0%	<0.001
Cadmium-T	mg/L (ppm)	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000192
Calcium-T	mg/L (ppm)	2%	8.2	8.1	1%	14.3	14.6	2%	8.2	8.1	1%	11.9	11.9	0%	5.7
Chromium-T	mg/L (ppm)	0%	<0.0003	<0.0003	-	0.001	0.001	0%	<0.0003	<0.0003	-	0.0012	0.0012	0%	0.0004
Cobalt-T	mg/L (ppm)	0%	0.00002	0.00002	0%	0.00002	0.00002	0%	<0.00002	<0.00002	-	0.00009	0.00009	0%	0.00006
Copper-T	mg/L (ppm)	-	0.0002	0.0002	0%	<0.0001	<0.0001	-	0.0002	0.0002	0%	0.0004	0.0004	0%	0.001
Iron-T	mg/L (ppm)	1%	0.0901	0.0905	0%	0.0833	0.0844	1%	0.0901	0.0905	0%	0.314	0.317	1%	0.21
Lead-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00008	0.00009	11%	0.00005
Lithium-T	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-T	mg/L (ppm)	0%	1.37	1.36	1%	3.35	3.35	0%	1.37	1.36	1%	2.97	2.95	1%	1.34
Manganese-T	mg/L (ppm)	0%	0.00557	0.00558	0%	0.00546	0.00545	0%	0.00557	0.00558	0%	0.0259	0.0263	2%	0.00659
Mercury-T	mg/L (ppm)	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-T	mg/L (ppm)	3%	0.0006	0.00058	3%	0.00087	0.0009	3%	0.0006	0.00058	3%	0.00081	0.00083	2%	0.00026
Nickel-T	mg/L (ppm)	14%	0.00012	0.00012	0%	0.00007	0.00006	14%	0.00012	0.00012	0%	0.00015	0.00017	12%	0.00038
Phosphorous-T	mg/L (ppm)	0%	0.02	0.02	0%	0.057	0.053	7%	0.027	0.032	16%	0.044	0.043	2%	0.014
Potassium-T	mg/L (ppm)	0%	<0.5	<0.5	-	0.6	0.6	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-T	mg/L (ppm)	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0001	<0.0001	-	<0.0001
Silicon-T	mg/L (ppm)	0%	4.86	4.81	1%	7.58	7.57	0%	4.86	4.81	1%	7.42	7.24	2%	4.45
Silver-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-T	mg/L (ppm)	0%	2.9	2.9	0%	4.1	4.1	0%	2.9	2.9	0%	3.4	3.3	3%	1.9

2013 Lab Duplicates	Lab file #		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181
	sample name	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ3
	type		LD	F		LD	F		LD	F		LD	F		LD
	date		12-Mar-13	12-Mar-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13
Strontium-T	mg/L (ppm)	2%	0.0573	0.0565	1%	0.0855	0.0873	2%	0.0573	0.0565	1%	0.0804	0.0806	0%	0.0383
Thallium-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-T	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-T	mg/L (ppm)	8%	0.0005	0.0005	0%	0.0011	0.0012	8%	0.0005	0.0005	0%	0.0042	0.0042	0%	0.004
Uranium-T	mg/L (ppm)	0%	0.00007	0.00007	0%	0.00021	0.00021	0%	0.00007	0.00007	0%	0.00027	0.00026	4%	0.00013
Vanadium-T	mg/L (ppm)	3%	<0.00005	<0.00005	-	0.00141	0.00145	3%	<0.00005	<0.00005	-	0.00193	0.00196	2%	0.00076
Zinc-T	mg/L (ppm)	3%	0.0022	0.0022	0%	0.0037	0.0038	3%	0.0022	0.0022	0%	0.0022	0.0022	0%	0.0037
T-Hardness as CaCO3	mg/L (ppm)	-			-			-			-			-	
Dissolved Metals															
Aluminum-D	mg/L (ppm)	38%	0.016	0.015	6%	0.008	0.013	38%	0.016	0.015	6%	0.019	0.019	0%	0.183
Antimony-D	mg/L (ppm)	17%	0.00005	0.00005	0%	0.00005	0.00006	17%	0.00005	0.00005	0%	0.00007	0.00008	13%	0.00006
Arsenic-D	mg/L (ppm)	0%	0.0003	0.0003	0%	0.0012	0.0012	0%	0.0003	0.0003	0%	0.0023	0.0023	0%	0.0005
Barium-D	mg/L (ppm)	3%	0.00552	0.00533	3%	0.00368	0.00381	3%	0.00552	0.00533	3%	0.0106	0.0106	0%	0.00346
Beryllium-D	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-D	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	0.006	0.006	0%	<0.001
Cadmium-D	mg/L (ppm)	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000042
Calcium-D	mg/L (ppm)	4%	8.2	8.1	1%	13.6	14.2	4%	8.2	8.1	1%	11.7	11.7	0%	5.7
Chromium-D	mg/L (ppm)	0%	<0.0003	<0.0003	-	0.0009	0.0009	0%	<0.0003	<0.0003	-	0.0008	0.0008	0%	0.0004
Cobalt-D	mg/L (ppm)	-	0.00002	0.00002	0%	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-	0.00006
Copper-D	mg/L (ppm)	0%	0.0002	0.0002	0%	<0.0001	<0.0001	-	0.0002	0.0002	0%	0.0004	0.0004	0%	0.001
Iron-D	mg/L (ppm)	0%	0.0606	0.0604	0%	0.0287	0.0288	0%	0.0606	0.0604	0%	0.0475	0.0471	1%	0.185
Lead-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Lithium-D	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-D	mg/L (ppm)	0%	1.37	1.36	1%	3.35	3.35	0%	1.37	1.36	1%	2.97	2.9	2%	1.34
Manganese-D	mg/L (ppm)	0%	0.00437	0.00432	1%	0.00237	0.00237	0%	0.00437	0.00432	1%	0.00352	0.00353	0%	0.00643
Mercury-D	mg/L (ppm)	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-D	mg/L (ppm)	4%	0.0006	0.00058	3%	0.0008	0.00083	4%	0.0006	0.00058	3%	0.00081	0.00083	2%	0.00026
Nickel-D	mg/L (ppm)	17%	0.00011	0.00012	8%	0.00006	0.00005	17%	0.00011	0.00012	8%	0.00008	0.00008	0%	0.00038
Phosphorous-D	mg/L (ppm)	0%	<0.01	<0.01	-	0.05	0.05	0%	<0.01	<0.01	-	0.04	0.04	0%	0.03
Potassium-D	mg/L (ppm)	0%	<0.5	<0.5	-	0.6	0.6	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-D	mg/L (ppm)	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0001	<0.0001	-	<0.0001
Silicon-D	mg/L (ppm)	2%	4.86	4.81	1%	7.52	7.34	2%	4.86	4.81	1%	6.62	6.51	2%	4.44
Silver-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-D	mg/L (ppm)	0%	2.9	2.9	0%	4.1	4.1	0%	2.9	2.9	0%	3.4	3.3	3%	1.9
Strontium-D	mg/L (ppm)	7%	0.0567	0.056	1%	0.0816	0.0873	7%	0.0567	0.056	1%	0.0804	0.0806	0%	0.0383
Thallium-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-D	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-D	mg/L (ppm)	0%	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0004	0.0004	0%	0.0007	0.0007	0%	0.0036
Uranium-D	mg/L (ppm)	5%	0.00007	0.00007	0%	0.00019	0.0002	5%	0.00007	0.00007	0%	0.00016	0.00016	0%	0.00013
Vanadium-D	mg/L (ppm)	2%	<0.00005	<0.00005	-	0.00124	0.00127	2%	<0.00005	<0.00005	-	0.00093	0.00089	4%	0.00067
Zinc-D	mg/L (ppm)	5%	0.0022	0.0022	0%	0.0018	0.0019	5%	0.0022	0.0022	0%	0.0022	0.0022	0%	0.0037
D-Hardness as CaCO3	mg/L (ppm)	-			-			-			-			-	
Cyanide															
Cyanide (Total)	mg/L (ppm)	-			-		<0.0050	-		<0.0050	-		<0.0050	-	
Cyanide (WAD)	mg/L (ppm)	-			-		<0.0050	-		<0.0050	-		<0.0050	-	
Cyanate	mg/L (ppm)	-			-			-			-			-	
Thiocyanate (SCN)	mg/L (ppm)	-			-			-			-	<0.50		-	

2013 Lab Duplicates	Lab file #	~LIMS:EC-65181		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65302	~LIMS:EC-65302		
	sample name	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	
	type	F		LD	F		LD	F		LD	F		LD	F		
	date	13-May-13		21-May-13	21-May-13		27-May-13	27-May-13		04-Jun-13	04-Jun-13		06-Jun-13	06-Jun-13		
Units																
Physical Tests																
pH @ 25°C BC-D	pH	7.33	2%		7.01	-	7.51	7.48	0%	7.11	6.9	3%			7.33	-
Conductivity @ 25°C	uS/cm	45	2%		32	-	50	50	0%	31	34	9%			47	-
T-Dissolved Solids180°C	mg/L (ppm)	60	13%	48	40	17%	80	68	15%		44	-			28	-
Total Suspended Solids @105°C	mg/L (ppm)	4	0%	<2	<2	-	4	3	25%		2	-			4	-
Turbidity	NTU	2	15%		1.1	-	1.5	1.5	0%	1.5	1.6	6%			1.5	-
Hardness as (CaCO3)	mg/L (ppm)	20.4	3%	11.3	11.2	1%	25	24.9	0%		12.5	-	21.3	21.6	1%	
Dissolved Anions																
Alkalinity as CaCO3	mg/L (ppm)	22	0%		12	-	23	22	4%	11	12	8%			21	-
Fluoride-D	mg/L (ppm)	0.07	14%		0.04	-	0.04	0.04	0%	0.03	0.03	0%			0.03	-
Sulphate-D	mg/L (ppm)	1.4	0%		1.7	-	1.4	1.4	0%	0.8	0.7	13%			0.6	-
Chloride-D	mg/L (ppm)	0.3	0%		0.3	-	0.2	0.2	0%	0.2	0.3	33%	0.2	0.3	33%	
Nutrients																
Ammonia - Nitrogen	mg/L (ppm)	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-		<0.02	-	<0.02	<0.02	-	
Nitrate-N-D	mg/L (ppm)	0.016	16%		0.033	-	0.006	0.006	0%	0.054	0.055	2%			0.007	-
Nitrite-N-D	mg/L (ppm)	<0.003	-		<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-			<0.003	-
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.24	17%	0.15	0.18	17%	0.13	0.13	0%		0.08	-			0.15	-
Phosphorous-Ortho-DLL	mg/L (ppm)		-			-			-			-				-
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0.017	18%	0.01	0.01	0%	<0.01	<0.01	-		<0.01	-	0.01	0.01	0%	
Organic Parameters																
Carbon (Total Organic)	mg/L (ppm)	11.9	2%	7.8	7.8	0%	11.2	11.4	2%		8	-	11.2	11.1	1%	
Carbon (Dissolved Organic)	mg/L (ppm)	11.9	2%	7.8	7.8	0%	11.2	11.4	2%		8	-	11.1	11.1	0%	
Total Metals																
Aluminum-T	mg/L (ppm)	0.201	5%	0.15	0.153	2%	0.173	0.171	1%		0.134	-	0.156	0.156	0%	
Antimony-T	mg/L (ppm)	0.00007	0%	0.00006	0.00006	0%	0.00007	0.00007	0%		0.00006	-	0.00006	0.00007	14%	
Arsenic-T	mg/L (ppm)	0.0005	0%	0.0007	0.0007	0%	0.0006	0.0005	17%		0.0006	-	0.0005	0.0005	0%	
Barium-T	mg/L (ppm)	0.00379	1%	0.00473	0.00487	3%	0.00386	0.00378	2%		0.00484	-	0.00397	0.00391	2%	
Beryllium-T	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-	
Boron-T	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	0.001	0.001	0%		0.002	-	0.002	0.002	0%	
Cadmium-T	mg/L (ppm)	0.000045	77%	<0.000015	<0.000015	-	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-	
Calcium-T	mg/L (ppm)	5.7	0%	3.7	3.8	3%	7.4	7.4	0%		4	-	6.5	6.6	2%	
Chromium-T	mg/L (ppm)	0.0005	20%	<0.0003	<0.0003	-	0.0006	0.0006	0%		<0.0003	-	0.0005	0.0005	0%	
Cobalt-T	mg/L (ppm)	0.00006	0%	0.00003	0.00003	0%	0.00004	0.00005	20%		0.00003	-	0.00006	0.00006	0%	
Copper-T	mg/L (ppm)	0.0011	9%	0.0001	0.0001	0%	0.0006	0.0006	0%		0.0005	-	0.0007	0.0007	0%	
Iron-T	mg/L (ppm)	0.207	1%	0.101	0.103	2%	0.179	0.178	1%		0.0913	-	0.168	0.167	1%	
Lead-T	mg/L (ppm)	0.00005	0%	<0.00005	<0.00005	-	<0.00005	<0.00005	-		0.00005	-	<0.00005	<0.00005	-	
Lithium-T	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-	
Magnesium-T	mg/L (ppm)	1.48	9%	0.63	0.63	0%	1.59	1.54	3%		0.61	-	1.39	1.42	2%	
Manganese-T	mg/L (ppm)	0.00712	7%	0.00513	0.00512	0%	0.00657	0.00657	0%		0.00539	-	0.00592	0.00593	0%	
Mercury-T	mg/L (ppm)	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-T	mg/L (ppm)	0.00026	0%	0.00028	0.0003	7%	0.00032	0.0003	6%		0.00032	-	0.00028	0.00029	3%	
Nickel-T	mg/L (ppm)	0.00039	3%	0.00029	0.0003	3%	0.00008	0.00007	13%		0.00028	-	0.00025	0.0003	17%	
Phosphorous-T	mg/L (ppm)	0.017	18%	0.01	0.01	0%	<0.01	<0.01	-		0.01	-	0.03	0.03	0%	
Potassium-T	mg/L (ppm)	0.5	-	<0.5	<0.5	-	<0.5	<0.5	-		<0.5	-	<0.5	<0.5	-	
Selenium-T	mg/L (ppm)	<0.0001	-	0.0001	<0.0001	-	0.0001	0.0001	0%		<0.0001	-	0.0001	0.0001	0%	
Silicon-T	mg/L (ppm)	4.53	2%	4.08	4.08	0%	5.1	5.1	0%		4.32	-	5.82	5.84	0%	
Silver-T	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	
Sodium-T	mg/L (ppm)	2	5%	1.7	1.6	6%	2.4	2.4	0%		1.6	-	2.2	2.2	0%	

2013 Lab Duplicates	Lab file #	~LIMS:EC-65181		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65302	~LIMS:EC-65302	
	sample name	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff
	type	F		LD	F		LD	F		LD	F		LD	F	
	date	13-May-13		21-May-13	21-May-13		27-May-13	27-May-13		04-Jun-13	04-Jun-13		06-Jun-13	06-Jun-13	
Strontium-T	mg/L (ppm)	0.0386	1%	0.0323	0.0326	1%	0.0443	0.0427	4%		0.0299	-	0.0413	0.0422	2%
Thallium-T	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Tin-T	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Titanium-T	mg/L (ppm)	0.0041	2%	0.0019	0.002	5%	0.0038	0.0035	8%		0.0017	-	0.0028	0.0027	4%
Uranium-T	mg/L (ppm)	0.00013	0%	0.00021	0.00022	5%	0.00014	0.00014	0%		0.00024	-	0.00016	0.00017	6%
Vanadium-T	mg/L (ppm)	0.00079	4%	0.00019	0.0002	5%	0.00054	0.0005	7%		<0.00005	-	0.00078	0.00074	5%
Zinc-T	mg/L (ppm)	0.0041	10%	0.0011	0.0011	0%	<0.0005	<0.0005	-		0.0221	-	0.0015	0.0016	6%
T-Hardness as CaCO3	mg/L (ppm)		-			-			-			-			-
Dissolved Metals															
Aluminum-D	mg/L (ppm)	0.201	9%	0.115	0.112	3%	0.138	0.138	0%		0.126	-	0.13	0.129	1%
Antimony-D	mg/L (ppm)	0.00006	0%	0.00006	0.00006	0%	<0.00005	<0.00005	-		0.00005	-	0.00006	0.00006	0%
Arsenic-D	mg/L (ppm)	0.0005	0%	0.0005	0.0005	0%	0.0005	0.0005	0%		0.0005	-	0.0004	0.0005	20%
Barium-D	mg/L (ppm)	0.00345	0%	0.00415	0.00414	0%	0.00342	0.00331	3%		0.0044	-	0.00335	0.00332	1%
Beryllium-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Boron-D	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		0.002	-	0.002	0.002	0%
Cadmium-D	mg/L (ppm)	0.000042	0%	<0.000015	<0.000015	-	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-
Calcium-D	mg/L (ppm)	5.7	0%	3.6	3.6	0%	7.4	7.4	0%		4	-	6.3	6.4	2%
Chromium-D	mg/L (ppm)	0.0005	20%	<0.0003	<0.0003	-	0.0003	0.0003	0%		<0.0003	-	0.0003	0.0003	0%
Cobalt-D	mg/L (ppm)	0.00006	0%	0.00002	0.00002	0%	<0.00002	<0.00002	-		0.00003	-	0.00005	0.00005	0%
Copper-D	mg/L (ppm)	0.0011	9%	0.0001	0.0001	0%	0.0005	0.0005	0%		0.0005	-	0.0007	0.0007	0%
Iron-D	mg/L (ppm)	0.201	8%	0.0675	0.0661	2%	0.117	0.117	0%		0.0648	-	0.112	0.113	1%
Lead-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		0.00005	-	<0.00005	<0.00005	-
Lithium-D	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-
Magnesium-D	mg/L (ppm)	1.48	9%	0.58	0.57	2%	1.59	1.54	3%		0.61	-	1.38	1.39	1%
Manganese-D	mg/L (ppm)	0.00712	10%	0.00223	0.00215	4%	0.00258	0.00252	2%		0.00247	-	0.00229	0.00232	1%
Mercury-D	mg/L (ppm)	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-
Molybdenum-D	mg/L (ppm)	0.00026	0%	0.00027	0.00027	0%	<0.00005	<0.00005	-		0.00031	-	0.00026	0.00026	0%
Nickel-D	mg/L (ppm)	0.00039	3%	0.00028	0.00027	4%	<0.00005	<0.00005	-		0.00028	-	0.00025	0.0003	17%
Phosphorous-D	mg/L (ppm)	0.03	0%	0.01	0.01	0%	<0.01	<0.01	-		<0.01	-	0.01	0.01	0%
Potassium-D	mg/L (ppm)	0.5	-	<0.5	<0.5	-	<0.5	<0.5	-		<0.5	-	<0.5	<0.5	-
Selenium-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	0.0001	0.0001	0%
Silicon-D	mg/L (ppm)	4.43	0%	3.05	3.19	4%	5.1	5.1	0%		4.32	-	5.82	5.84	0%
Silver-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Sodium-D	mg/L (ppm)	2	5%	1.7	1.6	6%	2.4	2.4	0%		1.6	-	2.1	2.2	5%
Strontium-D	mg/L (ppm)	0.0386	1%	0.0294	0.0294	0%	0.023	0.0237	3%		0.0299	-	0.041	0.0411	0%
Thallium-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Tin-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Titanium-D	mg/L (ppm)	0.0041	12%	0.0012	0.0013	8%	0.0024	0.0025	4%		0.0017	-	0.0024	0.0023	4%
Uranium-D	mg/L (ppm)	0.00013	0%	0.00019	0.00019	0%	0.00012	0.00012	0%		0.00022	-	0.00013	0.00013	0%
Vanadium-D	mg/L (ppm)	0.00079	15%	<0.00005	<0.00005	-	0.00044	0.00042	5%		<0.00005	-	0.00061	0.00059	3%
Zinc-D	mg/L (ppm)	0.0041	10%	0.0011	0.0011	0%	<0.0005	<0.0005	-		0.0221	-	0.0015	0.0016	6%
D-Hardness as CaCO3	mg/L (ppm)		-			-			-			-			-
Cyanide															
Cyanide (Total)	mg/L (ppm)	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-		<0.0050	-	<0.0050	<0.0050	-
Cyanide (WAD)	mg/L (ppm)	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-		<0.0050	-	<0.0050	<0.0050	-
Cyanate	mg/L (ppm)		-			-			-			-			-
Thiocyanate (SCN)	mg/L (ppm)		-			-			-			-			-

2013 Lab Duplicates	Lab file #	~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391	~LIMS:EC-65391		Mean RPDs
	sample name	WQ3	WQ3	% Diff	WQ3	WQ3	% Diff	
	type	LD	F		LD	F		
	date	10-Jun-13	10-Jun-13		17-Jun-13	17-Jun-13		
Units								
Physical Tests								
pH @ 25°C BC-D	pH		7.42	-	7.37	7.36	0%	1%
Conductivity @ 25°C	uS/cm		62	-	55	55	0%	2%
T-Dissolved Solids180°C	mg/L (ppm)		60	-	80	68	15%	12%
Total Suspended Solids @105°C	mg/L (ppm)		2	-	3	3	0%	4%
Turbidity	NTU		1.7	-	3.4	3.4	0%	6%
Hardness as (CaCO3)	mg/L (ppm)	26	26.3	1%	23.2	23.8	3%	1%
Dissolved Anions								
Alkalinity as CaCO3	mg/L (ppm)		26	-	26	25	4%	2%
Fluoride-D	mg/L (ppm)		0.07	-	0.04	0.04	0%	1%
Sulphate-D	mg/L (ppm)		2.1	-	0.6	0.8	25%	4%
Chloride-D	mg/L (ppm)		0.3	-	0.4	0.5	20%	9%
Nutrients								
Ammonia - Nitrogen	mg/L (ppm)	<0.02	<0.02	-	<0.02	<0.02	-	
Nitrate-N-D	mg/L (ppm)		0.096	-	0.014	0.017	18%	5%
Nitrite-N-D	mg/L (ppm)		<0.003	-	<0.003	<0.003	-	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)		<0.08	-	0.18	0.15	17%	13%
Phosphorous-Ortho-DLL	mg/L (ppm)			-			-	
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0.01	0.01	0%	0.01	0.01	0%	6%
Organic Parameters								
Carbon (Total Organic)	mg/L (ppm)	7.8	8	3%	9.1	9.1	0%	4%
Carbon (Dissolved Organic)	mg/L (ppm)	7.8	7.6	3%	9	9.1	1%	4%
Total Metals								
Aluminum-T	mg/L (ppm)	0.124	0.116	6%	0.117	0.117	0%	3%
Antimony-T	mg/L (ppm)	0.00009	0.00009	0%	0.00009	0.00008	11%	6%
Arsenic-T	mg/L (ppm)	0.0008	0.0003	63%	0.0005	0.0005	0%	8%
Barium-T	mg/L (ppm)	0.00456	0.00449	2%	0.00498	0.00498	0%	1%
Beryllium-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Boron-T	mg/L (ppm)	<0.001	<0.001	-	0.001	0.001	0%	0%
Cadmium-T	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	77%
Calcium-T	mg/L (ppm)	7.9	7.8	1%	7.4	7.4	0%	1%
Chromium-T	mg/L (ppm)	0.0005	0.0005	0%	0.0004	0.0004	0%	3%
Cobalt-T	mg/L (ppm)	0.00005	0.00005	0%	0.00006	0.00007	14%	3%
Copper-T	mg/L (ppm)	0.0002	0.0002	0%	<0.0001	<0.0001	-	3%
Iron-T	mg/L (ppm)	0.136	0.131	4%	0.145	0.147	1%	2%
Lead-T	mg/L (ppm)	<0.00005	<0.00005	-	0.00005	0.00005	0%	4%
Lithium-T	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	
Magnesium-T	mg/L (ppm)	1.66	1.68	1%	1.57	1.57	0%	2%
Manganese-T	mg/L (ppm)	0.00683	0.00689	1%	0.00643	0.0065	1%	1%
Mercury-T	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-T	mg/L (ppm)	0.00037	0.00045	18%	0.00034	0.00032	6%	5%
Nickel-T	mg/L (ppm)	0.00017	0.0002	15%	0.00457	0.00392	14%	9%
Phosphorous-T	mg/L (ppm)	0.05	0.04	20%	0.03	0.03	0%	7%
Potassium-T	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0%
Selenium-T	mg/L (ppm)	<0.0001	<0.0001	-	0.0001	0.0001	0%	0%
Silicon-T	mg/L (ppm)	5.65	5.52	2%	6.08	6.03	1%	2%
Silver-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Sodium-T	mg/L (ppm)	2.4	2.5	4%	2.5	2.5	0%	2%

2013 Lab Duplicates	Lab file #	~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391	~LIMS:EC-65391		Mean RPDs
	sample name	WQ3	WQ3	% Diff	WQ3	WQ3	% Diff	
	type	LD	F		LD	F		
	date	10-Jun-13	10-Jun-13		17-Jun-13	17-Jun-13		
Strontium-T	mg/L (ppm)	0.0519	0.0519	0%	0.0481	0.0485	1%	1%
Thallium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Tin-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Titanium-T	mg/L (ppm)	0.003	0.0028	7%	0.0026	0.0025	4%	4%
Uranium-T	mg/L (ppm)	0.00014	0.00014	0%	0.00015	0.00015	0%	1%
Vanadium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	4%
Zinc-T	mg/L (ppm)	0.0014	0.0015	7%	0.0012	0.0011	8%	4%
T-Hardness as CaCO3	mg/L (ppm)			-			-	
Dissolved Metals								
Aluminum-D	mg/L (ppm)	0.093	0.093	0%	0.103	0.105	2%	9%
Antimony-D	mg/L (ppm)	<0.00005	<0.00005	-	0.00009	0.00008	11%	6%
Arsenic-D	mg/L (ppm)	0.0003	0.0003	0%	<0.0001	<0.0001	-	2%
Barium-D	mg/L (ppm)	0.0039	0.00406	4%	0.00357	0.00376	5%	2%
Beryllium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Boron-D	mg/L (ppm)	<0.001	<0.001	-	0.001	0.001	0%	0%
Cadmium-D	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0%
Calcium-D	mg/L (ppm)	7.7	7.7	0%	6.9	7.1	3%	1%
Chromium-D	mg/L (ppm)	0.0005	0.0005	0%	<0.0003	<0.0003	-	3%
Cobalt-D	mg/L (ppm)	0.00004	0.00003	25%	0.00004	0.00004	0%	6%
Copper-D	mg/L (ppm)	0.0002	0.0002	0%	<0.0001	<0.0001	-	7%
Iron-D	mg/L (ppm)	0.0951	0.0966	2%	0.099	0.101	2%	1%
Lead-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Lithium-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	
Magnesium-D	mg/L (ppm)	1.66	1.68	1%	1.46	1.49	2%	2%
Manganese-D	mg/L (ppm)	0.00315	0.00316	0%	0.00113	0.0011	3%	2%
Mercury-D	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-D	mg/L (ppm)	0.00033	0.00033	0%	0.00031	0.00027	13%	3%
Nickel-D	mg/L (ppm)	0.00017	0.0002	15%	0.00457	0.00392	14%	9%
Phosphorous-D	mg/L (ppm)	0.01	0.01	0%	0.01	0.01	0%	0%
Potassium-D	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0%
Selenium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	0%
Silicon-D	mg/L (ppm)	4.88	4.83	1%	4.41	4.49	2%	2%
Silver-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Sodium-D	mg/L (ppm)	2.4	2.5	4%	<0.5	<0.5	-	2%
Strontium-D	mg/L (ppm)	0.0486	0.0494	2%	0.0461	0.046	0%	2%
Thallium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Tin-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Titanium-D	mg/L (ppm)	0.0019	0.0019	0%	0.0021	0.0023	9%	3%
Uranium-D	mg/L (ppm)	0.00012	0.00012	0%	0.00012	0.00011	8%	1%
Vanadium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	5%
Zinc-D	mg/L (ppm)	0.0014	0.0015	7%	0.0012	0.0011	8%	5%
D-Hardness as CaCO3	mg/L (ppm)			-			-	
Cyanide								
Cyanide (Total)	mg/L (ppm)		<0.0050	-		<0.0050	-	
Cyanide (WAD)	mg/L (ppm)		<0.0050	-		<0.0050	-	
Cyanate	mg/L (ppm)			-			-	
Thiocyanate (SCN)	mg/L (ppm)			-			-	

2011 Field Duplicates RPDs

Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Physical Tests																						
pH @ 25°C BC-T	pH units	6.37	6.37	0%	7.07	7.03	1%	7.32	7.31	0%	7.66	7.58	1%	7.55	7.58	0%	8.15	8.08	1%	7.81	7.82	0%
Conductivity @ 25°C	mS/cm	17	23	26%	37	37	0%	37	38	3%	108	110	2%	90	90	0%	146	141	3%	134	135	1%
T-Dissolved Solids180°C	mg/L (ppm)	52	32	38%	20	96	79%	24	24	0%	152	104	32%	100	44	56%	120	104	13%	96	88	8%
Total Suspended Solids @105°C	mg/L (ppm)	< 2	5		7	11	36%	< 2	< 2		< 2	< 2		< 2	< 2		5	5	0%	6	5	17%
Turbidity	NTU	1.1	1.3	15%	3.9	2.9	26%	1.2	0.9	25%	1	0.9	10%	1	0.8	20%	1.6	1.8	11%	3.5	3.3	6%
Dissolved Anions																						
Alkalinity as CaCO3	mg/L (ppm)	3	3	0%	10	13	23%	16	16	0%	53	54	2%	43	43	0%	69	69	0%	63	62	2%
Fluoride-D	mg/L (ppm)	0.2	0.3	33%	0.2	0.3	33%	0.2	0.2	0%	0.05	0.05	0%	0.04	0.04	0%	0.4	0.5	20%	0.07	0.07	0%
Sulphate-D	mg/L (ppm)	0.03	0.04	25%	0.05	0.05	0%	0.03	0.03	0%	1.8	1.9	5%	1.7	1.7	0%	0.08	0.08	0%	4	4.1	2%
Chloride-D	mg/L (ppm)	1.6	2.1	24%	1.5	1.5	0%	0.9	0.8	11%	0.2	0.2	0%	0.2	0.2	0%	4.4	4.8	8%	0.3	0.3	0%
Nutrients																						
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.04	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	0.02	
Nitrate-N-D	mg/L (ppm)	0.006	0.056	89%	0.015	0.016	6%	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		0.021	0.018	14%	0.007	< 0.005	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.46	0.61	25%	0.32	0.13	59%	< 0.08	0.09		< 0.08	0.55		< 0.08	< 0.08		0.18	0.28	36%	0.75	1.03	27%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		0.004	0.004	0%	0.004	0.007	43%	0.071	0.064	10%	< 0.003	< 0.003		< 0.003	< 0.003	
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.01	0.009	10%	0.014	0.015	7%	0.005	0.005	0%	0.007	0.007	0%	0.006	0.007	14%	0.004	0.004	0%	0.011	0.011	0%
Organic Parameters																						
Carbon (Total Organic)	mg/L (ppm)	11.9	12.5	5%	20.4	20.5	0%	5.9	5.1	14%	3.6	3.7	3%	5.2	4.8	8%	7	7.3	4%	9.8	9.9	1%
Carbon (Dissolved Organic)	mg/L (ppm)	10.7	11.8	9%	22.1	21.7	2%	5.1	5.1	0%	3.6	3.7	3%	5.2	4.8	8%	10.9	11.2	3%	10	10	0%
Total Metals																						
Aluminum	mg/L (ppm)	0.302	0.304	1%	0.596	0.581	3%	0.07	0.07	0%	0.022	0.022	0%	0.031	0.03	3%	0.039	0.053	26%	0.066	0.07	6%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0008	0.0008	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0005	0.0005	0%
Barium	mg/L (ppm)	0.00319	0.00311	3%	0.00627	0.00628	0%	0.00501	0.0051	2%	0.00845	0.00857	1%	0.00693	0.00671	3%	0.00571	0.00591	3%	0.00623	0.00637	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	0.001		< 0.001	< 0.001		< 0.001	0.003		< 0.001	< 0.001		0.006	0.003	50%	0.003	0.002	33%	0.002	0.002	0%
Cadmium	mg/L (ppm)	0.000027	0.000038	29%	0.000029	0.000041	29%	< 0.000015	< 0.000015		0.00002	< 0.000015		< 0.000015	< 0.000015		0.000024	0.000022	8%	< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	4.7	4.7	0%	5.1	4.8	6%	13.8	13.9	1%	12.4	12.3	1%	20.5	20.6	0%	18.1	18.2	1%
Chromium	mg/L (ppm)	0.0003	0.0003	0%	0.0006	0.0006	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00005	0.00005	0%	0.00014	0.00013	7%	0.00003	0.00003	0%	0.00007	0.00003	57%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00007	0.00006	14%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.001	0.0034	71%	0.0003	0.0002	33%	0.0004	0.0003	25%	0.0002	0.0001	50%	0.0003	0.0002	33%	0.0006	0.0006	0%
Iron	mg/L (ppm)	0.152	0.149	2%	0.5	0.488	2%	0.108	0.108	0%	0.159	0.16	1%	0.128	0.138	7%	0.0541	0.0693	22%	0.128	0.123	4%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		0.00014	0.00011	21%	< 0.00005	0.00005		< 0.00005	< 0.00005		0.00009	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		1.33	1.35	1%	0.8	0.8	0%	3.3	3.37	2%	2.8	2.77	1%	4.61	4.62	0%	4.39	4.42	1%
Manganese	mg/L (ppm)	0.0113	0.0111	2%	0.0335	0.038	12%	0.00769	0.00766	0%	0.0185	0.0187	1%	0.0164	0.0164	0%	0.0063	0.0075	16%	0.0208	0.0194	7%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		0.000016	0.000018	11%	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00009	0.00008	11%	0.00012	0.0001	17%	0.00043	0.00047	9%	0.00074	0.0007	5%	0.00051	0.00049	4%	0.00046	0.00044	4%	0.0005	0.00049	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00054	0.00054	0%	0.00017	0.00017	0%	< 0.00005	< 0.00005		0.00013	0.00016	19%	0.00025	0.00028	11%	0.00031	0.0003	3%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		0.03	0.03	0%	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.02	0.02	0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		0.5	0.5	0%	< 0.5	< 0.5		0.8	0.8	0%	0.8	0.8	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.45	3.39	2%	5.21	4.8	8%	5.2	5.32	2%	6.25	6.33	1%	6.3	6.3	0%	3.8	3.87	2%	3.97	4.01	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.9	1.9	0%	2	2	0%	3.3	3.4	3%	2.9	3	3%	3.4	3.4	0%	3.2	3.2	0%
Strontium	mg/L (ppm)	0.0147	0.0149	1%	0.0302	0.0298	1%	0.0388	0.0386	1%	0.0883	0.0902	2%	0.0713	0.0717	1%	0.092	0.0933	1%	0.0885	0.0899	2%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	

Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Titanium	mg/L (ppm)	0.0041	0.0037	10%	0.0137	0.0122	11%	0.0013	0.001	23%	0.0006	0.0008	25%	0.0008	0.0006	25%	0.0012	0.0016	25%	0.0021	0.0024	13%
Uranium	mg/L (ppm)	0.00017	0.00017	0%	0.00013	0.00013	0%	0.00015	0.00014	7%	0.00015	0.00016	6%	0.00011	0.00011	0%	0.00009	0.00009	0%	0.0001	0.00009	10%
Vanadium	mg/L (ppm)	0.0002	0.0002	0%	0.001	0.001	0%	0.0001	0.0001	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	< 0.0001	< 0.0001	0%	0.0003	0.0004	25%
Zinc	mg/L (ppm)	0.0047	0.0085	45%	0.0046	0.0054	15%	0.001	0.0016	38%	0.0014	< 0.0005	< 0.0005	< 0.0005	< 0.0005	50%	0.0046	0.0023	50%	0.0012	0.0011	8%
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		17.2	17.3	1%	15.9	15.2	4%	48.1	48.5	1%	42.4	42	1%	70.2	70.5	0%	63.1	63.7	1%
Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Dissolved Metals																						
Aluminum	mg/L (ppm)	0.241	0.242	0%	0.253	0.307	18%	0.048	0.046	4%	0.012	0.01	17%	0.019	0.019	0%	0.008	0.008	0%	0.018	0.018	0%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0007	0.0007	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.0028	0.00284	1%	0.00403	0.00398	1%	0.00465	0.00461	1%	0.00845	0.00853	1%	0.00656	0.00666	2%	0.00528	0.00536	1%	0.00577	0.00586	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	< 0.001		0.003	0.002	33%	0.002	0.001	50%
Cadmium	mg/L (ppm)	0.000027	0.000015	44%	0.000029	< 0.000015	< 0.000015	< 0.000015	< 0.000015		0.00002	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	1.6	1.6	0%	4.6	4.5	2%	4.5	4.5	0%	13.8	13.8	0%	11.5	11.6	1%	19.1	19.1	0%	17.7	17.7	0%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		0.0005	0.0004	20%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00004	0.00003	25%	0.00006	0.00007	14%	0.00003	0.00002	33%	0.00007	< 0.00002		0.00003	0.00003	0%	< 0.00002	< 0.00002		0.00004	0.00004	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0008	0.0034	76%	0.0003	0.0002	33%	0.0004	0.0003	25%	< 0.0001	< 0.0001		0.0003	0.0002	33%	0.0006	0.0006	0%
Iron	mg/L (ppm)	0.105	0.108	3%	0.174	0.216	19%	0.0669	0.0652	3%	0.128	0.127	1%	0.1	0.102	2%	0.0143	0.0137	4%	0.0468	0.0438	6%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00009	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		1.33	1.35	1%	0.77	0.77	0%	3.25	3.23	1%	2.74	2.74	0%	4.33	4.42	2%	4.12	4.17	1%
Manganese	mg/L (ppm)	0.00633	0.00636	0%	0.00858	0.00938	9%	0.00542	0.00534	1%	0.0163	0.0161	1%	0.0148	0.015	1%	0.00098	0.00099	1%	0.0122	0.0107	12%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		0.000016	0.000017	6%	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005		0.00005	0.00006	17%	0.00039	0.00042	7%	0.00074	0.00069	7%	0.0005	0.00047	6%	0.00039	0.00042	7%	0.00049	0.00046	6%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00029	0.00031	6%	0.00017	0.00015	12%	< 0.00005	< 0.00005		0.00013	0.00016	19%	0.00019	0.00018	5%	0.00031	0.0003	3%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		0.01	0.01	0%	< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	0.01	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		0.5	0.5	0%	< 0.5	0.5		0.7	0.7	0%	0.7	0.7	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.17	3.26	3%	4.5	4.8	6%	5.2	5.14	1%	6.25	6.33	1%	6.17	6.18	0%	3.66	3.53	4%	3.62	3.7	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.9	1.9	0%	1.9	1.9	0%	3.2	3.2	0%	2.9	3	3%	3.2	3.2	0%	3	3	0%
Strontium	mg/L (ppm)	0.0145	0.0144	1%	0.026	0.0255	2%	0.0371	0.0378	2%	0.0883	0.0902	2%	0.0713	0.0717	1%	0.0919	0.0919	0%	0.0871	0.0871	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0018	0.0017	6%	0.0023	0.0044	48%	0.0007	0.0005	29%	0.0004	< 0.0002		0.0003	0.0002	33%	0.0003	0.0003	0%	0.0005	0.0005	0%
Uranium	mg/L (ppm)	0.00015	0.00015	0%	0.00007	0.00007	0%	0.00014	0.00013	7%	0.00014	0.00015	7%	0.00011	0.00011	0%	0.00008	0.00008	0%	0.00008	0.00008	0%
Vanadium	mg/L (ppm)	0.00011	0.00011	0%	0.00046	0.00057	19%	0.00009	0.00008	11%	0.00017	0.00008	53%	0.0002	0.0002	0%	< 0.00005	< 0.00005		0.00022	0.00018	18%
Zinc	mg/L (ppm)	0.0044	0.0085	48%	0.002	0.0054	63%	0.001	0.0006	40%	0.0014	< 0.0005		< 0.0005	< 0.0005		0.0046	< 0.0005		0.0012	0.0011	8%
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		17	16.8	1%	14.4	14.4	0%	47.8	47.9	0%	40	40.3	1%	65.4	65.8	1%	61	61.5	1%

2011 Field Duplicates RPDs

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Physical Tests																	
pH @ 25°C BC-T	pH units	8.23	8.25	0%	8.17	8.18	0%	7.7	7.72	0%	7.75	7.73	0%	7.58	7.6	0%	0%
Conductivity @ 25°C	mS/cm	157	159	1%	155	154	1%	98	98	0%	126	126	0%	181	182	1%	3%
T-Dissolved Solids180°C	mg/L (ppm)	92	92	0%	80	80	0%	76	52	32%	128	104	19%	148	132	11%	24%
Total Suspended Solids @105°C	mg/L (ppm)	3	4	25%	4	5	20%	4	3	25%	29	3	90%	2	2	0%	27%
Turbidity	NTU	1.5	2.4	38%	2.2	2.6	15%	2.9	3.1	6%	1.9	1.3	32%	1.1	1.1	0%	17%
Dissolved Anions																	
Alkalinity as CaCO3	mg/L (ppm)	82	82	0%	76	77	1%	43	43	0%	62	61	2%	88	88	0%	2%
Fluoride-D	mg/L (ppm)	0.09	0.1	10%	0.08	0.09	11%	0.2	0.3	33%	0.07	0.07	0%	0.6	0.6	0%	12%
Sulphate-D	mg/L (ppm)	4.7	5.1	8%	4.4	4.5	2%	0.08	0.08	0%	0.4	0.5	20%	0.07	0.07	0%	5%
Chloride-D	mg/L (ppm)	0.3	0.3	0%	0.4	0.3	25%	5.1	5.3	4%	1.5	1.7	12%	4.4	4.1	7%	8%
Nutrients																	
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.02	< 0.02		< 0.01	< 0.01		
Nitrate-N-D	mg/L (ppm)	0.069	0.065	6%	0.042	0.042	0%	< 0.005	< 0.005		< 0.005	< 0.005		0.011	0.017	35%	25%
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		0.019	0.015	21%	< 0.003	< 0.003		< 0.003	< 0.003		21%
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.28	0.25	11%	0.67	0.58	13%	0.58	0.18	69%	< 0.08	0.12		< 0.08	< 0.08		34%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.009	0.007	22%	19%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.012	0.008	33%	0.016	0.016	0%	0.013	0.012	8%	0.008	0.009	11%	< 0.001	< 0.001		8%
Organic Parameters																	
Carbon (Total Organic)	mg/L (ppm)	5.9	6	2%	5.9	7.2	18%	25.1	37.1	32%	12.6	13.6	7%	4.3	4.2	2%	8%
Carbon (Dissolved Organic)	mg/L (ppm)	5.5	5.6	2%	2.6	5.1	49%	12.1	12.5	3%	12.3	13.6	10%	4.3	4.2	2%	8%
Total Metals																	
Aluminum	mg/L (ppm)	0.042	0.0314	25%	0.074	0.051	31%	0.172	0.178	3%	0.742	0.064	91%	0.012	0.008	33%	19%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0004	0.0003	25%	0.0002	0.0002	0%	0.0005	0.0005	0%	0.0011	0.0005	55%	0.0002	0.0002	0%	7%
Barium	mg/L (ppm)	0.00806	0.00792	2%	0.00913	0.00848	7%	0.0077	0.00784	2%	0.0235	0.0113	52%	0.0112	0.011	2%	7%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	0.001		0.002	0.002	0%	0.002	0.002	0%	0.001	0.001	0%	14%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.000018	< 0.000015		< 0.000015	< 0.000015		22%
Calcium	mg/L (ppm)	21.7	22	1%	21.8	21.7	0%	13.7	13.9	1%	20.2	19.2	5%	25.4	25.4	0%	1%
Chromium	mg/L (ppm)	< 0.0005	< 0.0005		< 0.0005	< 0.0005		< 0.0003	< 0.0003		0.0012	< 0.0003		< 0.0003	< 0.0003		0%
Cobalt	mg/L (ppm)	< 0.00005	< 0.00005		0.00007	0.00005	29%	0.00007	0.00008	13%	0.00027	0.00003	89%	0.00003	0.00003	0%	19%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0004	0.0003	25%	0.0007	0.0008	13%	0.0017	0.0005	71%	< 0.0001	< 0.0001		29%
Iron	mg/L (ppm)	0.199	0.179	10%	0.295	0.241	18%	0.193	0.209	8%	1.8	0.318	82%	0.217	0.2	8%	14%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00019	< 0.00005		< 0.00005	< 0.00005		21%
Lithium	mg/L (ppm)	< 0.005	< 0.005		< 0.005	< 0.005		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	4.89	4.83	1%	4.95	5	1%	3.19	3.24	2%	3.89	3.76	3%	5.42	5.57	3%	1%
Manganese	mg/L (ppm)	0.0292	0.0268	8%	0.0424	0.0372	12%	0.0101	0.0103	2%	0.155	0.0192	88%	0.0241	0.0227	6%	13%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		11%
Molybdenum	mg/L (ppm)	0.00067	0.00068	1%	0.0007	0.00072	3%	0.0005	0.00049	2%	0.00058	0.00049	16%	0.00052	0.00053	2%	6%
Nickel	mg/L (ppm)	0.0002	0.0003	33%	0.00032	0.00029	9%	0.00045	0.00048	6%	0.0011	0.00028	75%	0.00016	0.00016	0%	14%
Phosphorus	mg/L (ppm)	0.02	< 0.02		0.03	0.03	0%	0.02	0.02	0%	0.07	< 0.02		< 0.02	< 0.02		0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.9	0.9	0%	0.9	0.9	0%	0.5	< 0.5		0.8	0.8	0%	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	5.16	5.1	1%	5.4	5.1	6%	4.58	4.39	4%	8.27	7.1	14%	6.78	6.65	2%	4%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	3.7	3.6	3%	3.8	3.8	0%	2.6	2.6	0%	3.1	3.1	0%	4.1	4.2	2%	1%
Strontium	mg/L (ppm)	0.112	0.112	0%	0.116	0.115	1%	0.0735	0.0738	0%	0.106	0.1	6%	0.118	0.118	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Titanium	mg/L (ppm)	0.0024	0.0017	29%	0.004	0.0025	38%	0.0042	0.0046	9%	0.0168	0.0018	89%	0.0006	0.0005	17%	26%
Uranium	mg/L (ppm)	0.00014	0.00014	0%	0.00016	0.00015	6%	0.00011	0.00011	0%	0.00017	0.00007	59%	0.00014	0.00015	7%	8%
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		0.0004	0.0005	20%	0.0024	0.0005	79%	0.0001	0.0001	0%	14%
Zinc	mg/L (ppm)	0.004	< 0.001		0.002	0.0028	29%	0.0049	0.0022	55%	0.0023	< 0.0005		0.0014	0.0006	57%	37%
T-Hardness as CaCO3	mg/L (ppm)	74.3	74.8	1%	74.7	74.8	0%	47.4	48	1%	66.5	63.5	5%	85.7	86.4	1%	1%
Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Dissolved Metals																	
Aluminum	mg/L (ppm)	< 0.002	< 0.002		0.031	0.002	94%	0.066	0.058	12%	0.016	0.015	6%	0.003	0.003	0%	14%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0004	0.0003	25%	0.0002	0.0001	50%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0002	0.0002	0%	6%
Barium	mg/L (ppm)	0.00733	0.00777	6%	0.00863	0.0079	8%	0.00661	0.00647	2%	0.00964	0.00966	0%	0.0107	0.0106	1%	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		0.002	0.002	0%	0.002	0.002	0%	0.001	0.001	0%	17%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		44%
Calcium	mg/L (ppm)	21.3	22	3%	21.2	20.7	2%	13.3	13.2	1%	18.1	18.1	0%	25.4	25.4	0%	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		20%
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00006	0.00004	33%	0.00004	0.00003	25%	0.00003	0.00002	33%	< 0.00002	0.00002		18%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0003	0.0002	33%	0.0008	0.0006	25%	0.0004	0.0004	0%	< 0.0001	< 0.0001		23%
Iron	mg/L (ppm)	0.0851	0.0817	4%	0.246	0.117	52%	0.0845	0.0755	11%	0.16	0.156	3%	0.109	0.113	4%	9%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	4.83	4.7	3%	4.78	5	4%	3.01	2.97	1%	3.45	3.44	0%	5.42	5.57	3%	2%
Manganese	mg/L (ppm)	0.0219	0.0214	2%	0.0393	0.0334	15%	0.00475	0.00464	2%	0.0078	0.00777	0%	0.0176	0.0181	3%	4%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		6%
Molybdenum	mg/L (ppm)	0.00061	0.00064	5%	0.0006	0.00059	2%	0.0004	0.0004	0%	0.00047	0.00049	4%	0.00051	0.0005	2%	6%
Nickel	mg/L (ppm)	0.0002	0.00023	13%	0.00026	0.00023	12%	0.00033	0.00032	3%	0.0003	0.00028	7%	0.00015	0.00016	6%	8%
Phosphorus-D	mg/L (ppm)	0.01	0.01	0%	0.02	0.01	50%	0.01	0.01	0%	< 0.01	< 0.01		< 0.01	< 0.01		13%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.9	0.9	0%	0.8	0.8	0%	< 0.5	< 0.5		0.8	0.9	11%	2%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	5.07	4.96	2%	4.9	4.61	6%	4.13	4.18	1%	5.91	5.9	0%	6.78	6.65	2%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	3.6	3.5	3%	3.6	3.8	5%	2.5	2.4	4%	2.8	2.8	0%	4.1	4.2	2%	1%
Strontium	mg/L (ppm)	0.107	0.11	3%	0.109	0.107	2%	0.068	0.0675	1%	0.0931	0.0933	0%	0.118	0.118	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0003	0.0003	0%	0.0016	0.0003	81%	0.001	0.0007	30%	0.0005	0.0005	0%	< 0.0002	< 0.0002		23%
Uranium	mg/L (ppm)	0.00012	0.00013	8%	0.00015	0.00015	0%	0.00011	0.0001	9%	0.00006	0.00007	14%	0.00014	0.00014	0%	4%
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00024	0.0002	17%	0.00022	0.00022	0%	0.0001	0.00009	10%	14%
Zinc	mg/L (ppm)	0.0039	0.0009	77%	0.002	0.0028	29%	0.0049	0.0009	82%	0.0013	< 0.0005		0.0014	0.0006	57%	50%
D-Hardness as CaCO3	mg/L (ppm)	73	74.4	2%	72.6	72.3	0%	45.7	45.2	1%	59.3	59.4	0%	85.7	86.4	1%	1%

11.9% Mean of Mear

2012 Field Duplicates RPDs

Analytical Parameter	Unit	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
		Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
		Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
pH @ 25°C BC-D	pH	7.06	6.94	1.71%	7.88	7.86	0.25%	7.83	7.89	0.76%	7.39	7.45	0.81%	7.65	7.74	1.17%	7.86	7.82	0.51%	
Conductivity @ 25°C	uS/cm	44	44	0.00%	127	131	3.10%	101	105	3.88%	42	40	4.88%	74	74	0.00%	88	87	1.14%	
T-Dissolved Solids180°C	mg/L	56	28	66.67%	72	76	5.41%	80	96	18.18%	56	28	66.67%	84	60	33.33%	76	60	23.53%	
Total Suspended Solids @105°C	mg/L	10	8	22.22%	<2	2		<2	<2		40	37	7.79%	4	3	28.57%	2	<2		
Turbidity	NTU	15	16	6.45%	1	1.7	51.85%	1.5	1.6	6.45%	12	13	8.00%	1.1	1.3	16.67%	1.6	1.7	6.06%	
Alkalinity as CaCO3	mg/L	11	10	9.52%	62	64	3.17%	52	52	0.00%	17	17	0.00%	43	42	2.35%	44	44	0.00%	
Fluoride-D	mg/L	0.08	0.05	46.15%	0.06	0.06	0.00%	0.07	0.07	0.00%	0.05	0.08	46.15%	0.07	0.07	0.00%	<0.02	<0.02	0.00%	
Sulphate-D	mg/L	8.2	7.1	14.38%	3.4	3.4	0.00%	1.7	1.9	11.11%	1	0.9	10.53%	1.3	1.3	0.00%	2.6	2.6	0.00%	
Chloride-D	mg/L	1.8	1.5	18.18%	0.3	0.4	28.57%	0.4	0.4	0.00%	1.5	2	28.57%	0.6	0.6	0.00%	<0.1	<0.1	0.00%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.01	<0.01		<0.02	<0.02		0.02	0.02	0.00%	<0.02	<0.02		<0.02	<0.02		
Nitrate-N-D	mg/L	<0.005	<0.005		0.012	0.013	8.00%	<0.005	<0.005		0.012	0.008	40.00%	0.009	0.011	20.00%	<0.005	<0.005		
Nitrite-N-D	mg/L	0.012	<0.003		0.006	0.005	18.18%	0.013	0.011	16.67%	0.005	0.004	22.22%	0.003	0.003	0.00%	<0.003	<0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L	0.48	0.52	8.00%	0.14	0.27	63.41%	0.18	0.2	10.53%	0.15	0.19	23.53%	<0.08	0.11		0.1	0.09	10.53%	
Phosphorous-Ortho-DLL	mg/L	0.015	0.012	22.22%	0.007	<0.003		0.006	<0.003		<0.003	<0.003		<0.003	<0.003		<0.003	<0.003		
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.01	0.00%	<0.01	<0.01		0.02	0.02	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		
Carbon (Total Organic)	mg/L	16.4	16.5	0.61%	2.2	2.9	27.45%	13.3	13.2	0.75%	11.9	11.8	0.84%	5.7	5.5	3.57%	5.7	5.4	5.41%	
Carbon (Dissolved Organic)	mg/L	16.3	16.4	0.61%	2.2	2.4	8.70%	13	12.9	0.77%	11.9	11.8	0.84%	5.6	5.3	5.50%	5.5	5.4	1.83%	
Aluminum-T	mg/L	0.899	0.885	1.57%	0.023	0.05	73.97%	0.094	0.091	3.24%	0.291	0.266	8.98%	0.052	0.051	1.94%	0.04	0.052	26.09%	
Antimony-T	mg/L	0.00021	0.0002	4.88%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Arsenic-T	mg/L	0.0023	0.0023	0.00%	0.0004	0.0005	22.22%	0.0004	0.0004	0.00%	0.0005	0.0005	0.00%	0.0005	0.0006	18.18%	0.0006	0.0006	0.00%	
Barium-T	mg/L	0.0108	0.00839	25.12%	0.011	0.0151	31.42%	0.0102	0.0102	0.00%	0.00701	0.00668	4.82%	0.00719	0.00725	0.83%	0.00804	0.00821	2.09%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.002	66.67%	
Cadmium-T	mg/L	0.000072	0.00008	10.53%	<0.000015	0.000054		0.000092	<0.000015		0.000018	0.000025	32.56%	<0.000015	<0.000015		<0.000015	<0.000015		
Calcium-T	mg/L	5.9	6	1.68%	17.2	18.3	6.20%	15.1	15.1	0.00%	4.8	4.9	2.06%	9.6	9.6	0.00%	11.6	11.7	0.86%	
Chromium-T	mg/L	0.0008	0.0007	13.33%	<0.0003	0.0006		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		
Cobalt-T	mg/L	0.00006	0.00005	18.18%	0.00002	0.00003	40.00%	0.00006	0.00005	18.18%	0.00007	0.00005	33.33%	<0.00002	<0.00002		0.00004	0.00005	22.22%	
Copper-T	mg/L	0.0006	0.0031	135.14%	0.0002	0.0007	111.11%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0004	28.57%	<0.0001	<0.0001		
Iron-T	mg/L	0.736	0.721	2.06%	0.109	0.152	32.95%	0.223	0.217	2.73%	0.327	0.282	14.78%	0.119	0.118	0.84%	0.194	0.194	0.00%	
Lead-T	mg/L	0.00092	0.00093	1.08%	<0.00005	0.0001		0.00074	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		<0.00005	0.00037		
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	1.2	1.18	1.68%	3.71	3.96	6.52%	3.85	3.75	2.63%	1.13	1.11	1.79%	2.11	2.11	0.00%	2.61	2.58	1.16%	
Manganese-T	mg/L	0.0334	0.0338	1.19%	0.0191	0.0195	2.07%	0.0172	0.0169	1.76%	0.0209	0.0174	18.28%	0.0146	0.0144	1.38%	0.0219	0.0225	2.70%	
Mercury-T	mg/L	<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	0.000006		<0.000005	<0.000005		

Analytical Parameter	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
Unit	15-May-12	15-May-12	15-May-12	13-Feb-12	13-Feb-12	13-Feb-12	17-Apr-12	17-Apr-12	17-Apr-12	17-Apr-12	28-May-12	28-May-12	28-May-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Molybdenum-T	mg/L	<0.00005	<0.00005		0.00079	0.00086	8.48%	0.00063	0.00057	10.00%	0.00018	0.00017	5.71%	0.00052	0.00048	8.00%	0.00094	0.0006	44.16%
Nickel-T	mg/L	0.00035	0.00044	22.78%	0.00016	0.00042	89.66%	0.00029	0.00029	0.00%	0.00025	0.0001	85.71%	0.00021	0.00025	17.39%	0.00023	0.00077	108.00%
Phosphorous-T	mg/L	0.03	0.03	0.00%	<0.02	<0.02		0.03	0.03	0.00%	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02	
Potassium-T	mg/L	0.7	0.7	0.00%	0.6	0.6	0.00%	1.6	1.6	0.00%	<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	5.42	5.45	0.55%	6.51	7.08	8.39%	5.57	5.3	4.97%	4.65	4.69	0.86%	6.54	5.91	10.12%	6.91	6.7	3.09%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	2.1	2.1	0.00%	3.5	3.8	8.22%	3.2	3.1	3.17%	1.8	1.8	0.00%	2.7	2.7	0.00%	3.2	3.2	0.00%
Strontium-T	mg/L	0.0362	0.0363	0.28%	0.103	0.11	6.57%	0.0788	0.08	1.51%	0.0339	0.0344	1.46%	0.064	0.0645	0.78%	0.0807	0.0805	0.25%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0357	0.0347	2.84%	0.0012	0.0023	62.86%	0.0032	0.0031	3.17%	0.0061	0.0045	30.19%	0.0014	0.0012	15.38%	0.0011	0.0011	0.00%
Uranium-T	mg/L	0.00007	0.00007	0.00%	0.00023	0.00025	8.33%	0.00024	0.00015	46.15%	0.00018	0.00018	0.00%	0.00008	0.00009	11.76%	0.00012	0.00012	0.00%
Vanadium-T	mg/L	0.0016	0.0015	6.45%	0.0002	0.0003	40.00%	0.0004	0.0004	0.00%	0.0009	0.0007	25.00%	0.0005	0.0005	0.00%	0.0006	0.0006	0.00%
Zinc-T	mg/L	0.0596	0.0592	0.67%	0.024	0.0681	95.77%	0.0007	<0.0005		0.001	0.0012	18.18%	0.0007	<0.0005		<0.0005	0.0108	
T-Hardness as CaCO3	mg/L	19.7	19.8	0.51%	58.2	62	6.32%	53.4	53.2	0.38%	16.7	16.7	0.00%	32.8	32.6	0.61%	39.7	39.8	0.25%
Aluminum-D	mg/L	0.206	0.214	3.81%	<0.002	<0.002		0.028	0.027	3.64%	0.139	0.161	14.67%	0.024	0.025	4.08%	0.02	0.019	5.13%
Antimony-D	mg/L	0.00017	0.00019	11.11%	<0.00005	<0.00005		0.00014	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-D	mg/L	0.0014	0.0013	7.41%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0004	0.0005	22.22%	0.0006	0.0006	0.00%
Barium-D	mg/L	0.00277	0.00264	4.81%	0.00861	0.00908	5.31%	0.00962	0.0096	0.21%	0.00434	0.00456	4.94%	0.00693	0.00701	1.15%	0.00804	0.00809	0.62%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.002	66.67%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		0.000092	<0.000015		0.000018	0.000025	32.56%	<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-D	mg/L	5.4	5.5	1.83%	16.2	16.5	1.83%	15.1	14.7	2.68%	4.8	4.9	2.06%	9.2	9.2	0.00%	11.6	11.7	0.86%
Chromium-D	mg/L	<0.0003	0.0004		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003	
Cobalt-D	mg/L	<0.00002	0.00003		0.00002	0.00003	40.00%	0.00004	0.00004	0.00%	<0.00002	0.00003		<0.00002	<0.00002		0.00004	0.00003	28.57%
Copper-D	mg/L	0.0004	0.0031	154.29%	0.0002	0.0003	40.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0001	<0.0001		<0.0001	<0.0001	
Iron-D	mg/L	0.127	0.146	13.92%	0.0507	0.0472	7.15%	0.129	0.123	4.76%	0.102	0.119	15.38%	0.0718	0.0727	1.25%	0.148	0.145	2.05%
Lead-D	mg/L	0.00006	0.00023	117.24%	<0.00005	<0.00005		0.00014	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.91	0.91	0.00%	3.53	3.6	1.96%	3.85	3.75	2.63%	1.06	1.08	1.87%	2.07	2.1	1.44%	2.61	2.58	1.16%
Manganese-D	mg/L	0.0103	0.0106	2.87%	0.0132	0.0139	5.17%	0.0147	0.0143	2.76%	0.00537	0.00591	9.57%	0.0104	0.0108	3.77%	0.019	0.0188	1.06%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	
Molybdenum-D	mg/L	<0.00005	<0.00005		0.00073	0.00071	2.78%	0.00051	0.00054	5.71%	0.00018	0.00017	5.71%	0.00046	0.00047	2.15%	0.00094	0.00055	52.35%
Nickel-D	mg/L	0.00033	0.00044	28.57%	0.00013	0.00015	14.29%	0.00025	0.00027	7.69%	0.00025	0.0001	85.71%	0.00015	0.00012	22.22%	0.00023	0.00024	4.26%
Phosphorous-D	mg/L	0.01	0.01	0.00%	<0.01	<0.01		0.02	0.02	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01	
Potassium-D	mg/L	0.5	0.5	0.00%	0.5	0.5	0.00%	1.5	1.5	0.00%	<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	4.52	4.59	1.54%	6.45	6.5	0.77%	5.27	4.99	5.46%	4.65	4.69	0.86%	5.82	5.86	0.68%	6.91	6.7	3.09%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	2	2	0.00%	3.4	3.5	2.90%	3.2	3.1	3.17%	1.8	1.8	0.00%	2.7	2.7	0.00%	3.2	3.2	0.00%
Strontium-D	mg/L	0.0315	0.0318	0.95%	0.0972	0.0984	1.23%	0.0739	0.08	7.93%	0.0339	0.0344	1.46%	0.064	0.0645	0.78%	0.0807	0.0805	0.25%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0025	0.003	18.18%	<0.0002	<0.0002		0.0006	0.0005	18.18%	0.0012	0.0019	45.16%	0.0004	0.0003	28.57%	0.0004	0.0004	0.00%

	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
Analytical Parameter	Unit	15-May-12	15-May-12	15-May-12	13-Feb-12	13-Feb-12	13-Feb-12	17-Apr-12	17-Apr-12	17-Apr-12	28-May-12	28-May-12	28-May-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Uranium-D	mg/L	<0.00005	<0.00005		0.00022	0.00022	0.00%	0.00024	0.00015	46.15%	0.00013	0.00014	7.41%	0.00008	0.00009	11.76%	0.0001	0.0001	0.00%
Vanadium-D	mg/L	0.00009	0.0001	10.53%	<0.00005	<0.00005		0.00013	0.00013	0.00%	0.00025	0.00027	7.69%	0.00041	0.00043	4.76%	0.00058	0.00057	1.74%
Zinc-D	mg/L	0.052	0.0534	2.66%	0.0111	0.0276	85.27%	<0.0005	<0.0005		<0.0005	0.0012		0.0007	<0.0005		<0.0005	0.0025	
D-Hardness as CaCO3	mg/L	17.4	17.6	1.14%	54.9	56	1.98%	53.4	52.2	2.27%	16.4	16.6	1.21%	31.5	31.8	0.95%	39.7	39.8	0.25%

2012 Field Duplicates RPDs

Analytical Parameter	Unit	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14	
		Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
		Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%
pH @ 25°C BC-D	pH	12-Nov-12	12-Nov-12	1.28%	10-Dec-12	10-Dec-12	0.51%	12-Mar-12	12-Mar-12	0.40%	11-Jun-12	11-Jun-12	0.00%	04-Jun-12	04-Jun-12	0.25%	16-Oct-12	16-Oct-12	1.24%	
Conductivity @ 25°C	uS/cm	113	111	1.79%	148	148	0.00%	52	53	1.90%	119	120	0.84%	111	111	0.00%	185	185	0.00%	
T-Dissolved Solids180°C	mg/L	100	70	35.29%	80	90	11.76%	48	40	18.18%	88	92	4.44%	80	90	11.76%	96	96	0.00%	
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	6		7	8	13.33%	<2	<2		<2	<2		
Turbidity	NTU	0.9	0.9	0.00%	1.1	1.3	16.67%	1.2	1.8	40.00%	2.8	2.6	7.41%	1.8	3.5	64.15%	1.1	1	9.52%	
Alkalinity as CaCO3	mg/L	60	60	0.00%	80	80	0.00%	25	25	0.00%	63	65	3.13%	60	60	0.00%	100	99	1.01%	
Fluoride-D	mg/L	0.05	0.05	0.00%	0.07	0.07	0.00%	0.03	0.03	0.00%	0.06	0.06	0.00%	0.06	0.06	0.00%	0.07	0.07	0.00%	
Sulphate-D	mg/L	2.5	2.5	0.00%	5.6	5.5	1.80%	1.2	1.2	0.00%	2.9	3	3.39%	2.2	2	9.52%	4.2	4.3	2.35%	
Chloride-D	mg/L	0.3	0.3	0.00%	0.7	0.7	0.00%	0.2	0.2	0.00%	0.3	0.5	50.00%	0.8	0.7	13.33%	0.7	0.4	54.55%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		
Nitrate-N-D	mg/L	0.009	<0.005		0.103	0.112	8.37%	0.03	0.032	6.45%	<0.005	<0.005		0.006	<0.005		0.009	0.011	20.00%	
Nitrite-N-D	mg/L	<0.003	<0.003		0.02	0.014	35.29%	<0.003	<0.003		<0.003	0.003		<0.003	<0.003		<0.003	<0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L	0.4	0.46	13.95%	0.25	0.2	22.22%	<0.08	<0.08		0.11	0.11	0.00%	0.13	0.14	7.41%	0.14	<0.08		
Phosphorous-Ortho-DLL	mg/L							<0.003	<0.003		<0.003	<0.003								
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		0.01	0.02	66.67%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		
Carbon (Total Organic)	mg/L	3.8	3.8	0.00%	6.8	6.6	2.99%	5.5	5.7	3.57%	8.4	8	4.88%	10	11	9.52%	16.5	16.3	1.22%	
Carbon (Dissolved Organic)	mg/L	3.8	3.7	2.67%	6.8	6.6	2.99%	5.5	5.4	1.83%	8.2	7.7	6.29%	10	10	0.00%	16.5	15.7	4.97%	
Aluminum-T	mg/L	0.021	0.03	35.29%	0.016	0.009	56.00%	0.057	0.141	84.85%	0.061	0.032	62.37%	0.019	0.02	5.13%	0.019	0.016	17.14%	
Antimony-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005		
Arsenic-T	mg/L	0.0003	0.0003	0.00%	0.0005	0.0005	0.00%	0.0002	0.0003	40.00%	0.0006	0.0004	40.00%	0.0003	0.0002	40.00%	0.0002	0.0002	0.00%	
Barium-T	mg/L	0.00887	0.00873	1.59%	0.00737	0.00719	2.47%	0.00649	0.00864	28.42%	0.00697	0.092	171.83%	0.00836	0.00834	0.24%	0.0118	0.0118	0.00%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	0.009		<0.001	<0.001		<0.001	<0.001		
Cadmium-T	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	0.000017		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		
Calcium-T	mg/L	15	15	0.00%	23	22	4.44%	7.3	7.4	1.36%	15.7	15.7	0.00%	15	15	0.00%	28.3	28.7	1.40%	
Chromium-T	mg/L	<0.0003	0.0003		<0.0003	<0.0003		<0.0003	0.0005		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		
Cobalt-T	mg/L	0.00004	0.00005	22.22%	0.00003	0.00003	0.00%	0.00006	0.00018	100.00%	0.00003	0.00002	40.00%	<0.00002	0.00002		0.00003	0.00002	40.00%	
Copper-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		0.0003	0.0023	153.85%	0.0002	0.0003	40.00%	0.0001	0.0003	100.00%	
Iron-T	mg/L	0.1127	0.1141	1.23%	0.1332	0.1339	0.52%	0.288	0.628	74.24%	0.136	0.0685	66.01%	0.1407	0.1467	4.18%	0.224	0.206	8.37%	
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	3.71	3.64	1.90%	5.19	5.06	2.54%	1.27	1.31	3.10%	3.93	3.54	10.44%	3.1	3.14	1.28%	6.29	5.8	8.11%	
Manganese-T	mg/L	0.02334	0.02344	0.43%	0.02636	0.02579	2.19%	0.0424	0.144	109.01%	0.0209	0.0117	56.44%	0.00787	0.00909	14.39%	0.0147	0.012	20.22%	
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		

Analytical Parameter	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14		
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	
	Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%	
Unit	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Mar-12	12-Mar-12	12-Mar-12	11-Jun-12	11-Jun-12	11-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	16-Oct-12	16-Oct-12	16-Oct-12
Molybdenum-T	mg/L	0.0006	0.00058	3.39%	0.0006	0.00059	1.68%	0.00064	0.00069	7.52%	0.00046	0.00047	2.15%	0.00046	0.0005	8.33%	0.00052	0.00052	0.00%	
Nickel-T	mg/L	0.00018	0.00017	5.71%	0.0002	0.00019	5.13%	0.0001	0.00017	51.85%	0.00029	0.00026	10.91%	0.00023	0.00021	9.09%	0.00007	0.00008	13.33%	
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		
Potassium-T	mg/L	0.5	0.5	0.00%	0.9	0.9	0.00%	<0.5	<0.5		0.7	0.6	15.38%	0.5	0.5	0.00%	1.2	1	18.18%	
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-T	mg/L	6.77	6.43	5.15%	5.22	5.02	3.91%	3.81	3.94	3.35%	4.78	4.95	3.49%	5.68	5.62	1.06%	6.52	6.41	1.70%	
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-T	mg/L	3.7	3.6	2.74%	3.8	3.8	0.00%	2	2.1	4.88%	3.3	3.1	6.25%	2.7	2.8	3.64%	4.8	4.7	2.11%	
Strontium-T	mg/L	0.09096	0.0889	2.29%	0.1043	0.1029	1.35%	0.0582	0.0582	0.00%	0.0842	0.0834	0.95%	0.07719	0.07757	0.49%	0.131	0.133	1.52%	
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-T	mg/L	0.0006	0.0008	28.57%	0.0005	0.0004	22.22%	0.0015	0.0039	88.89%	0.002	0.0006	107.69%	0.0006	0.0006	0.00%	0.0006	0.0006	0.00%	
Uranium-T	mg/L	0.00017	0.00017	0.00%	0.00012	0.00012	0.00%	0.00019	0.00024	23.26%	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00014	0.00013	7.41%	
Vanadium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	0.0002		0.0002	0.0001	66.67%	<0.0001	<0.0001		<0.0001	<0.0001		
Zinc-T	mg/L	<0.0005	0.018		0.0007	0.0008	13.33%	0.0025	0.0041	48.48%	<0.0005	0.0389		<0.0005	<0.0005		<0.0005	0.0022		
T-Hardness as CaCO3	mg/L	53	52	1.90%	78	76	2.60%	23.5	24	2.11%	55.5	53.8	3.11%	50	50	0.00%	96.6	95.6	1.04%	
Aluminum-D	mg/L	0.01	0.011	9.52%	0.003	0.003	0.00%	0.02	0.02	0.00%	0.028	0.026	7.41%	0.016	0.016	0.00%	0.003	0.002	40.00%	
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005		
Arsenic-D	mg/L	0.0003	0.0003	0.00%	0.0004	0.0005	22.22%	0.0002	0.0001	66.67%	0.0006	0.0004	40.00%	0.0001	0.0001	0.00%	0.0002	0.0002	0.00%	
Barium-D	mg/L	0.0085	0.00841	1.06%	0.00737	0.00719	2.47%	0.00549	0.00555	1.09%	0.00627	0.00627	0.00%	0.00805	0.00799	0.75%	0.011	0.0109	0.91%	
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		
Calcium-D	mg/L	15	14	6.90%	23	22	4.44%	6.8	6.8	0.00%	14.9	15.2	1.99%	14	14	0.00%	27	27.1	0.37%	
Chromium-D	mg/L	<0.0003	0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		
Cobalt-D	mg/L	0.00004	0.00004	0.00%	<0.00002	<0.00002		<0.00002	<0.00002		0.00003	0.00002	40.00%	<0.00002	<0.00002		<0.00002	<0.00002		
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		0.0002	0.0001	66.67%	0.0002	0.0003	40.00%	<0.0001	<0.0001		
Iron-D	mg/L	0.0793	0.0756	4.78%	0.082	0.0838	2.17%	0.142	0.134	5.80%	0.0749	0.0653	13.69%	0.0991	0.0964	2.76%	0.114	0.105	8.22%	
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-D	mg/L	3.71	3.64	1.90%	5.19	5.06	2.54%	1.19	1.16	2.55%	3.93	3.44	13.30%	3	3.01	0.33%	5.84	5.8	0.69%	
Manganese-D	mg/L	0.02201	0.0218	0.96%	0.02383	0.02364	0.80%	0.00728	0.00749	2.84%	0.0135	0.0117	14.29%	0.0046	0.00462	0.43%	0.00556	0.00557	0.18%	
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-D	mg/L	0.00056	0.00057	1.77%	0.00059	0.00051	14.55%	0.00056	0.00054	3.64%	0.00046	0.00047	2.15%	0.00042	0.00044	4.65%	0.00049	0.00048	2.06%	
Nickel-D	mg/L	0.00007	0.00007	0.00%	0.00014	0.00014	0.00%	0.00007	0.00007	0.00%	0.00029	0.00026	10.91%	0.00023	0.00021	9.09%	0.00007	0.00008	13.33%	
Phosphorous-D	mg/L	<0.01	<0.01		0.01	0.02	66.67%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		
Potassium-D	mg/L	0.5	0.5	0.00%	0.9	0.9	0.00%	<0.5	<0.5		0.7	0.6	15.38%	0.5	0.5	0.00%	1	1	0.00%	
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-D	mg/L	6.77	6.43	5.15%	5.22	5.02	3.91%	3.13	3.12	0.32%	4.78	4.95	3.49%	5.68	5.54	2.50%	6.3	6.27	0.48%	
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-D	mg/L	3.7	3.6	2.74%	3.8	3.8	0.00%	2	1.9	5.13%	3.3	2.9	12.90%	2.7	2.8	3.64%	4.8	4.7	2.11%	
Strontium-D	mg/L	0.08651	0.0841	2.83%	0.1043	0.1011	3.12%	0.0529	0.0537	1.50%	0.0799	0.0806	0.87%	0.07518	0.07448	0.94%	0.125	0.124	0.80%	
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-D	mg/L	0.0003	0.0003	0.00%	<0.0002	<0.0002		0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0004	28.57%	<0.0002	<0.0002		

	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%
Analytical Parameter	Unit	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Mar-12	12-Mar-12	12-Mar-12	11-Jun-12	11-Jun-12	11-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	16-Oct-12	16-Oct-12	16-Oct-12
Uranium-D	mg/L	0.00016	0.00016	0.00%	0.0001	0.0001	0.00%	0.00015	0.00015	0.00%	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00013	0.00013	0.00%
Vanadium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00022	0.00015	37.84%	<0.00005	<0.00005		<0.00005	<0.00005	
Zinc-D	mg/L	<0.0005	0.0012		0.0007	<0.0005		0.0025	0.0036	36.07%	<0.0005	<0.0005		<0.0005	<0.0005		<0.0005	0.0022	
D-Hardness as CaCO3	mg/L	52	51	1.94%	78	76	2.60%	21.8	21.8	0.00%	53.5	52.1	2.65%	48	48	0.00%	91.4	91.4	0.00%

2012 Field Duplicates RPDs

	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Analytical Parameter	Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12	
pH @ 25°C BC-D	pH	7.25	7.29	0.55%	7.55	7.56	0.13%	0.68%
Conductivity @ 25°C	uS/cm	29	29	0.00%	70	70	0.00%	1.25%
T-Dissolved Solids180°C	mg/L	36	12	100.00%	56	48	15.38%	29.33%
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		17.98%
Turbidity	NTU	0.9	0.4	76.92%	0.6	0.7	15.38%	23.25%
Alkalinity as CaCO3	mg/L	10	11	9.52%	34	34	0.00%	2.05%
Fluoride-D	mg/L	0.04	0.04	0.00%	0.05	0.05	0.00%	7.10%
Sulphate-D	mg/L	0.7	0.7	0.00%	2.5	2.4	4.08%	4.08%
Chloride-D	mg/L	0.2	0.3	40.00%	<0.1	<0.1		19.43%
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		0.00%
Nitrate-N-D	mg/L	0.005	0.009	57.14%	0.014	0.012	15.38%	21.92%
Nitrite-N-D	mg/L	<0.003	<0.003		<0.003	<0.003		18.47%
Total Kjeldahl Nitrogen (TKN)	mg/L	0.11	0.2	58.06%	<0.08	0.12		21.76%
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003					22.22%
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		<0.01	<0.01		22.22%
Carbon (Total Organic)	mg/L	10.1	9.6	5.08%	10.9	12	9.61%	5.39%
Carbon (Dissolved Organic)	mg/L	10.1	9.6	5.08%	10.9	11.7	7.08%	3.51%
Aluminum-T	mg/L	0.194	0.217	11.19%	0.029	0.031	6.67%	28.17%
Antimony-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		4.88%
Arsenic-T	mg/L	0.0005	0.0006	18.18%	0.0004	0.0004	0.00%	12.76%
Barium-T	mg/L	0.00342	0.00337	1.47%	0.00692	0.00631	9.22%	19.97%
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		66.67%
Cadmium-T	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		21.54%
Calcium-T	mg/L	3.2	3.7	14.49%	8	8	0.00%	2.32%
Chromium-T	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		13.33%
Cobalt-T	mg/L	<0.00002	0.00003		0.00006	0.00006	0.00%	30.38%
Copper-T	mg/L	0.0004	0.0007	54.55%	0.0011	0.0005	75.00%	69.82%
Iron-T	mg/L	0.093	0.0934	0.43%	0.0934	0.0962	2.95%	15.09%
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		1.08%
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	0.77	0.87	12.20%	2.28	2.26	0.88%	3.87%
Manganese-T	mg/L	0.00379	0.00335	12.32%	0.0139	0.0137	1.45%	17.42%
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		

Analytical Parameter	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12	17-Sep-12	
Molybdenum-T	mg/L	0.00059	0.00057	3.45%	0.0017	0.00191	11.63%	8.81%
Nickel-T	mg/L	0.00024	0.00025	4.08%	0.00023	0.00025	8.33%	30.86%
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		3.73%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-T	mg/L	4.44	4.4	0.90%	6.43	6.15	4.45%	3.71%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-T	mg/L	1.6	1.9	17.14%	3	3	0.00%	3.44%
Strontium-T	mg/L	0.0217	0.0229	5.38%	0.051	0.0524	2.71%	1.82%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-T	mg/L	0.0014	0.0014	0.00%	0.0004	0.0004	0.00%	25.84%
Uranium-T	mg/L	0.00019	0.00016	17.14%	0.00007	0.00007	0.00%	8.77%
Vanadium-T	mg/L	0.0003	0.0002	40.00%	0.0002	0.0002	0.00%	19.79%
Zinc-T	mg/L	0.0019	0.0036	61.82%	0.0026	0.001	88.89%	46.74%
T-Hardness as CaCO3	mg/L	11.1	12.8	14.23%	29.4	29.4	0.00%	2.36%
Aluminum-D	mg/L	0.17	0.153	10.53%	0.029	0.026	10.91%	8.44%
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		11.11%
Arsenic-D	mg/L	0.0005	0.0006	18.18%	0.0004	0.0004	0.00%	12.62%
Barium-D	mg/L	0.00313	0.0033	5.29%	0.0065	0.00664	2.13%	2.20%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		66.67%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		32.56%
Calcium-D	mg/L	3.2	3.7	14.49%	8	8	0.00%	2.68%
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		
Cobalt-D	mg/L	<0.00002	0.00003		0.00003	0.00003	0.00%	18.10%
Copper-D	mg/L	<0.0001	<0.0001		0.0005	0.0005	0.00%	42.99%
Iron-D	mg/L	0.0771	0.0593	26.10%	0.0808	0.0809	0.12%	7.73%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		117.24%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		
Magnesium-D	mg/L	0.76	0.87	13.50%	2.28	2.26	0.88%	3.20%
Manganese-D	mg/L	0.00242	0.00335	32.24%	0.0139	0.0137	1.45%	5.60%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-D	mg/L	0.00056	0.00024	80.00%	0.00165	0.00191	14.61%	14.78%
Nickel-D	mg/L	0.00024	0.00025	4.08%	0.00023	0.00019	19.05%	15.66%
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01		22.22%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		1.71%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-D	mg/L	4.17	4.4	5.37%	6.43	6.15	4.45%	2.72%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-D	mg/L	1.6	1.9	17.14%	3	3	0.00%	3.55%
Strontium-D	mg/L	0.0211	0.0229	8.18%	0.051	0.0524	2.71%	2.40%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-D	mg/L	0.0009	0.001	10.53%	0.0003	0.0003	0.00%	13.56%

	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Analytical Parameter	Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12	
Uranium-D	mg/L	0.00019	0.0001	62.07%	0.00007	0.00006	15.38%	11.90%
Vanadium-D	mg/L	0.00031	0.00021	38.46%	0.00018	0.00018	0.00%	12.63%
Zinc-D	mg/L	0.0019	0.0036	61.82%	0.0026	0.001	88.89%	54.94%
D-Hardness as CaCO3	mg/L	11	12.8	15.13%	29.4	29.4	0.00%	2.15%

17.25% Mean of means

2013 Field Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706	% Diff	~LIMS:EC-64814	~LIMS:EC-64814	% Diff	~LIMS:EC-64914	~LIMS:EC-64914	% Diff	~LIMS:EC-65054	~LIMS:EC-65054	% Diff	~LIMS:EC-65181	~LIMS:EC-65181
	sample name	WQ Duplicate	WQ7	% Diff	WQ Duplicate	WQ7	% Diff	Duplicate 2	WQ8	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14
	type	FD	F		FD	F		FD	F		FD	F		FD	F
	date	15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13	13-May-13
	Units														
Physical Tests															
pH @ 25°C BC-D	pH	7.64	7.66	0%	7.77	7.78	0%	7.88	7.87	0%	7.74	7.79	1%	7.54	7.55
Conductivity @ 25°C	uS/cm	131	131	0%	127	128	1%	153	153	0%	120	120	0%	90	90
T-Dissolved Solids180°C	mg/L	90	80	11%	76	68	11%	104	92	12%	52	52	0%	64	68
Total Suspended Solids @ 105°C	mg/L	2	5	60%	<2	3	-	<2	3	-	<2	<2	-	<2	4
Turbidity	NTU	1.6	3.8	58%	0.6	0.7	14%	0.7	1.4	50%	0.9	1.2	25%	1.2	1.2
Hardness as (CaCO3)	mg/L	64	63	2%	60	59.1	2%	84.6	82.6	2%	52.1	53.2	2%	45.8	45.9
Dissolved Anions															
Alkalinity as CaCO3	mg/L	70	70	0%	66	66	0%	79	80	1%	54	55	2%	48	47
Fluoride-D	mg/L	0.06	0.06	0%	0.07	0.07	0%	0.08	0.08	0%	0.08	0.08	0%	0.07	0.07
Sulphate-D	mg/L	3.6	3.6	0%	3.3	3.4	3%	4.5	4.4	2%	3.2	3.1	3%	2.3	2.2
Chloride-D	mg/L	0.3	0.5	40%	0.4	0.5	20%	0.3	0.5	40%	0.5	0.5	0%	0.4	0.4
Nutrients															
Ammonia - Nitrogen	mg/L	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02
Nitrate-N-D	mg/L	0.06	0.086	30%	0.043	0.04	7%	0.086	0.088	2%	0.12	0.03	75%	0.006	0.016
Nitrite-N-D	mg/L	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.000	<0.000	-	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	-	<0.08	0.16	-	0.18	0.29	38%	0.25	0.24	4%	0.19	0.28
Phosphorous-Ortho-DLL	mg/L			-			-			-			-		
Phosphorous (Total-Dissolved) LL	mg/L	0.02	0.01	50%	0.002	0.007	71%	0.027	0.032	16%	0.02	0.01	50%	<0.001	<0.001
Organic Parameters															
Carbon (Total Organic)	mg/L	3.2	2.9	9%	3.4	3.1	9%	7.7	7.5	3%	7.2	7.1	1%	13	12.6
Carbon (Dissolved Organic)	mg/L	3	2.9	3%	3.4	3.1	9%	7.4	7.4	0%	7.2	7.1	1%	13	12.4
Total Metals															
Aluminum-T	mg/L	0.026	0.065	60%	0.01	0.039	74%	0.004	<0.002	-	0.03	0.04	25%	0.045	0.073
Antimony-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Arsenic-T	mg/L	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0005	0.0005	0%	0	0	-	0.0002	0.0002
Barium-T	mg/L	0.01138	0.01205	6%	0.00813	0.00903	10%	0.00613	0.00604	1%	0.01	0.01	0%	0.0072	0.00773
Beryllium-T	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	0.000017	-	0.000017	0.000105	84%	<0.000015	<0.000015	-	<0.000000	<0.000000	-	<0.000015	<0.000015
Calcium-T	mg/L	19	19	0%	17.5	17.1	2%	24.7	24.1	2%	14.7	15	2%	13.6	13.6
Chromium-T	mg/L	<0.0003	<0.0003	-	<0.0003	0.0005	-	<0.0003	<0.0003	-	<0.0000	<0.0000	-	<0.0003	<0.0003
Cobalt-T	mg/L	0.00005	0.00008	38%	0.00003	0.00006	50%	<0.00002	<0.00002	-	0	0	-	0.00003	0.00004
Copper-T	mg/L	0.0003	0.0003	0%	<0.0001	0.0011	-	0.0005	0.0004	20%	0	0	-	0.0005	0.0005
Iron-T	mg/L	0.1465	0.2277	36%	0.109	0.158	31%	0.0178	0.014	21%	0.17	0.17	0%	0.18	0.251
Lead-T	mg/L	<0.00005	<0.00005	-	<0.00005	0.00007	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Magnesium-T	mg/L	4.22	4.24	0%	3.96	4	1%	5.55	5.43	2%	3.74	3.82	2%	2.88	2.91
Manganese-T	mg/L	0.02873	0.07517	62%	0.0225	0.0271	17%	0.00166	0.00137	17%	0.02	0.02	0%	0.0104	0.019
Mercury-T	mg/L	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000000	<0.000000	-	<0.000005	<0.000005
Molybdenum-T	mg/L	0.00075	0.00078	4%	0.0008	0.00078	3%	0.00059	0.00058	2%	0	0	-	0.0004	0.0004
Nickel-T	mg/L	0.00013	0.00012	8%	0.00005	0.00021	76%	0.00026	0.00024	8%	0	0	-	0.00026	0.00026
Phosphorous-T	mg/L	0.02	0.02	0%	0.002	0.007	71%	0.027	0.032	16%	0.02	0.01	50%	<0.001	<0.001
Potassium-T	mg/L	0.6	0.7	14%	0.6	1	40%	1	1	0%	0.7	0.7	0%	0.6	0.6
Selenium-T	mg/L	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Silicon-T	mg/L	6.68	6.38	4%	6.17	6.28	2%	4.16	4.15	0%	5.76	5.55	4%	4.4	4.3
Silver-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Sodium-T	mg/L	4	4	0%	4	4	0%	4.1	4.1	0%	3.4	3.6	6%	2.4	2.4

2013 Field Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181	~LIMS:EC-65181
	sample name	WQ Duplicate	WQ7	% Diff	WQ Duplicate	WQ7	% Diff	Duplicate 2	WQ8	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14
	type	FD	F		FD	F		FD	F		FD	F		FD	F
	date	15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13	13-May-13
	mg/L	0.1068	0.107	0%	0.0989	0.0992	0%	0.11	0.107	3%	0.09	0.09	0%	0.0671	0.0667
Strontium-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Thallium-T	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Tin-T	mg/L	0.0018	0.0034	47%	0.0006	0.0023	74%	<0.0002	<0.0002	-	0	0	-	0.0011	0.0016
Titanium-T	mg/L	0.00026	0.00026	0%	0.00021	0.00022	5%	0.0001	0.0001	0%	0	0	-	<0.00005	<0.00005
Uranium-T	mg/L	<0.0001	0.0002	-	<0.0001	<0.0001	-	<0.00005	<0.00005	-	0	0	-	<0.00005	<0.00005
Vanadium-T	mg/L	0.0074	0.0197	62%	0.0074	0.0178	58%	0.0056	0.002	64%	<0.0000	0	-	0.0028	<0.0005
Zinc-T	mg/L	64	65	2%			-			-			-		
T-Hardness as CaCO3	mg/L														
Dissolved Metals															
Aluminum-D	mg/L	0.008	0.008	0%	0.01	0.012	17%	<0.002	<0.002	-	0.02	0.02	0%	0.028	0.029
Antimony-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Arsenic-D	mg/L	0.0003	0.0003	0%			-	0.0005	0.0005	0%	0	0	-	0.0002	0.0002
Barium-D	mg/L	0.00944	0.00959	2%			-	0.00537	0.00554	3%	0.01	0.01	0%	0.0066	0.00666
Beryllium-D	mg/L	<0.0001	<0.0001	-			-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	-			-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Cadmium-D	mg/L	0.000015	0.000017	12%			-	<0.000015	<0.000015	-	<0.000000	<0.000000	-	<0.000015	<0.000015
Calcium-D	mg/L	19	18	5%			-	23.5	24.1	2%	14.5	14.5	0%	13.6	13.6
Chromium-D	mg/L	<0.0003	<0.0003	-			-	<0.0003	<0.0003	-	<0.0000	<0.0000	-	<0.0003	<0.0003
Cobalt-D	mg/L	0.00003	0.00004	25%			-	<0.00002	<0.00002	-	0	0	-	0.00002	0.00002
Copper-D	mg/L	0.0003	0.0003	0%			-	0.0005	0.0004	20%	0	0	-	0.0005	0.0005
Iron-D	mg/L	0.0627	0.0644	3%			-	0.0099	0.0105	6%	0.12	0.12	0%	0.105	0.11
Lead-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	-			-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Magnesium-D	mg/L	4.22	4.21	0%			-	5.55	5.43	2%	3.74	3.82	2%	2.88	2.91
Manganese-D	mg/L	0.02451	0.02546	4%			-	0.00084	0.00059	30%	0.01	0.01	0%	0.00239	0.00257
Mercury-D	mg/L	<0.000005	<0.000005	-			-	<0.000005	<0.000005	-	<0.000000	<0.000000	-	<0.000005	<0.000005
Molybdenum-D	mg/L	0.00072	0.00076	5%			-	0.00055	0.00054	2%	0	0	-	0.0004	0.0004
Nickel-D	mg/L	0.00013	0.00012	8%			-	0.00025	0.00024	4%	0	0	-	0.00026	0.00026
Phosphorous-D	mg/L	0.02	0.01	50%			-	0.02	0.02	0%	<0.01	<0.01	-	<0.01	<0.01
Potassium-D	mg/L	0.6	0.6	0%			-	1	1	0%	0.7	0.7	0%	0.6	0.6
Selenium-D	mg/L	<0.0006	<0.0006	-			-	<0.0006	<0.0006	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Silicon-D	mg/L	6.68	6.05	9%			-	4.16	4.1	1%	4.88	4.91	1%	4.4	4.3
Silver-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Sodium-D	mg/L	4	4	0%			-	4.1	4.1	0%	3.4	3.6	6%	2.3	2.3
Strontium-D	mg/L	0.1068	0.1063	0%			-	0.105	0.106	1%	0.09	0.09	0%	0.0671	0.0667
Thallium-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	-			-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Titanium-D	mg/L	0.0002	0.0002	0%			-	<0.0002	<0.0002	-	0	0	-	0.0006	0.0007
Uranium-D	mg/L	0.00026	0.00026	0%			-	0.00009	0.00009	0%	0	0	-	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Zinc-D	mg/L	0.0071	0.0131	46%			-	0.0056	0.002	64%	<0.0000	0	-	0.0028	<0.0005
D-Hardness as CaCO3	mg/L	64	63	2%			-			-			-		
Cyanide															
Cyanide (Total)	mg/L			-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050
Cyanide (WAD)	mg/L			-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050
Cyanate	mg/L	<0.20	<0.20	-			-			-			-		
Thiocyanate (SCN)	mg/L			-			-			-			-		

2013 Field Duplicates	Lab file #		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391
	sample name	% Diff	WQ1-FD	WQ1	% Diff	Duplicate	WQ9	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14	% Diff	Duplicate
	type		FD	F		FD	F		FD	F		FD	F		FD
	date		21-May-13	21-May-13		28-May-13	28-May-13		04-Jun-13	04-Jun-13		11-Jun-13	11-Jun-13		18-Jun-13
	Units														
Physical Tests															
pH @ 25°C BC-D	pH	0%	6.4	6.55	2%	7.83	7.87	1%	7.37	7.35	0%	7.73	7.74	0%	7.48
Conductivity @ 25°C	uS/cm	0%	20	19	5%	104	104	0%	44	44	0%	123	125	2%	56
T-Dissolved Solids180°C	mg/L	6%	64	28	56%	88	64	27%	24	20	17%	104	112	7%	76
Total Suspended Solids @ 105°C	mg/L	-	<2	<2	-	6	7	14%	15	14	7%	<2	<2	-	12
Turbidity	NTU	0%	1.5	1.6	6%	17	2.3	86%	3.8	4.1	7%	1.2	1.4	14%	2.8
Hardness as (CaCO3)	mg/L	0%	<6.0	<6.0	-	59.5	61.5	3%	20.9	20.9	0%	62.7	62.2	1%	24.5
Dissolved Anions															
Alkalinity as CaCO3	mg/L	2%	7	5	29%	50	50	0%	20	18	10%	59	58	2%	26
Fluoride-D	mg/L	0%	0.04	0.03	25%	0.04	0.04	0%	0.03	0.03	0%	0.05	0.06	17%	0.04
Sulphate-D	mg/L	4%	1.7	1.5	12%	3.3	3.4	3%	0.8	0.8	0%	1.7	1.8	6%	0.8
Chloride-D	mg/L	0%	0.2	0.2	0%	0.6	0.5	17%	0.3	0.3	0%	0.5	0.9	44%	0.3
Nutrients															
Ammonia - Nitrogen	mg/L	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02
Nitrate-N-D	mg/L	63%	0.017	0.008	53%	0.032	0.026	19%	0.017	0.036	53%	0.026	0.055	53%	0.009
Nitrite-N-D	mg/L	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	32%	0.25	0.16	36%	0.17	0.14	18%	0.12	0.12	0%	0.23	0.17	26%	0.65
Phosphorous-Ortho-DLL	mg/L	-			-			-			-			-	
Phosphorous (Total-Dissolved) LL	mg/L	-	0.01	0.01	0%	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01
Organic Parameters															
Carbon (Total Organic)	mg/L	3%	10.4	10.4	0%	9.7	9.7	0%	10.5	10.4	1%	10.2	10	2%	10.7
Carbon (Dissolved Organic)	mg/L	5%	10.4	10.4	0%	9.7	9.7	0%	10.5	10.4	1%	10.1	10	1%	10.7
Total Metals															
Aluminum-T	mg/L	38%	0.311	0.313	1%	0.134	0.121	10%	0.185	0.194	5%	0.015	0.011	27%	0.15
Antimony-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007
Arsenic-T	mg/L	0%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0001	<0.0001	-	0.0003
Barium-T	mg/L	7%	0.00293	0.00317	8%	0.00661	0.00652	1%	0.00582	0.00581	0%	0.00949	0.00938	1%	0.0067
Beryllium-T	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-T	mg/L	-	<0.001	<0.001	-	0.001	0.001	0%	0.002	0.002	0%	0.001	0.001	0%	0.001
Cadmium-T	mg/L	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000019	<0.000015	-	<0.000015
Calcium-T	mg/L	0%	1.7	1.8	6%	17.7	18.3	3%	6.3	6.3	0%	18.9	19.4	3%	7.9
Chromium-T	mg/L	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003
Cobalt-T	mg/L	25%	0.00005	0.00005	0%	0.00005	0.00004	20%	0.00009	0.00009	0%	0.00002	0.00004	50%	0.00008
Copper-T	mg/L	0%	<0.0001	0.0001	-	0.0006	0.0006	0%	0.0007	0.0007	0%	<0.0001	<0.0001	-	<0.0001
Iron-T	mg/L	28%	0.159	0.159	0%	0.181	0.169	7%	0.208	0.204	2%	0.162	0.163	1%	0.172
Lead-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007	0.00008	13%	<0.00005	0.00046	-	0.00006
Lithium-T	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-T	mg/L	1%	<0.50	<0.50	-	3.71	3.83	3%	1.34	1.35	1%	3.75	3.76	0%	1.68
Manganese-T	mg/L	45%	0.00491	0.00537	9%	0.0197	0.018	9%	0.0149	0.0139	7%	0.00863	0.00842	2%	0.014
Mercury-T	mg/L	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-T	mg/L	0%	0.00009	0.00008	11%	0.0005	0.00049	2%	0.00026	0.00025	4%	0.00044	0.00045	2%	0.00028
Nickel-T	mg/L	0%	0.00027	0.00029	7%	0.00015	0.00016	6%	0.00031	0.00056	45%	0.00027	0.00026	4%	0.00024
Phosphorous-T	mg/L	-	0.01	0.02	50%	<0.01	<0.01	-	0.02	0.02	0%	<0.01	<0.01	-	0.02
Potassium-T	mg/L	0%	<0.5	<0.5	-	0.8	0.8	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-T	mg/L	-	<0.0001	<0.0001	-	0.0001	<0.0001	-	0.0001	0.0001	0%	0.0002	0.0001	50%	<0.0001
Silicon-T	mg/L	2%	3.8	3.81	0%	3.98	3.97	0%	4.66	4.74	2%	5	5.11	2%	4.68
Silver-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-T	mg/L	0%	1.4	1.4	0%	3.1	3.2	3%	2	2.1	5%	3.2	3.2	0%	2.3

2013 Field Duplicates	Lab file #		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391
	sample name	% Diff	WQ1-FD	WQ1	% Diff	Duplicate	WQ9	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14	% Diff	Duplicate
	type		FD	F		FD	F		FD	F		FD	F		FD
	date		21-May-13	21-May-13		28-May-13	28-May-13		04-Jun-13	04-Jun-13		11-Jun-13	11-Jun-13		18-Jun-13
Strontium-T	mg/L	1%	0.017	0.0186	9%	0.0804	0.0782	3%	0.0394	0.039	1%	0.099	0.0989	0%	0.0486
Thallium-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-T	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-T	mg/L	31%	0.0039	0.0037	5%	0.0042	0.0042	0%	0.0036	0.0035	3%	0.0007	0.0009	22%	0.0031
Uranium-T	mg/L	-	0.00016	0.00017	6%	0.0001	0.0001	0%	0.00018	0.00017	6%	0.00005	0.00006	17%	0.00014
Vanadium-T	mg/L	-	0.00033	0.00032	3%	<0.00005	<0.00005	-	0.00026	0.00026	0%	<0.00005	<0.00005	-	<0.00005
Zinc-T	mg/L	-	0.0015	0.0017	12%	<0.0005	<0.0005	-	0.0027	0.0017	37%	<0.0005	0.0005	-	<0.0005
T-Hardness as CaCO3	mg/L	-			-			-			-			-	
Dissolved Metals															
Aluminum-D	mg/L	3%	0.263	0.256	3%	0.052	0.053	2%	0.128	0.128	0%	0.009	0.008	11%	0.114
Antimony-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007
Arsenic-D	mg/L	0%	0.0002	0.0003	33%	0.0005	0.0005	0%	0.0003	0.0003	0%	<0.0001	<0.0001	-	<0.0001
Barium-D	mg/L	1%	0.00262	0.00259	1%	0.006	0.00595	1%	0.00454	0.0044	3%	0.00949	0.00922	3%	0.00536
Beryllium-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-D	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	0.001	0.002	50%	<0.001	<0.001	-	0.001
Cadmium-D	mg/L	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000019	<0.000015	-	<0.000015
Calcium-D	mg/L	0%	1.7	1.7	0%	17.7	18.3	3%	6.2	6.2	0%	18.9	18.7	1%	7.3
Chromium-D	mg/L	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003
Cobalt-D	mg/L	0%	0.00003	0.00003	0%	<0.00002	<0.00002	-	0.00004	0.00009	56%	0.00002	0.00002	0%	0.00004
Copper-D	mg/L	0%	0.0001	0.0001	0%	0.0004	0.0005	20%	0.0007	0.0007	0%	0.0001	<0.0001	-	<0.0001
Iron-D	mg/L	5%	0.13	0.125	4%	0.0751	0.0743	1%	0.0937	0.0944	1%	0.125	0.123	2%	0.0995
Lead-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	0.00046	-	<0.00005
Lithium-D	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-D	mg/L	1%	<0.50	<0.50	-	3.71	3.83	3%	1.33	1.35	1%	3.75	3.76	0%	1.55
Manganese-D	mg/L	7%	0.00345	0.00335	3%	0.0103	0.0102	1%	0.00616	0.006	3%	0.00504	0.00504	0%	0.00479
Mercury-D	mg/L	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-D	mg/L	0%	0.00007	0.00007	0%	0.0001	0.00011	9%	0.00022	0.00023	4%	0.00044	0.00043	2%	0.00026
Nickel-D	mg/L	0%	0.00024	0.00024	0%	<0.00005	<0.00005	-	0.00031	0.00056	45%	0.00027	0.00026	4%	0.00024
Phosphorous-D	mg/L	-	0.01	0.01	0%	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01
Potassium-D	mg/L	0%	<0.5	<0.5	-	0.8	0.8	0%	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Selenium-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Silicon-D	mg/L	2%	3.2	3.18	1%	3.89	3.97	2%	4.66	4.74	2%	4.19	4.24	1%	3.56
Silver-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-D	mg/L	0%	1.4	1.4	0%	3.1	3.2	3%	2	2.1	5%	3.2	3.2	0%	<0.5
Strontium-D	mg/L	1%	0.0168	0.0169	1%	0.0619	0.0635	3%	0.0394	0.0388	2%	0.0908	0.0901	1%	0.0466
Thallium-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-D	mg/L	14%	0.0027	0.0026	4%	0.001	0.0009	10%	0.0017	0.0017	0%	0.0003	0.0004	25%	0.002
Uranium-D	mg/L	-	0.00014	0.00015	7%	0.00009	0.00009	0%	0.00014	0.00014	0%	0.00005	0.00005	0%	0.00011
Vanadium-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Zinc-D	mg/L	-	0.0014	0.0017	18%	<0.0005	<0.0005	-	0.0027	0.0017	37%	<0.0005	0.0005	-	<0.0005
D-Hardness as CaCO3	mg/L	-			-			-			-			-	
Cyanide															
Cyanide (Total)	mg/L	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cyanide (WAD)	mg/L	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cyanate	mg/L	-			-			-			-			-	
Thiocyanate (SCN)	mg/L	-			-			-			-			-	

2013 Field Duplicates	Lab file #	~LIMS:EC-65391		Mean
	sample name	WQ7	% Diff	% Diff
	type	F		
	date	18-Jun-13		
	Units			
Physical Tests				
pH @ 25°C BC-D	pH	7.46	0%	1%
Conductivity @ 25°C	uS/cm	56	0%	1%
T-Dissolved Solids180°C	mg/L	40	47%	19%
Total Suspended Solids @ 105°C	mg/L	10	17%	28%
Turbidity	NTU	3.5	20%	18%
Hardness as (CaCO3)	mg/L	24.6	0%	1%
Dissolved Anions				
Alkalinity as CaCO3	mg/L	25	4%	6%
Fluoride-D	mg/L	0.04	0%	5%
Sulphate-D	mg/L	0.8	0%	3%
Chloride-D	mg/L	0.3	0%	13%
Nutrients				
Ammonia - Nitrogen	mg/L	<0.02	-	
Nitrate-N-D	mg/L	0.025	64%	50%
Nitrite-N-D	mg/L	<0.003	-	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.5	23%	20%
Phosphorous-Ortho-DLL	mg/L		-	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	-	43%
Organic Parameters				
Carbon (Total Organic)	mg/L	10.7	0%	3%
Carbon (Dissolved Organic)	mg/L	10.7	0%	3%
Total Metals				
Aluminum-T	mg/L	0.142	5%	29%
Antimony-T	mg/L	0.00005	29%	29%
Arsenic-T	mg/L	0.0003	0%	0%
Barium-T	mg/L	0.00646	4%	4%
Beryllium-T	mg/L	<0.0001	-	
Boron-T	mg/L	<0.001	-	0%
Cadmium-T	mg/L	<0.000015	-	84%
Calcium-T	mg/L	8	1%	2%
Chromium-T	mg/L	<0.0003	-	
Cobalt-T	mg/L	0.00007	13%	25%
Copper-T	mg/L	<0.0001	-	0%
Iron-T	mg/L	0.157	9%	13%
Lead-T	mg/L	<0.00005	-	13%
Lithium-T	mg/L	<0.001	-	
Magnesium-T	mg/L	1.66	1%	1%
Manganese-T	mg/L	0.012	14%	20%
Mercury-T	mg/L	<0.000005	-	
Molybdenum-T	mg/L	0.00028	0%	3%
Nickel-T	mg/L	0.00027	11%	21%
Phosphorous-T	mg/L	0.02	0%	29%
Potassium-T	mg/L	<0.5	-	11%
Selenium-T	mg/L	0.0001	-	25%
Silicon-T	mg/L	4.82	3%	2%
Silver-T	mg/L	<0.00005	-	
Sodium-T	mg/L	2.3	0%	1%

2013 Field Duplicates	Lab file #	~LIMS:EC-65391		Mean
	sample name	WQ7	% Diff	% Diff
	type	F		
	date	18-Jun-13		
Strontium-T	mg/L	0.0488	0%	1%
Thallium-T	mg/L	<0.00005	-	
Tin-T	mg/L	<0.0001	-	
Titanium-T	mg/L	0.0026	16%	28%
Uranium-T	mg/L	0.00014	0%	5%
Vanadium-T	mg/L	<0.00005	-	2%
Zinc-T	mg/L	0.0018	-	42%
T-Hardness as CaCO3	mg/L		-	
Dissolved Metals				
Aluminum-D	mg/L	0.112	2%	4%
Antimony-D	mg/L	<0.00005	-	
Arsenic-D	mg/L	<0.0001	-	8%
Barium-D	mg/L	0.00518	3%	2%
Beryllium-D	mg/L	<0.0001	-	
Boron-D	mg/L	<0.001	-	50%
Cadmium-D	mg/L	<0.000015	-	12%
Calcium-D	mg/L	7.3	0%	1%
Chromium-D	mg/L	<0.0003	-	
Cobalt-D	mg/L	0.00004	0%	13%
Copper-D	mg/L	<0.0001	-	0%
Iron-D	mg/L	0.0981	1%	2%
Lead-D	mg/L	<0.00005	-	
Lithium-D	mg/L	<0.001	-	
Magnesium-D	mg/L	1.55	0%	1%
Manganese-D	mg/L	0.00469	2%	3%
Mercury-D	mg/L	<0.000005	-	
Molybdenum-D	mg/L	0.00024	8%	3%
Nickel-D	mg/L	0.00027	11%	11%
Phosphorous-D	mg/L	<0.01	-	25%
Potassium-D	mg/L	<0.5	-	0%
Selenium-D	mg/L	<0.0001	-	
Silicon-D	mg/L	3.63	2%	3%
Silver-D	mg/L	<0.00005	-	
Sodium-D	mg/L	<0.5	-	2%
Strontium-D	mg/L	0.0459	2%	1%
Thallium-D	mg/L	<0.00005	-	
Tin-D	mg/L	<0.0001	-	
Titanium-D	mg/L	0.0016	20%	10%
Uranium-D	mg/L	0.0001	9%	3%
Vanadium-D	mg/L	<0.00005	-	
Zinc-D	mg/L	0.0018	-	33%
D-Hardness as CaCO3	mg/L		-	
Cyanide				
Cyanide (Total)	mg/L	<0.0050	-	
Cyanide (WAD)	mg/L	<0.0050	-	
Cyanate	mg/L		-	
Thiocyanate (SCN)	mg/L		-	

Blanks

The tables following this page list trip and field blanks for 2011, 2012 and 2013. All but pH, carbon, hardness, alkalinity and ions in the de-mineralized, de-ionized water were below detection, indicating no contamination during sampling or shipping.

2011 Blanks

Parameter	Lab file #	EC60612	EC60740	EC60904	EC60941	EC60968	EC61018	EC61071	EC61343	EC61543	EC60941	EC60612	EC60740	EC60904	EC60968	EC61018	EC61071	EC61343	EC61543	EC61850
Date Sampled	Lab ID	11-3640-	11-4271-	11-5511-	11-5871-	11-6101-	11-6393-	11-6765-	11-9202-	11-10880-	11-5872-	11-3641-	11-4272-	11-5512-	11-6102-	11-6394-	11-6766-	11-9203-	11-10881-	11-13830-
Sample No.	sample name	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Field Blank
	date	28-Mar-11	19-Apr-11	17-May-11	25-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	27-May-11	28-Mar-11	19-Apr-11	17-May-11	30-May-11	6-Jun-11	14-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11

Physical Tests

pH @ 25°C BC-T	pH units	6.34	6.24	5.98	6.06	5.92	5.86	---	5.91	---	5.82	6.38	6.2	5.97	5.97	5.78	---	5.83	5.58	5.65
Conductivity @ 25°C	mS/cm	3	2	6	5	6	5	3	2	-	4	4	3	5	6	7	3	2	1	1
T-Dissolved Solids180°C	mg/L (ppm)	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	---	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Turbidity	NTU	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	---	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.5	0.4

Dissolved Anions

Alkalinity as CaCO3	mg/L (ppm)	2	2	4	< 1	< 1	< 1	< 1	< 1	---	< 1	2	2	4	< 1	< 1	< 1	< 1	< 1	< 1
Fluoride-D	mg/L (ppm)	0.03	0.02	0.2	0.1	< 0.1	0.1	< 0.02	0.02	---	0.3	0.04	0.02	< 0.1	< 0.1	0.2	< 0.02	0.03	< 0.1	< 0.02
Sulphate-D	mg/L (ppm)	0.8	< 0.5	0.02	0.02	0.03	0.03	0.8	0.3	---	0.02	0.9	0.5	0.02	0.03	0.03	0.8	0.2	< 0.02	< 0.5
Chloride-D	mg/L (ppm)	< 0.1	< 0.1	1.5	1.2	2	1.2	< 0.1	< 0.5	---	1.2	< 0.1	0.2	1.2	2	1.7	0.1	< 0.5	< 0.5	0.1

Nutrients

Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02	0.04	< 0.02	0.03	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	0.03	< 0.02	< 0.02
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	---	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	< 0.08	< 0.08	< 0.08	0.17	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.08	< 0.08	< 0.08	< 0.08	< 0.08
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	---	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Organic Parameters

Carbon (Total Organic)	mg/L (ppm)	< 0.1	< 0.1	0.2	0.1	0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	0.2	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Carbon (Dissolved Organic)	mg/L (ppm)	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.2

Total Metals

Aluminum	mg/L (ppm)	< 0.0025	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	0.00011	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.002	0.002	0.003	0.003	0.003	0.001	0.003	0.005	0.006	0.003	0.002	0.002	0.003	0.003	0.001	0.003	0.005	0.006	0.007
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0005	< 0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0005	< 0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00005	< 0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	< 0.0001	< 0.0001	0.0004	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	0.0002	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.0001	< 0.00010	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.0001	< 0.00010	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5															

2011 Blanks

Parameter	Lab file #	EC61850	EC62129	EC62129	EC62363	EC62363	EC62562	EC62562
Date Sampled	Lab ID	11-13831-	11-16743-	11-16744-	11-19510-	11-19511-	11-21064-	11-21065-
Sample No.	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	19-Sep-11	17-Oct-11	17-Oct-11	14-Nov-11	14-Nov-11	13/12/2011	13/12/2011

Physical Tests

pH @ 25°C BC-T	pH units	5.37	5.59	5.33	5.49	5.22	5.5	5.14
Conductivity @ 25°C	mS/cm	1	1	1	<1	<1	1	<1
T-Dissolved Solids180°C	mg/L (ppm)	< 4	< 4	< 4	< 4	< 4	4	< 4
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Turbidity	NTU	0.4	0.2	0.3	0.3	0.3	0.8	0.6

Dissolved Anions

Alkalinity as CaCO3	mg/L (ppm)	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fluoride-D	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.1	0.1	< 0.02	< 0.02
Sulphate-D	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.02	< 0.02	< 0.5	< 0.5
Chloride-D	mg/L (ppm)	< 0.1	0.1	< 0.1	< 0.5	< 0.5	< 0.1	< 0.1

Nutrients

Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Organic Parameters

Carbon (Total Organic)	mg/L (ppm)	< 0.1	< 0.1	< 0.1	0.6	0.3	0.6	< 0.1
Carbon (Dissolved Organic)	mg/L (ppm)	< 0.1	0.2	< 0.1	0.5	0.1	0.6	< 0.1

Total Metals

Aluminum	mg/L (ppm)	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.008	0.003	0.003	0.001	0.001	0.001	0.001
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	0.0005	0.0002	0.0012	< 0.0001	< 0.0001	0.0002
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium	mg/L (ppm)	< 0.000005	< 0.000005	< 0.000005	0.000006	< 0.000005	< 0.000005	< 0.000005
Thallium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Tin	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005

Parameter	Lab file #	EC61850	EC62129	EC62129	EC62363	EC62363	EC62562	EC62562
Date Sampled	Lab ID	11-13831-	11-16743-	11-16744-	11-19510-	11-19511-	11-21064-	11-21065-
Sample No.	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	19-Sep-11	17-Oct-11	17-Oct-11	14-Nov-11	14-Nov-11	13/12/2011	13/12/2011
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Zinc	mg/L (ppm)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0

Dissolved Metals

Aluminum	mg/L (ppm)	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.006	0.003	0.003	0.002	0.002	0.002	0.001
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	0.0011	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead-D	mg/L (ppm)	0.00009	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium	mg/L (ppm)	< 0.000005	< 0.000005	< 0.000005	0.000052	0.000034	< 0.000005	< 0.000005
Thallium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Tin	mg/L (ppm)	0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Zinc	mg/L (ppm)	0.0022	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0

Cyanide

Cyanide, total	mg/L (ppm)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Cyanide, WAD	mg/L (ppm)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
cyanate	mg/L (ppm)		<1	<1				
thiocyanate	mg/L (ppm)		<0.050	<0.050				

2012 Blanks

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
pH @ 25°C BC-D	pH	5.60	5.23			5.51	5.84	5.42	5.68				5.74	5.70
Conductivity @ 25°C	uS/cm	<1	<1			<1	<1	<1	<1				1	<1
T-Dissolved Solids180°C	mg/L	<4	<4			<4	<4	<4	<4				<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2			<2	<2	<2	<2				<2	<2
Turbidity	NTU	0.3	0.2			0.4	0.3	0.2	0.3				0.2	0.7
Alkalinity as CaCO3	mg/L	<1	<1			<1	<1	<1	<1				<1	2
Fluoride-D	mg/L	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02				<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5				<0.5	<0.5
Chloride-D	mg/L	<0.1	<0.1			<0.1	0.1	<0.1	<0.1				<0.1	<0.1
Ammonia - Nitrogen	mg/L	<0.02	<0.02			<0.01	<0.01	<0.02	<0.02			<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005				<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	0.004			<0.003	<0.003	<0.003	<0.003				<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08			<0.08	<0.08	<0.08	<0.08			<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003				<0.003	<0.003
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	0.5	<0.1			0.2	0.4	0.5	<0.1			0.2	<0.1	0.1
Carbon (Dissolved Organic)	mg/L	0.4	<0.1			0.2	0.4	0.4	<0.1			0.2	<0.1	0.1
Aluminum-T	mg/L	0.002	<0.002			<0.002	<0.002	<0.002	<0.002			0.003	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	0.0014			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			0.00344	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
Manganese-T	mg/L	0.00007	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000008	<0.000008			<0.000008	<0.000008	<0.000008	<0.000008			<0.000008	<0.000008	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01			<0.01	0.02	<0.01	<0.01			<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005			<0.000005	0.000012	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0
Aluminum-D	mg/L	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
Manganese-D	mg/L	0.00007	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000008	<0.000008			<0.000008	<0.000008	<0.000008	<0.000008			<0.000008	<0.000008	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0
Cyanide (Total)	mg/L											<0.0050	<0.0050	
Cyanide (WAD)	mg/L											<0.0050	<0.0050	
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L			<0.50	<0.50					<0.50	<0.50			

2012 Blanks

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
pH @ 25°C BC-D	pH	5.53	6.73	6.31	6.04	5.91		5.81		5.48	5.23	5.83	5.47	
Conductivity @ 25°C	uS/cm	<1	7	6	<2.0	3		4		<1	<1	<1	<1	
T-Dissolved Solids180°C	mg/L	8	<4	4	<10	8		4		<4	<4	4	<4	
Total Suspended Solids @105°C	mg/L	<2	<2	<2		<2		<2		<2	<2	<2	<2	
Turbidity	NTU	0.7	0.2	0.2	<0.10	<0.1		<0.1		0.1	<0.1	0.1	<0.1	
Alkalinity as CaCO3	mg/L	2	3	2	<2.0	2		2		<1	<1	3	2	
Fluoride-D	mg/L	0.05	0.03	0.03	<0.020	0.02		<0.02		<0.02	<0.02	<0.02	<0.02	
Sulphate-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Chloride-D	mg/L	1.0	0.7	0.6	<0.50	0.7		0.8		0.3	0.3	<0.1	<0.1	
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.0050	<0.02		0.03		<0.02	<0.02	<0.02	<0.02	
Nitrate-N-D	mg/L	0.007	<0.005	<0.005	<0.0050	0.010		0.010		<0.005	<0.005	<0.005	<0.005	
Nitrite-N-D	mg/L	0.003	<0.003	<0.003	<0.0010	<0.003		<0.003		<0.003	<0.003	<0.003	<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.050	<0.08		<0.08		<0.08	<0.08	<0.08	<0.08	
Phosphorous-Ortho-DLL	mg/L	0.015	0.016	0.016		<0.003		<0.003				<0.003	<0.003	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.30	<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Carbon (Total Organic)	mg/L	0.1	<0.1	<0.1	<0.50	0.1		<0.1		0.5	<0.1	<0.1	<0.1	
Carbon (Dissolved Organic)	mg/L	0.1	<0.1	<0.1		0.1		<0.1		0.4	<0.1	<0.1	<0.1	
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.0030	<0.002		<0.002		<0.002	<0.002	0.058	<0.002	
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	0.0004	<0.0001	
Barium-T	mg/L	0.00014	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.00706	0.00014	
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Boron-T	mg/L	<0.001	<0.001	<0.001	<0.010	<0.001		<0.001		<0.001	<0.001	<0.001	0.002	
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000010	<0.000015		<0.000015		<0.000015	<0.000015	<0.000015	<0.000015	
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	15.9	<0.5	
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.00010	<0.0003		<0.0003		<0.0003	<0.0003	<0.0003	<0.0003	
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00010	<0.00002		<0.00002		<0.00002	<0.00002	0.00002	<0.00002	
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00050	<0.0001		<0.0001		<0.0001	<0.0001	0.0004	<0.0001	
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.010	<0.0001		<0.0001		<0.0001	<0.0001	0.1330	<0.0001	
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.00050	<0.001		<0.001		<0.001	<0.001	<0.001	<0.001	
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.10	<0.50		<0.50		<0.50	<0.50	3.57	<0.50	

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.02160	<0.00005	
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000010	<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.00043	<0.00005	
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00050	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Phosphorous-T	mg/L	<0.02	<0.02	<0.02	<0.30	<0.02		<0.02		<0.02	<0.02	<0.02	<0.02	
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	0.6	<0.5	
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.00010	<0.0006		<0.0006		<0.0006	<0.0006	<0.0006	<0.0006	
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.050	<0.01		<0.01		<0.01	<0.01	4.61	<0.01	
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	2.9	<0.5	
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.00020	<0.000005		<0.000005		<0.000005	<0.000005	0.083900	<0.000005	
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.010	<0.0002		<0.0002		<0.0002	<0.0002	0.0016	<0.0002	
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	0.00008	<0.00005	
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0010	<0.0001		<0.0001		<0.0001	<0.0001	0.0002	<0.0001	
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0030	<0.0005		<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	
T-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0		<6.0		<6.0		<6.0	<6.0	54.4	<6.0	
Aluminum-D	mg/L	<0.002	<0.002	<0.002		<0.002		<0.002		<0.002	<0.002	<0.002	<0.002	
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Barium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001	<0.001		<0.001		<0.001		<0.001	<0.001	0.002	<0.001	
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015		<0.000015		<0.000015		<0.000015	<0.000015	<0.000015	<0.000015	
Calcium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003		<0.0003		<0.0003		<0.0003	<0.0003	<0.0003	<0.0003	
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002		<0.00002		<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	
Copper-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Iron-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Lead-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001	<0.001		<0.001		<0.001		<0.001	<0.001	<0.001	<0.001	
Magnesium-D	mg/L	<0.50	<0.50	<0.50		<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005		<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Phosphorous-D	mg/L	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Potassium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006		<0.0006		<0.0006		<0.0006	<0.0006	<0.0006	<0.0006	
Silicon-D	mg/L	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Silver-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Sodium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Strontium-D	mg/L	0.000007	<0.000005	<0.000005		<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002		<0.0002		<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005		<0.0005		<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	
D-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0		<6.0		<6.0		<6.0	<6.0	<6.0	<6.0	
Cyanide (Total)	mg/L						<0.0050		<0.0050	<0.0050	<0.0050			<0.0050
Cyanide (WAD)	mg/L				<0.0050		<0.0050		<0.0050	<0.0050	<0.0050			<0.0050
Cyanate	mg/L				<0.0050									
Thiocyanate (SCN)	mg/L													

2012 Blanks

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
pH @ 25°C BC-D	pH				5.53	5.48	6.29	5.65	5.75	5.51	5.91	5.55	5.74	5.52
Conductivity @ 25°C	uS/cm				<1	<1	3	<1	1	<1	1	1	<1	<1
T-Dissolved Solids180°C	mg/L				<4	<4	4	4	<4	<4	36	20	<4	<4
Total Suspended Solids @105°C	mg/L				<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity	NTU				0.2	0.2	<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
Alkalinity as CaCO3	mg/L				3	2	2	1	2	1	2	2	2	2
Fluoride-D	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L				<0.1	<0.1	<0.1	<0.1	0.4	0.4	<0.1	0.1	0.3	0.4
Ammonia - Nitrogen	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L				<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L				0.16	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L				<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.068	<0.003
Phosphorous (Total-Dissolved) LL	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L				0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	<0.1
Carbon (Dissolved Organic)	mg/L				0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	<0.1
Aluminum-T	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005
Beryllium-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L				0.003	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L				<0.000015	0.000028	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L				<0.00002	0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
Manganese-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L				<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L				<0.0005	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L				<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L				0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L				<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L				<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Lead-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
Manganese-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L				<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L				<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L										<0.50	<0.50		

2012 Blanks

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
pH @ 25°C BC-D	pH	5.83	5.61	5.82	5.65	5.70	5.53	5.70	5.19		6.00	6.28	5.81	5.94
Conductivity @ 25°C	uS/cm	1	<1	1	1	<1	<1	<1	<1		<1	1	<1	<1
T-Dissolved Solids180°C	mg/L	4	4	<4	<4	4	<4	<4	<4		<4	<4	20	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2	<2	<2		<2	<2	<2	<2
Turbidity	NTU	0.2	0.1	0.2	0.1	0.2	0.2	0.4	3.9		0.7	0.9	0.2	0.4
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1		10	8	8	10
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08		<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003							
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.4	0.3		0.3	0.1	<0.1	0.4
Carbon (Dissolved Organic)	mg/L	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.2		0.2	0.1	<0.1	0.4
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	0.001	0.002	0.002	0.002	0.002	0.002	0.001	0.001		<0.001	<0.001	0.002	0.002
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015		<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		0.0002	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	0.000015	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0		<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	0.001	0.001	0.002	0.002	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015		<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	0.000005	<0.000005	0.000009	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0		<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050		<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050		<0.0050
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L													

2012 Blanks

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
pH @ 25°C BC-D	pH	5.76	5.67		5.72	5.35	5.90	5.90	5.75	5.63	5.52	5.80	5.67	5.66
Conductivity @ 25°C	uS/cm	<1	<1	<2.0	<1	<1	<2.0	1	<1	<1	<1			<2.0
T-Dissolved Solids180°C	mg/L	<4	8	<10	<4	<4	<10	<4	<4	<4	<4			<10
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	<2	<2	<2	<2	<2	
Turbidity	NTU	0.5	<0.1	<0.10	0.7	0.8	<0.10	0.2	0.2	0.7	0.6			<0.10
Alkalinity as CaCO3	mg/L	9	5	1.3	<1	<1	1.4	<1	<1	<1	<1			<2.0
Fluoride-D	mg/L	<0.02	<0.02	<0.020	<0.02	<0.02	<0.020	<0.02	<0.02	<0.02	<0.02			<0.020
Sulphate-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	<0.5	<0.5			
Chloride-D	mg/L	<0.1	<0.1	<0.50	<0.1	<0.1	<0.50	<0.1	<0.1	<0.1	0.3	0.2	0.2	<0.50
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.0050	<0.02	<0.02	<0.0050	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0050
Nitrate-N-D	mg/L	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050
Nitrite-N-D	mg/L	<0.003	<0.003	<0.0010	<0.003	<0.003	<0.0010	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0010
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.050	<0.08	<0.08	<0.050	<0.08	<0.08	<0.08	<0.08			<0.050
Phosphorous-Ortho-DLL	mg/L													
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.30	<0.01	<0.01	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Carbon (Total Organic)	mg/L	0.1	<0.1	<0.50	<0.1	<0.1	<0.50	<0.1	0.1	0.6	0.2			<0.50
Carbon (Dissolved Organic)	mg/L	0.1	<0.1		<0.1	<0.1	<0.50	<0.1	0.1	0.2	0.1			<0.50
Aluminum-T	mg/L	<0.002	<0.002	<0.0030	<0.002	<0.002	<0.0030	<0.002	<0.002	<0.002	<0.002			<0.0030
Antimony-T	mg/L	<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005			<0.00010
Arsenic-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001			<0.00010
Barium-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	0.00015	<0.00005			<0.000050
Beryllium-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001			<0.00010
Boron-T	mg/L	0.002	0.002	<0.010	<0.001	<0.001	<0.010	<0.001	<0.001	0.001	0.001			<0.010
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015			<0.000010
Calcium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5			<0.050
Chromium-T	mg/L	<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003			<0.00010
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002			<0.00010
Copper-T	mg/L	<0.0001	<0.0001	<0.00050	<0.0001	<0.0001	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001			<0.00050
Iron-T	mg/L	<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.0001	<0.0001			<0.010
Lead-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005			<0.000050
Lithium-T	mg/L	<0.001	<0.001	<0.00050	<0.001	<0.001	<0.00050	<0.001	<0.001	<0.001	<0.001			<0.00050
Magnesium-T	mg/L	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50			<0.10

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005		<0.000050	
Mercury-T	mg/L	<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005		<0.000010	
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005		<0.000050	
Nickel-T	mg/L	<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005		<0.00050	
Phosphorous-T	mg/L	<0.02	<0.02	<0.30	<0.02	<0.02	<0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.050	
Potassium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5		<0.10	
Selenium-T	mg/L	<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006		<0.00010	
Silicon-T	mg/L	<0.01	<0.01	<0.050	<0.01	<0.01	<0.050	<0.01	<0.01	<0.01	<0.01		<0.050	
Silver-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Sodium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5		<0.050	
Strontium-T	mg/L	<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005		<0.00020	
Thallium-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Tin-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001		<0.00010	
Titanium-T	mg/L	<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.0002	<0.0002		<0.010	
Uranium-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0010	<0.0001	<0.0001	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001		<0.0010	
Zinc-T	mg/L	<0.0005	<0.0005	<0.0030	0.0006	<0.0005	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005		<0.0030	
T-Hardness as CaCO3	mg/L	<6.0	<6.0		<6.0	<6.0		<6.0	<6.0	<6.0	<6.0			
Aluminum-D	mg/L	<0.002	<0.002		<0.002	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0010	
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	
Arsenic-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	
Barium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001	<0.010	<0.001	<0.001	0.001	<0.001	<0.001	<0.010	
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000010	
Calcium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050	
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00010	
Cobalt-D	mg/L	<0.00002	<0.00002		<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00010	
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00020	
Iron-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.010	
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	
Magnesium-D	mg/L	<0.50	<0.50		<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.10	

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
Manganese-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000010
Molybdenum-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Nickel-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00050
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.10
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.00010
Silicon-D	mg/L	<0.01	<0.01		<0.01	<0.01	<0.050	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Sodium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
Strontium-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00020
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010
Titanium-D	mg/L	<0.0002	<0.0002		<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.010
Uranium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Vanadium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.0010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0010
Zinc-D	mg/L	<0.0005	<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010
D-Hardness as CaCO3	mg/L	<6.0	<6.0		<6.0	<6.0		<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	
Cyanide (Total)	mg/L	<0.0050		<0.0050	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050
Cyanide (WAD)	mg/L	<0.0050			<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050
Cyanate	mg/L			<0.0050			<0.0050							<0.0050
Thiocyanate (SCN)	mg/L						<0.50		<0.50					<0.50

2012 Blanks

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
pH @ 25°C BC-D	pH	5.74	5.67	5.56	5.63	5.49	5.58	5.54	5.59	5.73	5.60	5.51	5.69	5.53
Conductivity @ 25°C	uS/cm	<2.0	1	1	<1	<1	<2.0	<2.0	<1	1	<1	<1	<1	<1
T-Dissolved Solids180°C	mg/L	<10	<4	4	4	4	<10	<10	<4	<4	<4	<4	<4	<4
Total Suspended Solids @105°C	mg/L		<2	<2	<2	<2			<2	<2	<2	<2	<2	<2
Turbidity	NTU	<0.10	0.5	0.5	0.6	0.6	<0.10	<0.10	0.6	0.4	0.4	0.5	1.3	1.3
Alkalinity as CaCO3	mg/L	<2.0	<1	<1	<1	<1	<1.0	<1.0	<1	<1	<1	<1	<1	<1
Fluoride-D	mg/L	<0.020	<0.02	<0.02	<0.02	<0.02	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L		<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.50	<0.1	<0.1	<0.1	<0.1	<0.50	<0.50	0.1	0.1	<0.1	<0.1	0.1	0.1
Ammonia - Nitrogen	mg/L	<0.0050	<0.02	<0.02	<0.02	<0.02	<0.0050	0.0093	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.0010	<0.003	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.003	0.004	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.050	<0.08	<0.08	<0.08	<0.08	<0.050	0.088	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L													
Phosphorous (Total-Dissolved) LL	mg/L	<0.050	<0.01	<0.01	<0.01	<0.01	<0.30	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	<0.50	0.9	<0.1	<0.1	<0.1	<0.50		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon (Dissolved Organic)	mg/L	<0.50	0.9	<0.1	<0.1	<0.1	<0.50	<0.50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aluminum-T	mg/L	<0.0030	<0.002	<0.002	<0.002	<0.002	<0.0030	<0.0030	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.010	<0.001	<0.001	<0.001	<0.001	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	0.000011	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.050	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.00010	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00010	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.010	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.10	<0.50	<0.50	<0.50	<0.50	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
Manganese-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	0.000065	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000010	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00050	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.050	<0.02	<0.02	<0.02	<0.02	<0.30	<0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.10	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.00010	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.050	<0.01	<0.01	<0.01	<0.01	<0.050	<0.050	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.050	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.00020	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.010	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0010	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005	<0.0030	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L		<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L		<0.002	<0.002	<0.002	<0.002	<0.0010		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.000080		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L		<0.001	<0.001	<0.001	<0.001	<0.010		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L		<0.000015	<0.000015	<0.000015	<0.000015	<0.000010		<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L		<0.0003	<0.0003	<0.0003	<0.0003	<0.00010		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L		<0.00002	<0.00002	<0.00002	<0.00002	<0.00010		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00020		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L		<0.001	<0.001	<0.001	<0.001	<0.00050		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L		<0.50	<0.50	<0.50	<0.50	<0.10		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
Manganese-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L		<0.000005	<0.000005	<0.000005	<0.000005	<0.000010		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L		<0.01	<0.01	<0.01	<0.01	<0.30		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L		<0.0006	<0.0006	<0.0006	<0.0006	<0.00010		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L		<0.01	<0.01	<0.01	<0.01	<0.050		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L		<0.000005	<0.000005	<0.000005	<0.000005	<0.00020		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.010		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0010		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L		<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050		<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050		<0.0050	<0.0050
Cyanate	mg/L	<0.0050					<0.0050							
Thiocyanate (SCN)	mg/L	<0.50					<0.50							

2013 Blanks	Lab file #	~LIMS:EC-64814	~LIMS:EC-64814	~LIMS:EC-64914	~LIMS:EC-64914	~LIMS:EC-65054	~LIMS:EC-65054	~LIMS:L1291117	~LIMS:L1291117	~LIMS:EC-65181	~LIMS:EC-65181	~LIMS:EC-65224	~LIMS:EC-65224
	sample name	Field Blank	Travel Blank	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	12-Feb-13	12-Feb-13	13-Mar-13	13-Mar-13	15-Apr-13	15-Apr-13	16-Apr-13	16-Apr-13	13-May-13	13-May-13	21-May-13	22-May-13
Physical Tests	Units												
pH @ 25°C BC-D	pH	5.75	5.62	5.78	5.83	5.64	5.53			7.62	5.84	5.59	5.69
Conductivity @ 25°C	uS/cm	<1	1	<1	<1	1	<1			16	<1	1	1
T-Dissolved Solids180°C	mg/L	4	<4	<4	<4	<4	<4			<4	<4	<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2			<2	<2	<2	<2
Turbidity	NTU	0.4	0.3	0.5	0.5	0.2	0.2			0.5	0.5	0.4	0.5
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0
Dissolved Anions													
Alkalinity as CaCO3	mg/L	<1	<1	<1	1	<1	<1			5	1	1	<1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	0.2	0.2	<0.1	<0.1	<0.1	<0.1			0.1	0.1	<0.1	0.6
Nutrients													
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.005			<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08			<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L												
Phosphorous (Total-Dissolved) LL	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.01	<0.01
Organic Parameters													
Carbon (Total Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			0.2	<0.1	0.2	0.1
Carbon (Dissolved Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	0.2	<0.1
Total Metals													
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	0.002			<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.01	<0.01
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005

2013 Blanks	Lab file #	~LIMS:EC-64814	~LIMS:EC-64814	~LIMS:EC-64914	~LIMS:EC-64914	~LIMS:EC-65054	~LIMS:EC-65054	~LIMS:L1291117	~LIMS:L1291117	~LIMS:EC-65181	~LIMS:EC-65181	~LIMS:EC-65224	~LIMS:EC-65224
	sample name	Field Blank	Travel Blank	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	12-Feb-13	12-Feb-13	13-Mar-13	13-Mar-13	15-Apr-13	15-Apr-13	16-Apr-13	16-Apr-13	13-May-13	13-May-13	21-May-13	22-May-13
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L												
Dissolved Metals													
Aluminum-D	mg/L	<0.002		<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L			<0.0006	<0.0006	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Silicon-D	mg/L			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L												
Cyanide													
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L												
Thiocyanate (SCN)	mg/L							<0.50	<0.50				

2013 Blanks	Lab file #	~LIMS:EC-65253	~LIMS:EC-65253	~LIMS:EC-65302	~LIMS:EC-65302	~LIMS:EC-65342	~LIMS:EC-65342	~LIMS:EC-65391	~LIMS:EC-65391
	sample name	Field Blank	Trip Blank	Field Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Trip Blank
	date	28-May-13	28-May-13	04-Jun-13	06-Jun-13	10-Jun-13	11-Jun-13	17-Jun-13	17-Jun-13
Physical Tests	Units								
pH @ 25°C BC-D	pH	5.71	6.21	5.68	6.10	5.78	5.78	5.74	5.64
Conductivity @ 25°C	uS/cm	1	1	1	1	1	1	1	1
T-Dissolved Solids180°C	mg/L	4	4	<4	<4	<4	4	<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity	NTU	0.5	0.5	0.7	0.4	1.3	0.7	1.1	1.0
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Dissolved Anions									
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	0.02	0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1
Nutrients									
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L								
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Organic Parameters									
Carbon (Total Organic)	mg/L	0.2	0.2	<0.1	<0.1	0.1	0.1	0.3	0.1
Carbon (Dissolved Organic)	mg/L	0.2	0.2	<0.1	<0.1	0.1	<0.1	0.3	<0.1
Total Metals									
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	0.000021	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005

2013 Blanks	Lab file #	~LIMS:EC-65253	~LIMS:EC-65253	~LIMS:EC-65302	~LIMS:EC-65302	~LIMS:EC-65342	~LIMS:EC-65342	~LIMS:EC-65391	~LIMS:EC-65391
	sample name	Field Blank	Trip Blank	Field Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Trip Blank
	date	28-May-13	28-May-13	04-Jun-13	06-Jun-13	10-Jun-13	11-Jun-13	17-Jun-13	17-Jun-13
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L								
Dissolved Metals									
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L								
Cyanide									
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L								
Thiocyanate (SCN)	mg/L								

Lakes

Lake samples were collected quarterly with stream samples. There were no field duplicate samples collected for lakes.

Lab Duplicates

The lab duplicate RPDs for lakes ranged from 0% to 50% for dissolved phosphorus. Mean RPDs ranged from 0% to 25% and the overall mean RPD was 7% or slightly higher than stream results. Lake results are not closely comparable to stream results because the sample size was much smaller. The overall mean of 7% represents the average precision of lab results.

Blanks

Other than pH, conductivity and turbidity, all blanks results were below detection indicating no contamination from field sampling or laboratory procedures. The reason for measureable turbidity in lake sample blanks is not apparent since blanks would have been made up with di-ionized, distilled water.

2013 Lake Lab Duplicates	Lab file #	~LIMS:EC-64761	~LIMS:EC-64761		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:L1279413	~LIMS:EC-64914	
	sample name	WQ21-Epi	WQ21-Epi	% Diff	WQ20 met	WQ20 met	% Diff	WQ22-epi	WQ22-epi	% Diff	WQ23-Epi	WQ23-Epi	% Diff	WQ25-Hypo	WQ25-Hypo	
	type	LD	F		LD	F		LD	F		LD	F		LD	F	
	date	28-Jan-13	28-Jan-13		04-Feb-13	04-Feb-13		04-Feb-13	04-Feb-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13	
	Units															
Physical Tests																
pH @ 25°C BC-D	pH	7.79	7.76	0%	7.76	7.75	0%		7.33	-	7.45	7.39	1%		7.4	
Conductivity @ 25°C	uS/cm	162	164	1%	162	161	1%		108	-	56	57	2%		57	
T-Dissolved Solids180°C	mg/L	92	104	12%		100	-	68	72	6%		52	-		32	
Total Suspended Solids @ 105°C	mg/L	<2	<2	-		<2	-	<2	<2	-		<2	-		<2	
Turbidity	NTU	1	1.2	17%	3.5	3.4	3%		2.5	-	0.5	0.7	29%		0.8	
Hardness as (CaCO3)	mg/L	85.4	84.8	1%		85.1	-	51.5	51.3	0%		25.8	-		28.5	
Dissolved Anions																
Alkalinity as CaCO3	mg/L	85	85	0%	89	90	1%		55	-	25	25	0%		25	
Fluoride-D	mg/L	0.09	0.09	0%	0.07	0.08	13%		0.06	-	0.05	0.05	0%		0.04	
Sulphate-D	mg/L	5	4.9	2%	2.2	2.1	5%		1.2	-	2.2	2.2	0%		1.6	
Chloride-D	mg/L	0.3	0.4	25%	0.4	0.6	33%		0.4	-	0.3	0.3	0%		0.3	
Nutrients																
Ammonia - Nitrogen	mg/L	<0.02	<0.02	-		<0.02	-	<0.02	<0.02	-		<0.02	-		<0.02	
Nitrate-N-D	mg/L	0.084	0.081	4%	0.112	0.107	4%		0.252	-	0.066	0.067	1%		0.066	
Nitrite-N-D	mg/L	<0.003	<0.003	-	<0.003	<0.003	-		<0.003	-	<0.003	<0.003	-		<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.13	0.12	8%	0.25	0.24	4%	0.44	0.45	2%		0.09	-		0.16	
Phosphorous-Ortho-DLL	mg/L			-			-			-			-			
Phosphorous (Total-Dissolved) LL	mg/L	0.02	0.019	5%		0.011	-	0.015	0.015	0%		0.023	-		0.025	
Organic Parameters																
Carbon (Total Organic)	mg/L	7.6	7.6	0%		7.8	-	16	16	0%		3.5	-		7	
Carbon (Dissolved Organic)	mg/L	7.5	7.3	3%		7.8	-	15	14.8	1%		2.9	-		6.9	
Total Metals																
Aluminum-T	mg/L	0.003	0.006	50%		0.003	-	0.012	0.012	0%		0.003	-		0.016	
Antimony-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	0.00008	0.00009	11%		0.00007	-		<0.00005	
Arsenic-T	mg/L	0.0005	0.0005	0%		0.0003	-	0.0003	0.0003	0%		0.0006	-		0.0002	
Barium-T	mg/L	0.00611	0.0062	1%		0.00878	-	0.00727	0.00737	1%		0.00291	-		0.00963	
Beryllium-T	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001	
Boron-T	mg/L	0.003	0.004	25%		0.001	-	0.003	0.003	0%		<0.001	-		<0.001	
Cadmium-T	mg/L	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-		<0.000015	-		<0.000015	
Calcium-T	mg/L	24.9	24.8	0%		23.3	-	14.2	14.1	1%		8.1	-		9.3	
Chromium-T	mg/L	<0.0003	<0.0003	-		<0.0003	-	<0.0003	<0.0003	-		<0.0003	-		<0.0003	
Cobalt-T	mg/L	<0.00002	<0.00002	-		<0.00002	-	<0.00002	<0.00002	-		<0.00002	-		<0.00002	
Copper-T	mg/L	0.0008	0.0008	0%		<0.0001	-	0.0003	0.0004	25%		0.0002	-		0.0002	
Iron-T	mg/L	0.0087	0.0083	5%		0.0104	-	0.0674	0.0632	6%		0.0275	-		0.0564	
Lead-T	mg/L	0.00073	0.00075	3%		<0.00005	-	0.00177	0.00179	1%		<0.00005	-		<0.00005	
Lithium-T	mg/L	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-		<0.001	-		<0.001	
Magnesium-T	mg/L	5.66	5.57	2%		6.58	-	3.91	3.9	0%		1.34	-		1.25	
Manganese-T	mg/L	0.00331	0.00326	2%		0.0189	-	0.0127	0.0119	6%		0.00056	-		0.0659	
Mercury-T	mg/L	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-		<0.000005	-		<0.000005	
Molybdenum-T	mg/L	0.00056	0.00063	11%		0.00061	-	0.00033	0.00033	0%		0.00075	-		0.00062	
Nickel-T	mg/L	0.00024	0.00025	4%		0.00036	-	0.0003	0.00028	7%		<0.00005	-		0.00009	
Phosphorous-T	mg/L	0.02	0.019	5%		0.011	-	0.015	0.015	0%		0.023	-		0.025	
Potassium-T	mg/L	1	1	0%		1.1	-	1.3	1.3	0%		<0.5	-		<0.5	
Selenium-T	mg/L	<0.0006	<0.0006	-		<0.0006	-	<0.0006	<0.0006	-		<0.0006	-		<0.0006	
Silicon-T	mg/L	5.47	5.92	8%		7.94	-	5.73	6.26	8%		3.67	-		1.91	
Silver-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005	
Sodium-T	mg/L	4.2	4.1	2%		3.9	-	3.8	3.8	0%		2.5	-		1.9	

2013 Lake Lab Duplicates	Lab file #	~LIMS:EC-64761	~LIMS:EC-64761		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:L1279413	~LIMS:EC-64914
	sample name	WQ21-Epi	WQ21-Epi	% Diff	WQ20 met	WQ20 met	% Diff	WQ22-epi	WQ22-epi	% Diff	WQ23-Epi	WQ23-Epi	% Diff	WQ25-Hypo	WQ25-Hypo
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	28-Jan-13	28-Jan-13		04-Feb-13	04-Feb-13		04-Feb-13	04-Feb-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13
Strontium-T	mg/L	0.106	0.108	2%		0.111	-	0.0748	0.0751	0%		0.0492	-		0.0856
Thallium-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Tin-T	mg/L	<0.00001	<0.00001	-		<0.00001	-	<0.00001	<0.00001	-		<0.00001	-		<0.00001
Titanium-T	mg/L	0.0002	0.0002	0%		<0.0002	-	0.0003	0.0002	33%		<0.0002	-		0.0002
Uranium-T	mg/L	0.00009	0.00011	18%		<0.00005	-	<0.00005	<0.00005	-		0.0001	-		0.00012
Vanadium-T	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.00005	-		<0.00005
Zinc-T	mg/L	0.0026	0.0027	4%		0.0057	-	0.0048	0.0051	6%		0.0027	-		0.0009
T-Hardness as CaCO3	mg/L			-			-			-			-		
Dissolved Metals															
Aluminum-D	mg/L	<0.002	<0.002	-		<0.002	-	0.01	0.008	20%		<0.002	-		0.013
Antimony-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	0.00006	0.00008	25%		0.00007	-		<0.00005
Arsenic-D	mg/L	0.0005	0.0005	0%		0.0003	-	0.0002	0.0003	33%		0.0006	-		0.0002
Barium-D	mg/L	0.00588	0.00571	3%		0.00878	-	0.00707	0.00702	1%		0.0026	-		0.00874
Beryllium-D	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001
Boron-D	mg/L	0.003	0.004	25%		<0.001	-	0.001	0.001	0%		<0.001	-		<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-		<0.000015	-		<0.000015
Calcium-D	mg/L	21.7	24.8	13%		23.3	-	14.2	14.1	1%		8.1	-		9.2
Chromium-D	mg/L	<0.0003	<0.0003	-		<0.0003	-	<0.0003	<0.0003	-		<0.0003	-		<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	-		<0.00002	-	<0.00002	<0.00002	-		<0.00002	-		<0.00002
Copper-D	mg/L	0.0008	0.0008	0%		<0.0001	-	0.0003	0.0004	25%		0.0002	-		0.0002
Iron-D	mg/L	0.0073	0.0072	1%		0.0074	-	0.0505	0.0537	6%		0.0135	-		0.0435
Lead-D	mg/L	0.00038	0.00048	21%		<0.00005	-	0.00061	0.00061	0%		<0.00005	-		<0.00005
Lithium-D	mg/L	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-		<0.001	-		<0.001
Magnesium-D	mg/L	5.66	5.57	2%		6.58	-	3.74	3.9	4%		1.34	-		1.24
Manganese-D	mg/L	0.00043	0.00041	5%		0.00404	-	0.00799	0.00815	2%		<0.00005	-		0.0635
Mercury-D	mg/L	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-		<0.000005	-		<0.000005
Molybdenum-D	mg/L	0.00051	0.00063	19%		0.00061	-	0.0003	0.00029	3%		0.00073	-		0.00062
Nickel-D	mg/L	0.00012	0.00012	0%		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		0.00006
Phosphorous-D	mg/L	0.02	0.02	0%		0.01	-	0.01	0.02	50%		<0.01	-		<0.01
Potassium-D	mg/L	1	1	0%		1.1	-	1.3	1.3	0%		<0.5	-		<0.5
Selenium-D	mg/L	<0.0006	<0.0006	-		<0.0006	-	<0.0006	<0.0006	-		<0.0006	-		<0.0006
Silicon-D	mg/L	5.47	5.92	8%		7.94	-	5.73	6.26	8%		3.67	-		1.91
Silver-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Sodium-D	mg/L	4.2	4.1	2%		3.9	-	3.7	3.8	3%		2.5	-		1.9
Strontium-D	mg/L	0.105	0.107	2%		0.111	-	0.0731	0.0736	1%		0.0486	-		0.0791
Thallium-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Tin-D	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	-		<0.0002	-	<0.0002	0.0002	-		<0.0002	-		<0.0002
Uranium-D	mg/L	0.00009	0.00011	18%		<0.00005	-	<0.00005	<0.00005	-		0.0001	-		0.00011
Vanadium-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Zinc-D	mg/L	0.0025	0.0025	0%		0.0017	-	0.0048	0.0051	6%		0.0027	-		0.0005
D-Hardness as CaCO3	mg/L			-			-			-			-		
Cyanide															
Cyanide (Total)	mg/L			-			-			-		<0.0050	-	<0.005	<0.0050
Cyanide (WAD)	mg/L			-			-			-		<0.0050	-	<0.005	<0.0050
Cyanate	mg/L			-			-			-			-		
Thiocyanate (SCN)	mg/L			-			-			-			-		

2013 Lake Lab Duplicates	Lab file #		Mean
	sample name	% Diff	% Diff
	type		
	date		
Physical Tests	Units		
pH @ 25°C BC-D	pH	-	0%
Conductivity @ 25°C	uS/cm	-	1%
T-Dissolved Solids180°C	mg/L	-	9%
Total Suspended Solids @ 105°C	mg/L	-	
Turbidity	NTU	-	16%
Hardness as (CaCO3)	mg/L	-	1%
Dissolved Anions			
Alkalinity as CaCO3	mg/L	-	0%
Fluoride-D	mg/L	-	4%
Sulphate-D	mg/L	-	2%
Chloride-D	mg/L	-	19%
Nutrients			
Ammonia - Nitrogen	mg/L	-	
Nitrate-N-D	mg/L	-	3%
Nitrite-N-D	mg/L	-	
Total Kjeldahl Nitrogen (TKN)	mg/L	-	5%
Phosphorous-Ortho-DLL	mg/L	-	
Phosphorous (Total-Dissolved) LL	mg/L	-	3%
Organic Parameters			
Carbon (Total Organic)	mg/L	-	0%
Carbon (Dissolved Organic)	mg/L	-	2%
Total Metals			
Aluminum-T	mg/L	-	25%
Antimony-T	mg/L	-	11%
Arsenic-T	mg/L	-	0%
Barium-T	mg/L	-	1%
Beryllium-T	mg/L	-	
Boron-T	mg/L	-	13%
Cadmium-T	mg/L	-	
Calcium-T	mg/L	-	1%
Chromium-T	mg/L	-	
Cobalt-T	mg/L	-	
Copper-T	mg/L	-	13%
Iron-T	mg/L	-	5%
Lead-T	mg/L	-	2%
Lithium-T	mg/L	-	
Magnesium-T	mg/L	-	1%
Manganese-T	mg/L	-	4%
Mercury-T	mg/L	-	
Molybdenum-T	mg/L	-	6%
Nickel-T	mg/L	-	5%
Phosphorous-T	mg/L	-	3%
Potassium-T	mg/L	-	0%
Selenium-T	mg/L	-	
Silicon-T	mg/L	-	8%
Silver-T	mg/L	-	
Sodium-T	mg/L	-	1%

2013 Lake Lab Duplicates	Lab file #		Mean
	sample name	% Diff	% Diff
	type		
	date		
Strontium-T	mg/L	-	1%
Thallium-T	mg/L	-	
Tin-T	mg/L	-	
Titanium-T	mg/L	-	17%
Uranium-T	mg/L	-	18%
Vanadium-T	mg/L	-	
Zinc-T	mg/L	-	5%
T-Hardness as CaCO3	mg/L	-	
Dissolved Metals			
Aluminum-D	mg/L	-	20%
Antimony-D	mg/L	-	25%
Arsenic-D	mg/L	-	17%
Barium-D	mg/L	-	2%
Beryllium-D	mg/L	-	
Boron-D	mg/L	-	13%
Cadmium-D	mg/L	-	
Calcium-D	mg/L	-	7%
Chromium-D	mg/L	-	
Cobalt-D	mg/L	-	
Copper-D	mg/L	-	13%
Iron-D	mg/L	-	4%
Lead-D	mg/L	-	10%
Lithium-D	mg/L	-	
Magnesium-D	mg/L	-	3%
Manganese-D	mg/L	-	3%
Mercury-D	mg/L	-	
Molybdenum-D	mg/L	-	11%
Nickel-D	mg/L	-	0%
Phosphorous-D	mg/L	-	25%
Potassium-D	mg/L	-	0%
Selenium-D	mg/L	-	
Silicon-D	mg/L	-	8%
Silver-D	mg/L	-	
Sodium-D	mg/L	-	3%
Strontium-D	mg/L	-	1%
Thallium-D	mg/L	-	
Tin-D	mg/L	-	
Titanium-D	mg/L	-	
Uranium-D	mg/L	-	18%
Vanadium-D	mg/L	-	
Zinc-D	mg/L	-	3%
D-Hardness as CaCO3	mg/L	-	
Cyanide			
Cyanide (Total)	mg/L	-	
Cyanide (WAD)	mg/L	-	
Cyanate	mg/L	-	
Thiocyanate (SCN)	mg/L	-	

2013 Lake Blanks

Lab ID	~LIMS:EC-64761	~LIMS:EC-64781	~LIMS:EC-64781	~LIMS:EC-64914	~LIMS:EC-64914	
sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	
type	TB	FB	TB	FB	TB	
date	28-Jan-13	04-Feb-13	04-Feb-13	13-Mar-13	13-Mar-13	
Units						
Physical Tests						
pH @ 25°C BC-D	pH	5.75	5.75	5.75	5.78	5.83
Conductivity @ 25°C	uS/cm	1	1	1	<1	<1
T-Dissolved Solids180°C	mg/L	<4	<4	<4	<4	<4
Total Suspended Solids @ 105°C	mg/L	<2	<2	<2	<2	<2
Turbidity	NTU	0.7	1.2	1.2	0.5	0.5
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0
Dissolved Anions						
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.1	0.2	0.2	<0.1	<0.1
Nutrients						
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L					
Phosphorous (Total-Dissolved) LL	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Organic Parameters						
Carbon (Total Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon (Dissolved Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Total Metals						
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	0.002	0.002	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L					
Dissolved Metals						
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

2013 Lake Blanks	Lab ID	~LIMS:EC-64761	~LIMS:EC-64781	~LIMS:EC-64781	~LIMS:EC-64914	~LIMS:EC-64914
	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank
	type	TB	FB	TB	FB	TB
	date	28-Jan-13	04-Feb-13	04-Feb-13	13-Mar-13	13-Mar-13
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L					
Cyanide						
Cyanide (Total)	mg/L				<0.0050	<0.0050
Cyanide (WAD)	mg/L				<0.0050	<0.0050
Cyanate	mg/L					
Thiocyanate (SCN)	mg/L					

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Lab No.	Units	2	3		10	11		22	23		39	40		64			64	65	
Physical Tests																			
pH @ 25°C BC-T	pH units	8.23	8.23	0%	8.14	8.15	0%	6.3	6.3	0%	6.17	6.17	0%	6.85	6.87	0%	7.7	---	
Conductivity @ 25°C	mS/cm	157	159	1%	131	131	0%	27	27	0%	26	26	0%	27	27	0%	98		
T-Dissolved Solids180°C	mg/L (ppm)	92	92	0%	112	104	7%	44	48	8%	64	56	13%	44	---		76	---	
Total Suspended Solids @105°C	mg/L (ppm)	3	3	0%	< 2	---		< 2	< 2		< 2	< 2		5	---		4	---	
Turbidity	NTU	1.5	1.5	0%	0.7	0.7	0%	0.9	1	10%	1	1	0%	3	---		2.9	---	
Dissolved Anions																			
Alkalinity as CaCO3	mg/L (ppm)	82	81	1%	67	67	0%	4	4	0%	3	3	0%	7	7	0%	43	---	
Fluoride-D	mg/L (ppm)	0.09	0.08	11%	0.07	0.07	0%	0.4	0.4	0%	1.2	1.2	0%	< 0.1	< 0.1		0.2	---	
Sulphate-D	mg/L (ppm)	4.7	4.6	2%	3.1	3	3%	0.03	0.03	0%	0.03	0.03	0%	0.04	0.04	0%	0.08	---	
Chloride-D	mg/L (ppm)	0.3	0.3	0%	0.2	0.2	0%	1.9	1.9	0%	1.5	1.5	0%	2.4	2.4	0%	5.1	---	
Nutrients																			
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	---		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	---		< 0.02	---	
Nitrate-N-D	mg/L (ppm)	0.069	0.068	1%	0.04	0.04	0%	0.007	0.007	0%	0.007	0.007	0%	0.006	0.006	0%	< 0.005	---	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.011	0.011	0%	0.019	---	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.28	0.27	4%	0.76	0.71	7%	0.26	0.28	7%	0.34	0.36	6%	0.64	---		0.58	---	
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	---	
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.012	0.01	17%	0.009	0.008	11%	0.021	0.022	5%	0.014	0.015	7%	0.013	0.014	7%	0.013	0.014	7%
Organic Parameters																			
Carbon (Total Organic)	mg/L (ppm)	5.9	5.9	0%	2.7	2.7	0%	21.2	21.8	3%	19.5	19.1	2%	25.1	24.8	1%	25.1	24.8	1%
Carbon (Dissolved Organic)	mg/L (ppm)	5.5	5.5	0%	2.2	2.3	4%	22	22.5	2%	21.4	21.6	1%	12.1	12.1	0%	12.1	12.1	0%
Total Metals																			
Aluminum	mg/L (ppm)	0.042	0.0431	3%	0.011	0.012	8%	0.346	0.345	0%	0.364	0.356	2%	0.172	0.174	1%	0.172	0.174	1%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	< 0.0002	< 0.0002		0.0007	0.0006	14%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0005	0.0005	0%
Barium	mg/L (ppm)	0.00806	0.00798	1%	0.00882	0.00898	2%	0.00707	0.00709	0%	0.00527	0.0053	1%	0.0077	0.00776	1%	0.0077	0.00776	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	0.001	0.001	0%	0.001	0.001	0%	< 0.001	< 0.001		0.001	0.001	0%	0.002	0.002	0%	0.002	0.002	0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.00006	0.00006	0%	0.000047	0.000045	4%	< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	21.7	21.6	0%	17.2	17.4	1%	3	3	0%	2.7	2.7	0%	13.7	13.7	0%	13.7	13.7	0%
Chromium	mg/L (ppm)	< 0.0005	< 0.0005		< 0.0005	< 0.0005		0.0003	0.0003	0%	0.0003	0.0003	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	< 0.00005	0.00005		< 0.00005	< 0.00005		0.00007	0.00007	0%	0.00006	0.00006	0%	0.00007	0.00007	0%	0.00007	0.00007	0%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0002	0.0002	0%	0.0007	0.0007	0%	0.0007	0.0006	14%	0.0007	0.0007	0%	0.0007	0.0007	0%
Iron	mg/L (ppm)	0.199	0.198	1%	0.172	0.172	0%	0.306	0.308	1%	0.226	0.227	0%	0.193	0.187	3%	0.193	0.187	3%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.005	< 0.005		< 0.005	< 0.005		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	4.89	4.87	0%	4.07	4.05	0%	0.65	0.65	0%	0.54	0.54	0%	3.19	3.18	0%	3.19	3.18	0%
Manganese	mg/L (ppm)	0.0292	0.029	1%	0.0265	0.0264	0%	0.0344	0.0345	0%	0.0183	0.0184	1%	0.0101	0.0101	0%	0.0101	0.0101	0%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		0.000017	0.000019	11%	0.000015	0.000014	7%	< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00067	0.00069	3%	0.00087	0.00086	1%	0.00005	0.00005	0%	< 0.00005	< 0.00005		0.0005	0.0005	0%	0.0005	0.0005	0%
Nickel	mg/L (ppm)	0.0002	0.0003	33%	0.00015	0.00013	13%	0.00056	0.00056	0%	0.00046	0.00046	0%	0.00045	0.00052	13%	0.00045	0.00052	13%
Phosphorus	mg/L (ppm)	0.02	0.02	0%	< 0.02	< 0.02		0.04	0.04	0%	< 0.02	< 0.02		0.02	0.02	0%	0.02	0.02	0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.6	0.6	0%	0.7	0.7	0%	< 0.5	< 0.5		0.9	0.9	0%	0.9	0.9	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	5.16	5.09	1%	6.66	6.95	4%	4.03	4.04	0%	3.64	3.58	2%	4.58	4.64	1%	4.58	4.64	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	3.7	3.7	0%	3.9	3.9	0%	1.4	1.4	0%	1.3	1.3	0%	2.6	2.6	0%	2.6	2.6	0%
Strontium	mg/L (ppm)	0.112	0.113	1%	0.109	0.11	1%	0.0275	0.0278	1%	0.0217	0.0216	0%	0.0735	0.0731	1%	0.0735	0.0731	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0024	0.0022	8%	0.0005	0.0005	0%	0.0035	0.0033	6%	0.0034	0.0031	9%	0.0042	0.0043	2%	0.0042	0.0043	2%
Uranium	mg/L (ppm)	0.00014	0.00014	0%	0.00033	0.00031	6%	0.00015	0.00014	7%	0.00018	0.00017	6%	0.00011	0.00011	0%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		0.0004	0.0004	0%	< 0.0001	< 0.0001		0.0004	0.0004	0%	0.0004	0.0004	0%
Zinc	mg/L (ppm)	0.004	0.004	0%	0.0017	0.0019	11%	0.0093	0.0092	1%	0.0068	0.0065	4%	0.0049	0.005	2%	0.0049	0.005	2%
T-Hardness as CaCO3	mg/L (ppm)	74.3	73.9	1%	59.7	60.1	1%	10.2	10.2	0%	8.9	8.9	0%	47.4	47.2	0%	47.4	47.2	0%

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60904	EC60904	% Diff	EC60941	EC60941	% Diff	EC60968	EC60968	% Diff	EC60968	EC60968	% Diff
Date Sampled	Lab ID	11-3636-	11-3636-D		11-4263-	11-4263-D		11-5498-	11-5498-D		11-5858-	11-5858-D		11-6095-	11-6095-D		11-6095-	11-6095-D	
Sample No.	sample name	WQ9	WQ9-LD		WQ7	WQ7-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ9	WQ9		WQ9	WQ9-LD	
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		17-May-11	17-May-11		24-May-11	24-May-11		30-May-11	31-May-11		30-May-11	30-May-11	
Dissolved Metals																			
Aluminum	mg/L (ppm)	< 0.002	0.002		0.005	0.005	0%	0.295	0.307	4%	0.364	0.329	10%	0.066	0.065	2%	0.066	0.065	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	< 0.0001	< 0.0001		0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.00733	0.00756	3%	0.00829	0.00839	1%	0.00589	0.00604	2%	0.00487	0.00515	5%	0.00661	0.0067	1%	0.00661	0.0067	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	0.001	0%	0.002	0.002	0%	0.002	0.002	0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.000054	0.000049	9%	0.000034	0.000037	8%	< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	21.3	21.6	1%	16.3	16.4	1%	2.9	2.9	0%	2.4	2.4	0%	13.3	13.2	1%	13.3	13.2	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		0.0003	0.0003	0%	0.0004	0.0003	25%	< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00004	0.00004	0%	0.00006	0.00006	0%	0.00005	0.00005	0%	0.00004	0.00004	0%	0.00004	0.00004	0%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0001	0.0001	0%	0.0007	0.0007	0%	0.0007	0.0006	14%	0.0008	0.0008	0%	0.0008	0.0008	0%
Iron	mg/L (ppm)	0.0851	0.0856	1%	0.132	0.126	5%	0.213	0.216	1%	0.176	0.171	3%	0.0845	0.085	1%	0.0845	0.085	1%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	4.83	4.83	0%	4.07	3.89	4%	0.64	0.63	2%	0.52	0.5	4%	3.01	2.99	1%	3.01	2.99	1%
Manganese	mg/L (ppm)	0.0219	0.0219	0%	0.0248	0.0236	5%	0.0227	0.0227	0%	0.0137	0.0132	4%	0.00475	0.00481	1%	0.00475	0.00481	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		0.000017	0.000014	18%	0.000012	0.000012	0%	< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00061	0.00063	3%	0.00073	0.00075	3%	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.0004	0.00041	2%	0.0004	0.00041	2%
Nickel	mg/L (ppm)	0.0002	0.00021	5%	0.0001	0.0001	0%	0.00041	0.00042	2%	0.0004	0.00039	3%	0.00033	0.00033	0%	0.00033	0.00033	0%
Phosphorus-D	mg/L (ppm)	0.01	0.01	0%	< 0.01	< 0.01		0.02	0.02	0%	0.01	0.01	0%	0.01	0.01	0%	0.01	0.01	0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.6	0.6	0%	0.7	0.7	0%	< 0.5	< 0.5		0.8	0.8	0%	0.8	0.8	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	5.07	5.01	1%	6.66	6.95	4%	4.03	3.91	3%	3.41	3.36	1%	4.13	4.18	1%	4.13	4.18	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	3.6	3.6	0%	3.9	3.7	5%	1.4	1.4	0%	1.2	1.2	0%	2.5	2.4	4%	2.5	2.4	4%
Strontium	mg/L (ppm)	0.107	0.108	1%	0.1	0.101	1%	0.0236	0.0242	2%	0.0207	0.0212	2%	0.068	0.0675	1%	0.068	0.0675	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0003	0.0003	0%	0.0004	0.0003	25%	0.0022	0.0024	8%	0.0028	0.0025	11%	0.001	0.001	0%	0.001	0.001	0%
Uranium	mg/L (ppm)	0.00012	0.00012	0%	0.00028	0.00028	0%	0.00012	0.00013	8%	0.00016	0.00017	6%	0.00011	0.0001	9%	0.00011	0.0001	9%
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.0003	0.00033	9%	< 0.00005	< 0.00005		0.00024	0.00022	8%	0.00024	0.00022	8%
Zinc	mg/L (ppm)	0.0039	0.0077	49%	0.0018	0.0015	17%	0.0085	0.0088	3%	0.0068	0.0065	4%	0.0049	0.005	2%	0.0049	0.005	2%
D-Hardness as CaCO3	mg/L (ppm)	73	73.9	1%	57.4	57	1%	9.8	9.9	1%	8.1	8.1	0%	45.7	45.3	1%	45.7	45.3	1%

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Lab No.	Units	78	79		95	96		123	124		131	132		148	149		174	175	
Physical Tests																			
pH @ 25°C BC-T	pH units	6.37	6.4	0%	6.23	---		7.18	7.19	0%	6.78	6.85	1%	6.8	6.9	1%	7.55	7.57	0%
Conductivity @ 25°C	mS/cm	17	16	6%	16	16	0%	36	35	3%	20	19	5%	23	23	0%	90	90	0%
T-Dissolved Solids180°C	mg/L (ppm)	52	48	8%	64	68	6%	52	---		16	12	25%	20	16	20%	100	---	
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2		< 2	< 2		< 2	---		< 2	< 2		< 2	---		< 2	---	
Turbidity	NTU	1.1	1.1	0%	0.6	0.6	0%	0.8	---		2	2.2	9%	1.4	1.3	7%	1	1	0%
Dissolved Anions																			
Alkalinity as CaCO3	mg/L (ppm)	3	3	0%	4	3	25%	15	15	0%	7	7	0%	8	8	0%	43	43	0%
Fluoride-D	mg/L (ppm)	0.2	0.2	0%	0.03	0.03	0%	0.04	0.04	0%	0.1	0.1	0%	0.02	0.02	0%	0.04	0.04	0%
Sulphate-D	mg/L (ppm)	0.03	0.03	0%	1.1	1.1	0%	0.2	0.2	0%	0.02	0.02	0%	0.6	0.6	0%	1.7	1.7	0%
Chloride-D	mg/L (ppm)	1.6	1.5	6%	0.1	< 0.1		0.5	0.5	0%	0.7	0.7	0%	0.1	0.1	0%	0.2	0.2	0%
Nutrients																			
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		0.02	---		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	---	
Nitrate-N-D	mg/L (ppm)	0.006	0.006	0%	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.46	0.45	2%	0.24	0.25	4%	< 0.08	---		0.09	0.08	11%	0.19	0.19	0%	< 0.08	---	
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.026	0.025	4%	0.071	0.071	0%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.01	0.009	10%	0.009	0.01	10%	0.004	0.004	0%	0.004	0.005	20%	0.005	0.005	0%	0.006	0.005	17%
Organic Parameters																			
Carbon (Total Organic)	mg/L (ppm)	11.9	11.8	1%	9.7	9.6	1%	10.4	10.3	1%	6.7	6.8	1%	5.1	5.1	0%	5.2	5.2	0%
Carbon (Dissolved Organic)	mg/L (ppm)	10.7	11.3	5%	9.7	9.7	0%	10	10.2	2%	6.7	6.8	1%	5.1	5.1	0%	5.2	5.2	0%
Total Metals																			
Aluminum	mg/L (ppm)	0.302	0.303	0%	0.234	0.231	1%	0.166	0.167	1%	0.177	0.173	2%	0.098	0.097	1%	0.031	0.03	3%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0002	0.0002	0%	0.0006	0.0006	0%	0.0005	0.0005	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.00319	0.00323	1%	0.0024	0.00244	2%	0.00674	0.00654	3%	0.00287	0.00273	5%	0.00229	0.00231	1%	0.00693	0.00684	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.006	0.005	17%
Cadmium	mg/L (ppm)	0.000027	0.00003	10%	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	1.5	1.5	0%	5.3	5.3	0%	2.2	2.2	0%	2.4	2.4	0%	12.4	12.4	0%
Chromium	mg/L (ppm)	0.0003	0.0003	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00005	0.00005	0%	0.00004	0.00004	0%	0.00003	0.00002	33%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0005	0.0005	0%	0.0025	0.0026	4%	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0002	0.0001	50%
Iron	mg/L (ppm)	0.152	0.152	0%	0.108	0.108	0%	0.136	0.136	0%	0.143	0.14	2%	0.128	0.126	2%	0.128	0.127	1%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00014	0.00012	14%	0.00007	0.00008	13%	< 0.00005	< 0.00005		0.00009	0.00009	0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		< 0.50	< 0.50		0.82	0.82	0%	< 0.50	< 0.50		0.53	0.51	4%	2.8	2.77	1%
Manganese	mg/L (ppm)	0.0113	0.0114	1%	0.00467	0.00469	0%	0.00905	0.00895	1%	0.0102	0.0101	1%	0.0153	0.0151	1%	0.0164	0.0162	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00009	0.00008	11%	0.00008	0.00009	11%	0.00037	0.00033	11%	0.00016	0.00015	6%	0.00022	0.00022	0%	0.00051	0.0005	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00027	0.00028	4%	0.00011	0.00014	21%	0.00019	0.0002	5%	< 0.00005	< 0.00005		0.00013	0.00013	0%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5	
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.45	3.39	2%	3.72	3.69	1%	3.93	3.65	7%	5.47	5.43	1%	5.72	5.71	0%	6.3	6.33	0%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.1	1.1	0%	1.6	1.6	0%	1.8	1.8	0%	1.9	2	5%	2.9	2.9	0%
Strontium	mg/L (ppm)	0.0147	0.0148	1%	0.0139	0.0138	1%	0.042	0.0421	0%	0.0193	0.0191	1%	0.0212	0.0211	0%	0.0713	0.0713	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0041	0.0043	5%	0.0019	0.0019	0%	0.0027	0.0028	4%	0.0022	0.0018	18%	0.0008	0.0009	11%	0.0008	0.0007	13%
Uranium	mg/L (ppm)	0.00017	0.00018	6%	0.00019	0.0002	5%	0.00023	0.00023	0%	0.00011	0.00012	8%	0.00008	0.00008	0%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	0.0002	0.0002	0%	0.0002	0.0002	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	< 0.0001	< 0.0001		0.0002	0.0002	0%
Zinc	mg/L (ppm)	0.0047	0.0048	2%	0.0028	0.0028	0%	0.0022	0.0048	54%	0.0024	0.0024	0%	0.0018	0.0019	5%	< 0.0005	< 0.0005	
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		< 6.0	< 6.0		16.5	16.5	0%	7.3	7.2	1%	8.1	8.1	0%	42.4	42.2	0%

Parameter	Lab file #	EC61018	EC61018	% Diff	EC61071	EC61071	% Diff	EC61343	EC61343	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff
Date Sampled	Lab ID	11-6380-	11-6380-D		11-6751-	11-6751-D		11-9198-	11-9198-D		11-10866-	11-10866-D		11-13816-	11-13816-D		11-16734-	11-16734-D	
Sample No.	sample name	WQ1	WQ1-LD		WQ1	WQ1-LD		WQ12	WQ12-LD		WQ1	WQ1-LD		WQ1	WQ1-LD		WQ7	WQ7-LD	
	date	6-Jun-11	6-Jun-11		13-Jun-11	13-Jun-11		18-Jul-11	18-Jul-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11	
Dissolved Metals																			
Aluminum	mg/L (ppm)	0.241	0.241	0%	0.216	0.215	0%	0.12	0.118	2%	0.128	0.129	1%	0.079	0.079	0%	0.019	0.019	0%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.0028	0.00284	1%	0.00229	0.00224	2%	0.00589	0.00574	3%	0.00223	0.00223	0%	0.00227	0.00231	2%	0.00656	0.00668	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	0.001	0%
Cadmium	mg/L (ppm)	0.000027	0.000025	7%	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	1.5	1.5	0%	5	5	0%	2	2	0%	2.3	2.4	4%	11.5	11.6	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00004	0.00004	0%	0.00004	0.00003	25%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00003	0.00003	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0003	0.0003	0%	< 0.0001	< 0.0001	
Iron	mg/L (ppm)	0.105	0.106	1%	0.0815	0.0816	0%	0.0882	0.0886	0%	0.0845	0.0852	1%	0.098	0.0982	0%	0.1	0.1	0%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00009	0.00009	0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		< 0.50	< 0.50		0.77	0.76	1%	< 0.50	< 0.50		< 0.50	< 0.50		2.74	2.71	1%
Manganese	mg/L (ppm)	0.00633	0.00628	1%	0.00281	0.00266	5%	0.00344	0.00344	0%	0.00613	0.00614	0%	0.0137	0.0137	0%	0.0148	0.0148	0%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005		0.00008	0.00008	0%	0.00032	0.00029	9%	0.00011	0.00012	8%	0.00019	0.00019	0%	0.0005	0.00049	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00027	0.00028	4%	0.00011	0.00014	21%	0.00017	0.00017	0%	< 0.00005	< 0.00005		0.00013	0.00013	0%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5	
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.17	3.27	3%	3.58	3.58	0%	3.48	3.55	2%	5.02	5.27	5%	5.72	5.71	0%	6.17	6.25	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1.1	9%	1.1	1.1	0%	1.5	1.5	0%	1.7	1.7	0%	1.8	2	10%	2.9	2.9	0%
Strontium	mg/L (ppm)	0.0145	0.0142	2%	0.0134	0.0135	1%	0.0404	0.0399	1%	0.0183	0.0182	1%	0.021	0.0211	0%	0.0713	0.0713	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0018	0.0018	0%	0.0013	0.0014	7%	0.0012	0.0013	8%	0.001	0.001	0%	0.0007	0.0007	0%	0.0003	0.0003	0%
Uranium	mg/L (ppm)	0.00015	0.00016	6%	0.00016	0.00016	0%	0.00023	0.00022	4%	0.0001	0.0001	0%	0.00007	0.00006	14%	0.00011	0.00011	0%
Vanadium	mg/L (ppm)	0.00011	0.00011	0%	0.00013	0.00013	0%	0.00017	0.00017	0%	0.00013	0.00012	8%	< 0.00005	< 0.00005		0.0002	0.0002	0%
Zinc	mg/L (ppm)	0.0044	0.004	9%	0.0028	0.0028	0%	0.0022	0.0048	54%	0.0024	0.0024	0%	0.0018	0.0019	5%	< 0.0005	< 0.0005	
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		< 6.0	< 6.0		15.7	15.6	1%	6.6	6.6	0%	7.9	7.9	0%	40	40.1	0%

Table 1: 2011 Lab Duplicates

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Lab No.	Units	197	198		214	215		
Physical Tests								
pH @ 25°C BC-T	pH units	7.09	7.08	0%	7.4	7.48	1%	0%
Conductivity @ 25°C	mS/cm	45	45	0%	105	105	0%	1%
T-Dissolved Solids180°C	mg/L (ppm)	60	56	7%	76	72	5%	10%
Total Suspended Solids @105°C	mg/L (ppm)	< 2	---		11	14	21%	11%
Turbidity	NTU	0.7	0.7	0%	4.4	4.8	8%	3%
Dissolved Anions								
Alkalinity as CaCO3	mg/L (ppm)	20	21	5%	50	50	0%	2%
Fluoride-D	mg/L (ppm)	0.2	0.2	0%	0.05	0.05	0%	1%
Sulphate-D	mg/L (ppm)	0.03	0.03	0%	2.1	2.1	0%	0%
Chloride-D	mg/L (ppm)	0.8	0.8	0%	0.3	0.2	33%	3%
Nutrients								
Ammonia - Nitrogen	mg/L (ppm)	< 0.01	---		< 0.02	< 0.02		
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005		0.01	0.01	0%	0%
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	---		0.11	0.13	15%	6%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		2%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001		0.001	0.001	0%	8%
Organic Parameters								
Carbon (Total Organic)	mg/L (ppm)	6.5	6.5	0%	3.7	---		1%
Carbon (Dissolved Organic)	mg/L (ppm)	6.5	6.5	0%	3.4	---		1%
Total Metals								
Aluminum	mg/L (ppm)	0.073	0.073	0%	0.229	0.226	1%	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0002	0.0002	0%	0.0006	0.0007	14%	2%
Barium	mg/L (ppm)	0.00553	0.00557	1%	0.0126	0.0126	0%	1%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		2%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		0.000029	0.000033	12%	7%
Calcium	mg/L (ppm)	6	6	0%	14.7	14.8	1%	0%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		0.0005	0.0005	0%	0%
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00017	0.00016	6%	3%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0008	0.0009	11%	6%
Iron	mg/L (ppm)	0.14	0.14	0%	0.506	0.501	1%	1%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		0.00013	0.00013	0%	7%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	1.01	1.01	0%	3.45	3.43	1%	1%
Manganese	mg/L (ppm)	0.0126	0.0127	1%	0.0529	0.0529	0%	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		9%
Molybdenum	mg/L (ppm)	0.00045	0.00047	4%	0.0007	0.00071	1%	4%
Nickel	mg/L (ppm)	0.00011	0.00011	0%	0.00045	0.00043	4%	8%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		0.02	0.02	0%	0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		0.6	0.5	17%	3%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	3.67	3.67	0%	6.58	6.54	1%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	1.8	1.8	0%	3.4	3.4	0%	0%
Strontium	mg/L (ppm)	0.0476	0.0481	1%	0.0901	0.0902	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0016	0.0015	6%	0.0098	0.0101	3%	6%
Uranium	mg/L (ppm)	0.00017	0.00016	6%	0.0002	0.0002	0%	3%
Vanadium	mg/L (ppm)	0.0001	0.0001	0%	0.0009	0.0009	0%	0%
Zinc	mg/L (ppm)	0.0015	0.0016	6%	0.0112	0.0112	0%	7%
T-Hardness as CaCO3	mg/L (ppm)	19.1	19.2	1%	50.9	51.1	0%	0%

Parameter	Lab file #	EC62363	EC62363	% Diff	EC62562	EC62562	% Diff	Mean
Date Sampled	Lab ID	11-19506-	11-19506-D		11-21060-	11-21060-D		% Diff
Sample No.	sample name	WQ12	WQ12-LD		WQ7	WQ7		
	date	14-Nov-11	14-Nov-11		13-Dec-11	13-Dec-11		
Dissolved Metals								
Aluminum	mg/L (ppm)	0.05	0.051	2%	0.01	0.01	0%	2%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0002	0.0002	0%	0.0004	0.0004	0%	0%
Barium	mg/L (ppm)	0.00513	0.0052	1%	0.0086	0.00854	1%	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		0%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		8%
Calcium	mg/L (ppm)	5.9	6	2%	14.7	14.8	1%	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		13%
Cobalt	mg/L (ppm)	0.00003	0.00002	33%	0.00003	0.00003	0%	4%
Copper	mg/L (ppm)	0.0002	0.0001	50%	0.0003	0.0003	0%	5%
Iron	mg/L (ppm)	0.102	0.102	0%	0.0851	0.0859	1%	1%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0%
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	1.01	1.01	0%	3.38	3.42	1%	1%
Manganese	mg/L (ppm)	0.0111	0.0111	0%	0.0207	0.021	1%	1%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		9%
Molybdenum	mg/L (ppm)	0.00045	0.00046	2%	0.00068	0.00066	3%	3%
Nickel	mg/L (ppm)	0.00009	0.00009	0%	0.00006	0.00005	17%	4%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		< 0.01	< 0.01		0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	3.67	3.67	0%	6.53	6.54	0%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	1.8	1.8	0%	3.3	3.3	0%	2%
Strontium	mg/L (ppm)	0.047	0.0481	2%	0.0901	0.0901	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0008	0.0008	0%	0.0002	0.0002	0%	4%
Uranium	mg/L (ppm)	0.00015	0.00016	6%	0.00015	0.00016	6%	5%
Vanadium	mg/L (ppm)	0.0001	0.0001	0%	0.00018	0.00021	14%	5%
Zinc	mg/L (ppm)	0.0015	0.0016	6%	0.009	0.0079	12%	13%
D-Hardness as CaCO3	mg/L (ppm)	18.9	19.1	1%	50.6	51	1%	1%

3% Mean of means

Table 2: 2012 Lab Duplicates RPDs

Analytical Parameter	Unit	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD
		Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
		Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753
		23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12	
pH @ 25°C BC-D	pH	6.73	6.88	2.20%	6.89	6.82	1.02%	6.78	6.73	0.74%	6.45	6.81	5.43%	6.94	7	0.86%	6.98	7.06	1.14%	
Conductivity @ 25°C	uS/cm	26	27	3.77%	26	25	3.92%	18	18	0.00%	19	18	5.41%	23	22	4.44%	36	35	2.82%	
T-Dissolved Solids180°C	mg/L	56	64	13.33%	48	44	8.70%	40	50	22.22%	27	32	16.95%	60	52	14.29%	76	64	17.14%	
Total Suspended Solids @105°C	mg/L	<2	<2		2	2	0.00%	<2	<2		<2	2		<2	<2		5	5	0.00%	
Turbidity	NTU	3.1	3.1	0.00%	2.4	2.3	4.26%	3.3	3.3	0.00%	2.6	2.7	3.77%	3.1	3.2	3.17%	10	10	0.00%	
Alkalinity as CaCO3	mg/L	5	5	0.00%	3	6	66.67%	4	5	22.22%	4	5	22.22%	8	8	0.00%	12	12	0.00%	
Fluoride-D	mg/L	0.07	0.07	0.00%	0.05	0.12	82.35%	0.03	0.03	0.00%	0.03	0.03	0.00%	0.05	0.05	0.00%	<0.02	<0.02		
Sulphate-D	mg/L	1.4	1.6	13.33%	0.8	0.7	13.33%	1.2	1.1	8.70%	0.7	0.8	13.33%	0.8	0.8	0.00%	<0.5	<0.5		
Chloride-D	mg/L	1.4	1.4	0.00%	2.7	2.6	3.77%	0.6	0.6	0.00%	0.5	0.5	0.00%	0.6	0.5	18.18%	0.2	0.2	0.00%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		0.04	0.03	28.57%	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		
Nitrate-N-D	mg/L	<0.005	<0.005		0.014	0.014	0.00%	<0.005	<0.005		0.005	0.005	0.00%	0.01	0.011	9.52%	<0.005	<0.005		
Nitrite-N-D	mg/L	0.003	0.003	0.00%	0.004	0.004	0.00%	<0.003	<0.003		<0.003	<0.003		<0.003	0.004		<0.003	<0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L	0.37	0.34	8.45%	0.24	0.28	15.38%	0.2	0.21	4.88%	0.16	0.13	20.69%	0.15	0.18	18.18%	0.99	0.99	0.00%	
Phosphorous-Ortho-DLL	mg/L	0.018	0.018	0.00%	<0.003	<0.003					<0.003	<0.003		<0.003	<0.003		<0.003	<0.003		
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.01	0.00%	0.01	0.01	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.05	0.05	0.00%	
Carbon (Total Organic)	mg/L	16	16.2	1.24%	14	14	0.00%	11	11	0.00%	9	9	0.00%	7	7	0.00%	12.9	13	0.77%	
Carbon (Dissolved Organic)	mg/L	16	16.2	1.24%	13.6	13.9	2.18%	11	11	0.00%	8.5	8.7	2.33%	6.6	6.7	1.50%	12.9	13	0.77%	
Aluminum-T	mg/L	0.458	0.463	1.09%	0.328	0.323	1.54%	0.34	0.337	0.89%	0.31	0.349	11.84%	0.286	0.274	4.29%	0.708	0.7	1.14%	
Antimony-T	mg/L	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		0.00005	<0.00005		0.00013	0.00014	7.41%	
Arsenic-T	mg/L	0.0005	0.0005	0.00%	0.0004	0.0004	0.00%	0.0005	0.0004	22.22%	0.0004	0.0003	28.57%	0.0005	0.0005	0.00%	0.0016	0.0015	6.45%	
Barium-T	mg/L	0.00542	0.00542	0.00%	0.00384	0.00386	0.52%	0.00391	0.00379	3.12%	0.00298	0.00302		0.0032	0.00323	0.93%	0.00876	0.00886	1.14%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.003	0.00%	
Cadmium-T	mg/L	<0.000015	<0.000015		0.00005	0.000051	1.98%	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		0.000062	0.000064	3.17%	
Calcium-T	mg/L	2.6	2.7	3.77%	2.1	2.1	0.00%	1.9	1.9	0.00%	1.7	1.6	6.06%	2.1	2	4.88%	3.5	3.4	2.90%	
Chromium-T	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		0.0009	0.001	10.53%	
Cobalt-T	mg/L	0.00003	0.00004	28.57%	0.00058	0.00053	9.01%	0.00006	0.00007	15.38%	<0.00002	<0.00002		<0.00002	<0.00002		0.0001	0.0001	0.00%	
Copper-T	mg/L	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0003	0.0003	0.00%	<0.0001	<0.0001		0.0013	0.0013	0.00%	0.0002	0.0002	0.00%	
Iron-T	mg/L	0.294	0.298	1.35%	0.211	0.211	0.00%	0.242	0.2417	0.12%	0.159	0.16	0.63%	0.171	0.172	0.58%	0.814	0.817	0.37%	
Lead-T	mg/L	0.00006	0.00006	0.00%	0.00009	0.0001	10.53%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00021	0.00021	0.00%	
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	0.59	0.6	1.68%	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		0.82	0.87	5.92%	
Manganese-T	mg/L	0.0115	0.0117	1.72%	0.0111	0.0111	0.00%	0.007	0.00709	1.28%	0.00501	0.005	0.20%	0.0085	0.00851	0.12%	0.0211	0.0214	1.41%	
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-T	mg/L	0.00006	0.00006	0.00%	0.00007	0.00006	15.38%	0.00008	0.00008	0.00%	0.00037	0.00019	64.29%	0.00034	0.00025	30.51%	0.00033	0.00033	0.00%	

Analytical Parameter	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753
Unit	23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Nickel-T	mg/L	0.00022	0.00022	0.00%	<0.00005	<0.00005		0.00025	0.00026	3.92%	0.00034	0.00023	38.60%	0.00024	0.00023	4.26%	0.00068	0.00066	2.99%
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		0.05	0.05	0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	4.52	4.43	2.01%	4.03	4.04	0.25%	4.48	4.43	1.12%	4.38	4.28	2.31%	6.2	5.91	4.79%	6.93	7.03	1.43%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	1.7	1.7	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	1.2	1.2	0.00%	1.8	1.8	0.00%	3.6	3.6	0.00%
Strontium-T	mg/L	0.0239	0.0241	0.83%	0.0195	0.0196	0.51%	0.01797	0.01805	0.44%	0.016	0.0149	7.12%	0.0199	0.0192	3.58%	0.034	0.0343	0.88%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0078	0.0081	3.77%	0.0048	0.0049	2.06%	0.0065	0.0065	0.00%	0.0047	0.0046	2.15%	0.0062	0.0063	1.60%	0.0173	0.0172	0.58%
Uranium-T	mg/L	0.00013	0.00013	0.00%	0.00018	0.00018	0.00%	0.00018	0.00018	0.00%	0.00026	0.00019	31.11%	0.00014	0.00012	15.38%	0.0002	0.0002	0.00%
Vanadium-T	mg/L	0.0003	0.0003	0.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0004	0.0003	28.57%	0.001	0.0011	9.52%
Zinc-T	mg/L	0.0047	0.0048	2.11%	0.0068	0.0067	1.48%	0.0026	0.0026	0.00%	0.0042	0.004	4.88%	0.0031	0.003	3.28%	0.0104	0.0104	0.00%
T-Hardness as CaCO3	mg/L	9.1	9.1	0.00%	7.1	7.1	0.00%	6.3	6.3	0.00%	<6.0	<6.0		7	6.6	5.88%	12.1	12.1	0.00%
Aluminum-D	mg/L	0.288	0.284	1.40%	0.275	0.273	0.73%	0.219	0.217	0.92%	0.207	0.209	0.96%	0.171	0.177	3.45%	0.39	0.389	0.26%
Antimony-D	mg/L	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00009	0.00009	0.00%
Arsenic-D	mg/L	0.0004	0.0004	0.00%	0.0004	0.0003	28.57%	0.0003	0.0002	40.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0012	0.0012	0.00%
Barium-D	mg/L	0.00413	0.00402	2.70%	0.00345	0.00344	0.29%	0.00259	0.00261	0.77%	0.0024	0.00222	7.79%	0.00274	0.0026	5.24%	0.00503	0.00492	2.21%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.003	0.00%
Cadmium-D	mg/L	<0.000015	<0.000015		0.00003	0.000041	30.99%	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	0.00002	
Calcium-D	mg/L	2.6	2.6	0.00%	2.1	2.1	0.00%	1.8	1.8	0.00%	1.7	1.6	6.06%	2.1	1.9	10.00%	3.5	3.4	2.90%
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		0.0005	0.0005	0.00%
Cobalt-D	mg/L	<0.00002	<0.00002		<0.00002	<0.00002		0.00002	0.00002	0.00%	<0.00002	<0.00002		<0.00002	<0.00002		0.00005	0.00006	18.18%
Copper-D	mg/L	0.0003	0.0004	28.57%	0.0006	0.0005	18.18%	0.0003	0.0003	0.00%	<0.0001	<0.0001		0.0001	0.0001	0.00%	<0.0001	<0.0001	
Iron-D	mg/L	0.157	0.158	0.63%	0.135	0.134	0.74%	0.1038	0.1045	0.67%	0.0773	0.0801	3.56%	0.112	0.112	0.00%	0.434	0.43	0.93%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00021	0.00021	0.00%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.57	0.57	0.00%	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		0.74	0.73	1.36%
Manganese-D	mg/L	0.00674	0.00673	0.15%	0.0053	0.0053	0.00%	0.00303	0.00301	0.66%	0.00397	0.00287	32.16%	0.0056	0.00537	4.19%	0.00941	0.00943	0.21%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	
Molybdenum-D	mg/L	0.00006	0.00005	18.18%	<0.00005	<0.00005		0.00007	0.00007	0.00%	0.00037	0.00019	64.29%	<0.00005	0.00025		0.00033	0.00033	0.00%
Nickel-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		0.00025	0.00026	3.92%	0.00034	0.00023	38.60%	0.00018	0.0002	10.53%	0.00054	0.00055	1.83%
Phosphorous-D	mg/L	0.01	0.01	0.00%	0.01	0.01	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.05	0.05	0.00%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	4.52	4.43	2.01%	4.03	4.04	0.25%	4.18	4.37	4.44%	3.93	3.97	1.01%	5.51	5.24	5.02%	6.56	6.85	4.33%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	1.7	1.7	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	1.4	1.3	7.41%	1.8	1.8	0.00%	3.6	3.6	0.00%
Strontium-D	mg/L	0.0225	0.0225	0.00%	0.0195	0.0196	0.51%	0.01687	0.01665	1.31%	0.016	0.0149	7.12%	0.0199	0.019	4.63%	0.0334	0.0339	1.49%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0024	0.0025	4.08%	0.0026	0.0027	3.77%	0.0022	0.0021	4.65%	0.002	0.0018	10.53%	0.0034	0.0032	6.06%	0.005	0.0052	3.92%
Uranium-D	mg/L	0.00011	0.00011	0.00%	0.00018	0.00018	0.00%	0.00014	0.00014	0.00%	0.00026	0.00019	31.11%	0.00014	0.00012	15.38%	0.00014	0.00014	0.00%
Vanadium-D	mg/L	0.00026	0.00021	21.28%	0.0001	0.0001	0.00%	<0.00005	<0.00005		0.00031	0.00031	0.00%	0.00026	0.00027	3.77%	0.0005	0.0005	0.00%

	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63237	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63271	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63753
Analytical Parameter	Unit	23-May-12	23-May-12	23-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	04-Jun-12	18-Jun-12	18-Jun-12	18-Jun-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Zinc-D	mg/L	0.0056	0.0056	0.00%	0.0068	0.0067	1.48%	0.0023	0.0023	0.00%	0.0042	0.004	4.88%	0.0031	0.003	3.28%	0.0104	0.0103	0.97%
D-Hardness as CaCO3	mg/L	8.7	8.7	0.00%	7	7	0.00%	<6.0	<6.0		<6.0	<6.0		7.2	6.5	10.22%	11.7	11.6	0.86%

Table 2: 2012 Lab Duplicates RPDs

Analytical Parameter	Unit	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
		Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
		Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
		17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12	
pH @ 25°C BC-D	pH	7.12	7.15	0.42%	6.98	7.02	0.57%	6.89	7.01	1.73%	7.46	7.57	1.46%	7.83	7.88	0.64%	7.87	7.95	1.01%	
Conductivity @ 25°C	uS/cm	35	32	8.96%	32	32	0.00%	33	33	0.00%	108	104	3.77%	103	103	0.00%	105	106	0.95%	
T-Dissolved Solids180°C	mg/L	64	56	13.33%	40	40	0.00%	30	40	28.57%	68			56	48	15.38%	68			
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	<2		<2			4	5	22.22%	<2			
Turbidity	NTU	1.4	1.7	19.35%	1.7			1	1	0.00%	1.3	1.3	0.00%	2.2	1.7	25.64%	1	1.1	9.52%	
Alkalinity as CaCO3	mg/L	11	11	0.00%	10	10	0.00%	10	10	0.00%	52	51	1.94%	51	52	1.94%	53	53	0.00%	
Fluoride-D	mg/L	0.05	0.05	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.07	0.07	0.00%	0.07	0.07	0.00%	0.07	0.07	0.00%	
Sulphate-D	mg/L	2	2	0.00%	2.7	2.7	0.00%	3.9	3.8	2.60%	1.5	1.5	0.00%	1.6	1.5	6.45%	1.7	1.8	5.71%	
Chloride-D	mg/L	0.3	<0.1		0.4	0.4	0.00%	0.5	0.6	18.18%	0.2	0.2	0.00%	0.2	0.2	0.00%	0.2	0.1	66.67%	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.01	<0.01		<0.02	<0.02		
Nitrate-N-D	mg/L	<0.005	<0.005		0.031	0.015	69.57%	0.011	0.01	9.52%	0.03	0.031	3.28%	0.02	0.019	5.13%	0.02	0.019	5.13%	
Nitrite-N-D	mg/L	<0.003	<0.003		<0.003	<0.003		0.015	0.016	6.45%	0.005	0.005	0.00%	0.007	0.006	15.38%	<0.003	<0.003		
Total Kjeldahl Nitrogen (TKN)	mg/L	0.17	0.16	6.06%	0.12	0.14	15.38%	<0.08	<0.08		<0.08	<0.08		0.13	0.15	14.29%	<0.08	<0.08		
Phosphorous-Ortho-DLL	mg/L										0.037	0.037	0.00%	0.039	0.04	2.53%	0.037	0.034	8.45%	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.04	0.04	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	
Carbon (Total Organic)	mg/L	10.9	10.7	1.85%	6.1	6	1.65%	4.9	5	2.02%	1.9	1.9	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	
Carbon (Dissolved Organic)	mg/L	9.5	10.5	10.00%	6.1	6	1.65%	4.9	5	2.02%	1.9	1.9	0.00%	1.5	1.5	0.00%	1.4	1.4	0.00%	
Aluminum-T	mg/L	0.131	0.131	0.00%	0.12	0.119	0.84%	0.121	0.12	0.83%	0.043	0.043	0.00%	0.157	0.163	3.75%	0.021	0.022	4.65%	
Antimony-T	mg/L	0.00009	0.00008	11.76%	0.00013	0.00012	8.00%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Arsenic-T	mg/L	0.0008	0.0007	13.33%	0.0005	0.0005	0.00%	0.0006	0.0006	0.00%	0.0011	0.0011	0.00%	0.0013	0.0014	7.41%	0.0011	0.0011	0.00%	
Barium-T	mg/L	0.00305	0.00313	2.59%	0.00323	0.0032	0.93%	0.00304	0.00288	5.41%	0.00531	0.00529	0.38%	0.00618	0.00651	5.20%	0.00477	0.00533	11.09%	
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.003	0.002	40.00%	<0.001	<0.001		0.003	0.002	40.00%	
Cadmium-T	mg/L	0.000016	0.000016	0.00%	<0.000015	<0.000015		<0.000015	<0.000015		0.000032	0.000036	11.76%	<0.000015	<0.000015		<0.000015	<0.000015		
Calcium-T	mg/L	3	2.9	3.39%	2.9	2.8	3.51%	3	3.1	3.28%	12.7	12.8	0.78%	13.1	13	0.77%	13.3	13.6	2.23%	
Chromium-T	mg/L	<0.0003	<0.0003		0.0003	0.0003	0.00%	<0.0003	<0.0003		0.0009	0.0009	0.00%	0.0012	0.0013	8.00%	0.0009	0.0009	0.00%	
Cobalt-T	mg/L	0.00004	0.00004	0.00%	0.00004	0.00003	28.57%	0.00005	0.00005	0.00%	0.00002	0.00002	0.00%	0.00006	0.00006	0.00%	<0.00002	<0.00002		
Copper-T	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		0.0002	0.0002	0.00%	0.0073	0.0074	1.36%	0.0001	0.0002	66.67%	<0.0001	<0.0001		
Iron-T	mg/L	0.202	0.205	1.47%	0.181	0.1814	0.22%	0.2259	0.2284	1.10%	0.0944	0.0948	0.42%	0.283	0.286	1.05%	0.0615	0.0604	1.80%	
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00084	0.00084	0.00%	0.00007	0.00007	0.00%	<0.00005	<0.00005		
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.001	0.00%	<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	0.65	0.64	1.55%	0.66	0.66	0.00%	0.76	0.77	1.31%	3	3.03	1.00%	3.03	3.07	1.31%	3.22	3.19	0.94%	
Manganese-T	mg/L	0.0138	0.0138	0.00%	0.0116	0.01146	1.21%	0.02055	0.0204	0.73%	0.00655	0.0066	0.76%	0.0208	0.0222	6.51%	0.00438	0.00433	1.15%	
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000008	<0.000008		
Molybdenum-T	mg/L	0.00024	0.00024	0.00%	0.00014	0.00012	15.38%	0.0002	0.00018	10.53%	0.00078	0.00076	2.60%	0.00083	0.00083	0.00%	0.00088	0.001	12.77%	

Analytical Parameter	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
Unit	17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12
Nickel-T	mg/L	0.00033	0.00033	0.00%	0.00021	0.00019	10.00%	0.00019	0.00018	5.41%	0.00008	0.00008	0.00%	0.0001	0.00012	18.18%	<0.00005	<0.00005	
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		0.04	0.04	0.00%	0.06	0.06	0.00%	0.04	0.04	0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.6	0.6	0.00%	0.6	0.6	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	6.66	6.27	6.03%	6.75	6.25	7.69%	6.47	6.29	2.82%	10.5	10.8	2.82%	8.61	8.59	0.23%	9.62	9.75	1.34%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	2.4	2.4	0.00%	2.3	2.3	0.00%	2.3	2.4	4.26%	3.6	3.6	0.00%	3.5	3.6	2.82%	3.8	3.8	0.00%
Strontium-T	mg/L	0.0271	0.0269	0.74%	0.02472	0.02455	0.69%	0.02684	0.02675	0.34%	0.0866	0.0866	0.00%	0.0865	0.0869	0.46%	0.086	0.0972	12.23%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0017	0.0016	6.06%	0.0014	0.0015	6.90%	0.0013	0.0013	0.00%	0.0013	0.0014	7.41%	0.0055	0.0057	3.57%	0.0007	0.0007	0.00%
Uranium-T	mg/L	0.00009	0.00008	11.76%	0.00008	0.00008	0.00%	0.00008	0.00008		0.00018	0.00018	0.00%	0.00027	0.00027	0.00%	0.00021	0.00023	9.09%
Vanadium-T	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		<0.0001	<0.0001		0.0016	0.0016	0.00%	0.0022	0.0023	4.44%	0.0016	0.0016	0.00%
Zinc-T	mg/L	0.0042	0.0043	2.35%	0.0039	0.0038	2.60%	0.0049	0.0048	2.06%	0.0124	0.0126	1.60%	<0.0005	<0.0005		0.0016	0.0016	0.00%
T-Hardness as CaCO3	mg/L	10.1	10	1.00%	10	9.8	2.02%	11	11	0.00%	44	44.4	0.90%	45.1	45.2	0.22%	46.6	47.1	1.07%
Aluminum-D	mg/L	0.116	0.114	1.74%	0.118	0.116	1.71%	0.096	0.098	2.06%	0.006	0.006	0.00%	0.004	0.004	0.00%	0.006	0.006	0.00%
Antimony-D	mg/L	0.00009	0.00008	11.76%	0.00013	0.00012	8.00%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-D	mg/L	0.0008	0.0007	13.33%	0.0005	0.0005	0.00%	0.0005	0.0005	0.00%	0.0011	0.0011	0.00%	0.0011	0.0011	0.00%	0.001	0.001	0.00%
Barium-D	mg/L	0.00305	0.00297	2.66%	0.00306	0.00306	0.00%	0.00304	0.00288	5.41%	0.00485	0.0048	1.04%	0.00451	0.00453	0.44%	0.00427	0.00409	4.31%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.001	0.00%	<0.001	<0.001	
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-D	mg/L	3	2.9	3.39%	2.8	2.8	0.00%	3	3.1	3.28%	12.7	12.6	0.79%	12.6	12.6	0.00%	12.5	12.2	2.43%
Chromium-D	mg/L	<0.0003	<0.0003		0.0003	0.0003	0.00%	<0.0003	<0.0003		0.0009	0.0009	0.00%	0.0009	0.0009	0.00%	0.0006	0.0006	0.00%
Cobalt-D	mg/L	<0.00002	<0.00002		0.00004	0.00003	28.57%	0.00003	0.00003	0.00%	0.00002	0.00002	0.00%	<0.00002	<0.00002		<0.00002	<0.00002	
Copper-D	mg/L	0.0002	0.0002	0.00%	<0.0001	<0.0001		0.0002	0.0002	0.00%	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Iron-D	mg/L	0.164	0.165	0.61%	0.1447	0.1468	1.44%	0.1422	0.1463	2.84%	0.0271	0.0275	1.47%	0.0174	0.0176	1.14%	0.0191	0.019	0.52%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.64	0.63	1.57%	0.67	0.66	1.50%	0.74	0.77	3.97%	3.06	3.07		2.98	2.98	0.00%	2.82	2.78	1.43%
Manganese-D	mg/L	0.0131	0.0129	1.54%	0.01089	0.01076	1.20%	0.01536	0.01591	3.52%	0.00451	0.00447	0.89%	<0.00005	<0.00005		0.00248	0.00246	0.81%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000008	<0.000008	
Molybdenum-D	mg/L	0.00023	0.00022	4.44%	0.00014	0.00012	15.38%	0.00014	0.00014	0.00%	0.00076	0.00076	0.00%	0.00071	0.00072	1.40%	0.00067	0.00067	0.00%
Nickel-D	mg/L	0.00033	0.00032	3.08%	0.00014	0.00013	7.41%	0.00013	0.00013	0.00%	0.00009	0.0001	10.53%	<0.00005	<0.00005		<0.00005	<0.00005	
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		0.04	0.04	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.5	0.5	0.00%	0.5	0.5	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	6.66	6.09	8.94%	6.75	6.25	7.69%	6.45	6.29	2.51%	10.2	10.2	0.00%	8.54	8.52	0.23%	9.56	9.15	4.38%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	2.4	2.3	4.26%	2.3	2.3	0.00%	2.3	2.4	4.26%	3.6	3.6	0.00%	3.5	3.5	0.00%	3.5	3.4	2.90%
Strontium-D	mg/L	0.0271	0.0265	2.24%	0.02352	0.02379	1.14%	0.02611	0.02611	0.00%	0.0866	0.0866	0.00%	0.0827	0.0825	0.24%	0.0738	0.0717	2.89%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0015	0.0014	6.90%	0.001	0.0011	9.52%	0.0009	0.0009	0.00%	0.0002	0.0003	40.00%	<0.0002	<0.0002		0.0002	<0.0002	
Uranium-D	mg/L	0.00008	0.00007	13.33%	0.00008	0.00008	0.00%	0.00007	0.00006	15.38%	0.00016	0.00016	0.00%	0.00018	0.00018	0.00%	0.00017	0.00017	0.00%
Vanadium-D	mg/L	0.00021	0.00021	0.00%	<0.00005	<0.00005		<0.00005	<0.00005		0.0015	0.0015	0.00%	0.00142	0.0014	1.42%	0.00118	0.00115	2.58%

	ID	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ1	WQ1	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD
	Type	F	LD		F	LD		F	LD		F	LD		F	LD		F	LD	
	Comment	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-63959	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:EC-62887
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	17-Sep-12	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Jan-12	12-Jan-12	12-Jan-12	13-Feb-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	12-Mar-12
Zinc-D	mg/L	0.0042	0.0043	2.35%	0.0039	0.0038	2.60%	0.0049	0.0048	2.06%	0.0087	0.0087	0.00%	<0.0005	<0.0005		0.0016	0.0016	0.00%
D-Hardness as CaCO3	mg/L	10	9.8	2.02%	9.7	9.7	0.00%	10	11	9.52%	44.2	44.2	0.00%	43.8	43.8	0.00%	42.7	41.8	2.13%

**Table 2: 2012 Lab Duplicates
RPDs**

Analytical Parameter	Unit	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
		Type	F	LD		F	LD		F	LD		F	LD		
		Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
			16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12	
pH @ 25°C BC-D	pH		7.88	7.88	0.00%	7.76	7.66	1.30%	7.43	7.41	0.27%	7.87	7.84	0.38%	1.20%
Conductivity @ 25°C	uS/cm		100	101	1.00%	64	60	6.45%	48	48	0.00%	101	102	0.99%	2.65%
T-Dissolved Solids180°C	mg/L		80	68	16.22%	36	36	0.00%	48	56	15.38%	36	40	10.53%	13.72%
Total Suspended Solids @105°C	mg/L		2	2	0.00%	13	12	8.00%	10	8	22.22%	<2	<2		8.74%
Turbidity	NTU		1.2	1.2	0.00%	4.3	4.2	2.35%	2.1	2.2	4.65%	1.5	1.3	14.29%	5.80%
Alkalinity as CaCO3	mg/L		52	53	1.90%	31	29	6.67%	20	24	18.18%	55	53	3.70%	9.09%
Fluoride-D	mg/L		0.08	0.08	0.00%	0.07	0.07	0.00%	0.06	0.06	0.00%	0.08	0.07	13.33%	6.38%
Sulphate-D	mg/L		1.4	1.5	6.90%	0.9	0.9	0.00%	1	1	0.00%	1.8	1.8	0.00%	4.69%
Chloride-D	mg/L		0.1	0.2	66.67%	0.9	0.8	11.76%	0.7	0.6	15.38%	<0.1	<0.1		14.33%
Ammonia - Nitrogen	mg/L		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		28.57%
Nitrate-N-D	mg/L		<0.005	<0.005		<0.005	<0.005		<0.005	<0.005		0.014	0.01	33.33%	15.05%
Nitrite-N-D	mg/L		0.003	0.003	0.00%	<0.003	<0.003		0.004	0.004	0.00%	<0.003	<0.003		3.12%
Total Kjeldahl Nitrogen (TKN)	mg/L		<0.08	<0.08		0.18	0.18	0.00%	0.23			<0.08			10.33%
Phosphorous-Ortho-DLL	mg/L		0.029	0.028	3.51%	<0.003	<0.003		0.039	0.04	2.53%				2.84%
Phosphorous (Total-Dissolved) LL	mg/L		0.05	0.04	22.22%	0.02	0.02	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	2.22%
Carbon (Total Organic)	mg/L		2.5	2.6	3.92%	10.5	10.6	0.95%	11	11.3	2.69%	11.3	10.8	4.52%	1.23%
Carbon (Dissolved Organic)	mg/L		2.5	2.5	0.00%	10.5	10.6	0.95%	10.9	11.3	3.60%	11.3	10.8	4.52%	1.92%
Aluminum-T	mg/L		0.028	0.029	3.51%	0.221	0.211	4.63%	0.247	0.247	0.00%	0.031	0.032	3.17%	2.63%
Antimony-T	mg/L		0.00007	0.00006	15.38%	<0.00005	0.00006		0.00005	0.00006	18.18%	<0.00005	<0.00005		10.12%
Arsenic-T	mg/L		0.0011	0.0012	8.70%	0.0006	0.0007	15.38%	0.0006	0.0006	0.00%	0.0011	0.0011	0.00%	6.38%
Barium-T	mg/L		0.00512	0.00506	1.18%	0.00708	0.00727	2.65%	0.00506	0.0051	0.79%	0.00481	0.00485	0.83%	2.45%
Beryllium-T	mg/L		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L		<0.001	<0.001		<0.001	<0.001		0.001	<0.001		<0.001	<0.001		26.67%
Cadmium-T	mg/L		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		4.23%
Calcium-T	mg/L		13.6	13.5	0.74%	7.1	7.2	1.40%	6.1	6.1	0.00%	12.8	13	1.55%	2.20%
Chromium-T	mg/L		0.0008	0.0008	0.00%	0.0007	0.0006	15.38%	0.0006	0.0006	0.00%	0.0009	0.0009	0.00%	3.77%
Cobalt-T	mg/L		<0.00002	<0.00002		0.00009	0.0001	10.53%	0.00006	0.00006	0.00%	0.00002	0.00002	0.00%	7.67%
Copper-T	mg/L		<0.0001	<0.0001		0.0005	0.0005	0.00%	0.0005	0.0005	0.00%	<0.0001	<0.0001		6.18%
Iron-T	mg/L		0.0788	0.08	1.51%	0.321	0.322	0.31%	0.32	0.32	0.00%	0.0889	0.0916	2.99%	0.87%
Lead-T	mg/L		<0.00005	<0.00005		0.00017	0.00016	6.06%	0.0001	0.00011	9.52%	<0.00005	<0.00005		3.73%
Lithium-T	mg/L		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.00%
Magnesium-T	mg/L		3.25	3.29	1.22%	1.58	1.59	0.63%	1.47	1.48	0.68%	3.02	3.02	0.00%	1.35%
Manganese-T	mg/L		0.00444	0.00452	1.79%	0.0145	0.0148	2.05%	0.0123	0.0122	0.82%	0.00697	0.00716	2.69%	1.40%
Mercury-T	mg/L		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-T	mg/L		0.0007	0.0007	0.00%	0.00029	0.00025	14.81%	0.00029	0.00029	0.00%	0.00081	0.00081	0.00%	10.39%

Analytical Parameter	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
	Type	F	LD		F	LD		F	LD		F	LD		
	Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
Unit	16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12	
Nickel-T	mg/L	0.00006	0.00005	18.18%	0.00029	0.00031	6.67%	0.00007	0.00008	13.33%	<0.00005	<0.00005		9.35%
Phosphorous-T	mg/L	0.05	0.05	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.04	0.04	0.00%	0.00%
Potassium-T	mg/L	0.7	0.7	0.00%	0.5	0.5	0.00%	<0.5	<0.5		0.6	0.6	0.00%	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-T	mg/L	8.78	8.64	1.61%	6.06	5.91	2.51%	5.54	5.45	1.64%	8.28	8.05	2.82%	2.59%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-T	mg/L	3.7	3.8	2.67%	2.4	2.3	4.26%	2.1	2.1	0.00%	4.2	3.9	7.41%	1.34%
Strontium-T	mg/L	0.0769	0.0772	0.39%	0.0507	0.0509	0.39%	0.0418	0.0418	0.00%	0.0837	0.0847	1.19%	1.86%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-T	mg/L	0.0007	0.0006	15.38%	0.0058	0.0058	0.00%	0.0068	0.0067	1.48%	0.0012	0.001	18.18%	4.32%
Uranium-T	mg/L	0.00017	0.00017	0.00%	0.00018	0.00018	0.00%	0.00017	0.00017	0.00%	0.00019	0.00019	0.00%	4.49%
Vanadium-T	mg/L	0.0018	0.0018	0.00%	0.0014	0.0014	0.00%	0.0012	0.0012	0.00%	0.0016	0.0016	0.00%	3.04%
Zinc-T	mg/L	<0.0005	<0.0005		0.0027	0.0027	0.00%	0.0095	0.0092	3.21%	0.0027	0.0026	3.77%	1.95%
T-Hardness as CaCO3	mg/L	47.3	47.2	0.21%	24.3	24.5	0.82%	21.3	21.4	0.47%	44.4	44.9	1.12%	0.91%
Aluminum-D	mg/L	0.01	0.01	0.00%	0.108	0.105	2.82%	0.119	0.119	0.00%	0.014	0.013	7.41%	1.47%
Antimony-D	mg/L	0.00007	0.00006	15.38%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		7.03%
Arsenic-D	mg/L	0.0011	0.0012	8.70%	0.0006	0.0006	0.00%	0.0005	0.0004	22.22%	0.0011	0.0011	0.00%	7.05%
Barium-D	mg/L	0.0049	0.00489	0.20%	0.00408	0.00404	0.99%	0.0039	0.00376	3.66%	0.00438	0.0043	1.84%	2.47%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.00%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		30.99%
Calcium-D	mg/L	13.4	13.5	0.74%	6.8	6.7	1.48%	5.8	5.6	3.51%	12.3	12.1	1.64%	2.26%
Chromium-D	mg/L	0.0008	0.0008	0.00%	0.0004	0.0004	0.00%	0.0005	0.0004	22.22%	0.0009	0.0009	0.00%	2.47%
Cobalt-D	mg/L	<0.00002	<0.00002		0.00005	0.00004	22.22%	0.00003	0.00004	28.57%	<0.00002	<0.00002		13.94%
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		0.0006	0.0006	0.00%	<0.0001	<0.0001		6.68%
Iron-D	mg/L	0.0404	0.0417	3.17%	0.14	0.14	0.00%	0.134	0.132	1.50%	0.0473	0.0449	5.21%	1.53%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		
Magnesium-D	mg/L	3.22	3.24	0.62%	1.56	1.54	1.29%	1.29	1.28	0.78%	3.02	3	0.66%	1.20%
Manganese-D	mg/L	0.00339	0.00343	1.17%	0.00456	0.00453	0.66%	0.00391	0.00402	2.77%	0.0044	0.00438	0.46%	3.36%
Mercury-D	mg/L	<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-D	mg/L	0.00064	0.00069	7.52%	0.00028	0.00025	11.32%	0.00012	0.00012	0.00%	0.00069	0.00069	0.00%	8.75%
Nickel-D	mg/L	<0.00005	<0.00005		0.00021	0.00021	0.00%	0.00019	0.00022	14.63%	<0.00005	<0.00005		9.05%
Phosphorous-D	mg/L	0.05	0.04	22.22%	0.02	0.02	0.00%	0.02	0.02	0.00%	0.04	0.04	0.00%	2.22%
Potassium-D	mg/L	0.6	0.6	0.00%	0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-D	mg/L	8.22	7.93	3.59%	5.19	5.19	0.00%	5.54	5.45	1.64%	8.06	8.05	0.12%	2.89%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-D	mg/L	3.7	3.7	0.00%	2.4	2.3	4.26%	2	2	0.00%	4.2	3.9	7.41%	1.90%
Strontium-D	mg/L	0.0769	0.0772	0.39%	0.0507	0.0509	0.39%	0.0388	0.0381	1.82%	0.0798	0.0785	1.64%	1.61%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-D	mg/L	<0.0002	<0.0002		0.0021	0.002	4.88%	0.002	0.0022	9.52%	0.0003	0.0004	28.57%	10.19%
Uranium-D	mg/L	0.00017	0.00017	0.00%	0.00012	0.00011	8.70%	0.00009	0.00009	0.00%	0.00017	0.00017	0.00%	5.24%
Vanadium-D	mg/L	0.00159	0.00157	1.27%	0.00103	0.00108	4.74%	0.00086	0.00082	4.76%	0.00161	0.0015	7.07%	3.61%

	ID	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	WQ3	WQ3	RPD	Mean RPD
	Type	F	LD		F	LD		F	LD		F	LD		
	Comment	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63189	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64183	
Analytical Parameter	Unit	16-Apr-12	16-Apr-12	16-Apr-12	14-May-12	14-May-12	14-May-12	22-May-12	22-May-12	22-May-12	15-Oct-12	15-Oct-12	15-Oct-12	
Zinc-D	mg/L	<0.0005	<0.0005		0.0027	0.0027	0.00%	0.0095	0.0092	3.21%	0.0027	0.0026	3.77%	1.76%
D-Hardness as CaCO3	mg/L	46.8	47	0.43%	23.3	23.1	0.86%	19.7	19.4	1.53%	43.2	42.6	1.40%	2.07%

5.45% Mean

2013 Lab Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914
	sample name	WQ17	WQ17	% Diff	WQ6	WQ6	% Diff	WQ6	WQ6	% Diff	WQ26	WQ26	% Diff	WQ3	WQ3
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	13-Jan-13	13-Jan-13		15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		12-Feb-13	12-Feb-13		11-Mar-13	11-Mar-13
Units															
Physical Tests															
pH @ 25°C BC-D	pH	7.37	7.21	2%	7.22	7.2	0%	7.4	7.4	0%	7.82	7.8	0%	7.82	7.79
Conductivity @ 25°C	uS/cm	91	92	1%	55	56	2%	59	59	0%	125	127	2%	106	106
T-Dissolved Solids180°C	mg/L (ppm)	50	50	0%		60	-		8	-	56	64	13%	48	52
Total Suspended Solids @ 105°C	mg/L (ppm)	<2	<2	-		<2	-		<2	-	<2	<2	-	2	2
Turbidity	NTU	1	1	0%	1	1.2	17%	0.7	0.7	0%	0.5	0.5	0%	1.3	1.4
Hardness as (CaCO3)	mg/L (ppm)	40	40	0%		23	-		22.7	-	60.6	60.9	0%	47.9	49.1
Dissolved Anions															
Alkalinity as CaCO3	mg/L (ppm)	40	40	0%	30	30	0%	29	28	3%	66	66	0%	58	57
Fluoride-D	mg/L (ppm)	0.06	0.06	0%	0.04	0.04	0%	0.05	0.05	0%	0.08	0.08	0%	0.08	0.08
Sulphate-D	mg/L (ppm)	4.2	4.2	0%	2.3	2.2	4%	2.2	2.2	0%	3.4	3.4	0%	2	2
Chloride-D	mg/L (ppm)	0.2	0.3	33%	0.2	0.2	0%	0.3	0.3	0%	0.4	0.4	0%	0.2	0.2
Nutrients															
Ammonia - Nitrogen	mg/L (ppm)	<0.02	<0.02	-		<0.02	-		<0.02	-	<0.02	<0.02	-	<0.02	<0.02
Nitrate-N-D	mg/L (ppm)	0.095	0.094	1%	0.023	0.025	8%	0.032	0.031	3%	0.031	0.029	6%	0.037	0.037
Nitrite-N-D	mg/L (ppm)	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	0.003	-	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	<0.08	<0.08	-	<0.08	<0.08	-		<0.08	-	<0.08	<0.08	-	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L (ppm)			-			-			-			-		
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	<0.01	<0.01	-		<0.01	-		<0.001	-	0.005	0.006	17%	0.05	0.05
Organic Parameters															
Carbon (Total Organic)	mg/L (ppm)	3.5	3.5	0%		3.3	-		2.6	-	2.2	2.2	0%	1.3	1.4
Carbon (Dissolved Organic)	mg/L (ppm)	3.5	3.5	0%		3.3	-		2.6	-	2.2	2.2	0%	1.3	1.4
Total Metals															
Aluminum-T	mg/L (ppm)	0.018	0.021	14%		0.035	-		0.019	-	0.007	0.007	0%	0.034	0.035
Antimony-T	mg/L (ppm)	<0.00005	<0.00005	-		0.00006	-		<0.00005	-	<0.00005	<0.00005	-	0.00005	0.00006
Arsenic-T	mg/L (ppm)	0.0003	0.0003	0%		0.0004	-		0.0003	-	0.0004	0.0003	25%	0.0012	0.0012
Barium-T	mg/L (ppm)	0.00766	0.00771	1%		0.00615	-		0.00554	-	0.00795	0.00811	2%	0.00446	0.00457
Beryllium-T	mg/L (ppm)	<0.0001	<0.0001	-		<0.0001	-		<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Boron-T	mg/L (ppm)	<0.001	<0.001	-		<0.001	-		<0.001	-	<0.001	<0.001	-	<0.001	<0.001
Cadmium-T	mg/L (ppm)	<0.000015	<0.000015	-		<0.000015	-		<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015
Calcium-T	mg/L (ppm)	11	11	0%		7	-		7	-	17.9	17.9	0%	14.3	14.6
Chromium-T	mg/L (ppm)	<0.0003	<0.0003	-		<0.0003	-		<0.0003	-	<0.0003	<0.0003	-	0.001	0.001
Cobalt-T	mg/L (ppm)	0.00005	0.00005	0%		0.00002	-		<0.00002	-	<0.00002	<0.00002	-	0.00002	0.00002
Copper-T	mg/L (ppm)	0.0006	0.0005	17%		0.0002	-		<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Iron-T	mg/L (ppm)	0.077	0.0762	1%		0.0946	-		0.0797	-	0.0236	0.0248	5%	0.0833	0.0844
Lead-T	mg/L (ppm)	<0.00005	<0.00005	-		<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Lithium-T	mg/L (ppm)	<0.001	<0.001	-		<0.001	-		<0.001	-	<0.001	<0.001	-	<0.001	<0.001
Magnesium-T	mg/L (ppm)	3.15	3.15	0%		1.29	-		1.24	-	3.85	3.91	2%	3.35	3.35
Manganese-T	mg/L (ppm)	0.01107	0.01104	0%		0.00759	-		0.00511	-	0.00369	0.00376	2%	0.00546	0.00545
Mercury-T	mg/L (ppm)	<0.000005	<0.000005	-		<0.000005	-		<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005
Molybdenum-T	mg/L (ppm)	0.00246	0.00243	1%		0.0005	-		0.00055	-	0.00084	0.00082	2%	0.00087	0.0009
Nickel-T	mg/L (ppm)	0.00008	0.00008	0%		0.00007	-		<0.00005	-	<0.00005	<0.00005	-	0.00007	0.00006
Phosphorous-T	mg/L (ppm)	<0.02	<0.02	-		<0.02	-		<0.001	-	0.005	0.006	17%	0.05	0.05
Potassium-T	mg/L (ppm)	<0.5	<0.5	-		<0.5	-		<0.5	-	0.6	0.6	0%	0.6	0.6
Selenium-T	mg/L (ppm)	<0.0006	<0.0006	-		<0.0006	-		<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006
Silicon-T	mg/L (ppm)	6.33	6.19	2%		6.26	-		6.26	-	7.57	6.52	14%	7.58	7.57
Silver-T	mg/L (ppm)	<0.00005	<0.00005	-		<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Sodium	mg/L (ppm)	3.8	3.8	0%		2.7	-		2.6	-	3.9	4	3%	4.1	4.1

2013 Lab Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914
	sample name	WQ17	WQ17	% Diff	WQ6	WQ6	% Diff	WQ6	WQ6	% Diff	WQ26	WQ26	% Diff	WQ3	WQ3
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	13-Jan-13	13-Jan-13		15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		12-Feb-13	12-Feb-13		11-Mar-13	11-Mar-13
Strontium-T	mg/L (ppm)	0.06428	0.06448	0%	0.05109	0.0514	-	0.101	0.102	1%	0.0855	0.0873		0.0855	0.0873
Thallium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005
Tin-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001
Titanium-T	mg/L (ppm)	0.0004	0.0004	0%	0.0008	0.0005	-	0.0002	0.0002	0%	0.0011	0.0012		0.0011	0.0012
Uranium-T	mg/L (ppm)	0.00009	0.00009	0%	0.00008	0.00006	-	0.00022	0.00022	0%	0.00021	0.00021		0.00021	0.00021
Vanadium-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	0.00141	0.00145		0.00141	0.00145
Zinc-T	mg/L (ppm)	0.0025	0.0023	8%	0.003	0.0024	-	0.0039	0.004	3%	0.0037	0.0038		0.0037	0.0038
T-Hardness as CaCO3	mg/L (ppm)	40	40	0%	23	23	-			-					
Dissolved Metals															
Aluminum-D	mg/L (ppm)	0.018	0.021	14%	0.035	0.019	-	0.007	0.007	0%	0.008	0.013		0.008	0.013
Antimony-D	mg/L (ppm)	<0.00005	<0.00005	-	0.00006	<0.00005	-	<0.00005	<0.00005	-	0.00005	0.00006		0.00005	0.00006
Arsenic-D	mg/L (ppm)	0.0003	0.0003	0%	0.0004	0.0002	-	0.0003	0.0003	0%	0.0012	0.0012		0.0012	0.0012
Barium-D	mg/L (ppm)	0.00761	0.00749	2%	0.00584	0.00554	-	0.00794	0.00811	2%	0.00368	0.00381		0.00368	0.00381
Beryllium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001		<0.0001	<0.0001
Boron-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001		<0.001	<0.001
Cadmium-D	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015		<0.000015	<0.000015
Calcium-D	mg/L (ppm)	11	11	0%	7	7	-	17.9	17.9	0%	13.6	14.2		13.6	14.2
Chromium-D	mg/L (ppm)	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	0.0009	0.0009		0.0009	0.0009
Cobalt-D	mg/L (ppm)	0.00005	0.00004	20%	0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002		<0.00002	<0.00002
Copper-D	mg/L (ppm)	0.0006	0.0005	17%	0.0002	0.0002	-	0.0001	0.0002	50%	0.0001	0.0001		0.0001	0.0001
Iron-D	mg/L (ppm)	0.0509	0.0502	1%	0.0738	0.0574	-	0.0206	0.0208	1%	0.0287	0.0288		0.0287	0.0288
Lead-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Lithium-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001		<0.001	<0.001
Magnesium-D	mg/L (ppm)	3.15	3.15	0%	1.29	1.24	-	3.85	3.91	2%	3.35	3.35		3.35	3.35
Manganese-D	mg/L (ppm)	0.00938	0.0094	0%	0.00622	0.00511	-	0.00369	0.00376	2%	0.00237	0.00237		0.00237	0.00237
Mercury-D	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005		<0.000005	<0.000005
Molybdenum-D	mg/L (ppm)	0.00221	0.00212	4%	0.0005	0.00047	-	0.00068	0.00064	6%	0.0008	0.00083		0.0008	0.00083
Nickel-D	mg/L (ppm)	0.00008	0.00008	0%	0.00007	<0.00005	-	<0.00005	<0.00005	-	0.00006	0.00005		0.00006	0.00005
Phosphorous-D	mg/L (ppm)	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	0.05	0.05		0.05	0.05
Potassium-D	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0.6	0.6	0%	0.6	0.6		0.6	0.6
Selenium-D	mg/L (ppm)	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006		<0.0006	<0.0006
Silicon-D	mg/L (ppm)	6.33	6.19	2%	6.26	6.26	-	7.57	6.52	14%	7.52	7.34		7.52	7.34
Silver-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Sodium-D	mg/L (ppm)	3.8	3.8	0%	2.7	2.6	-	3.9	4	3%	4.1	4.1		4.1	4.1
Strontium-D	mg/L (ppm)	0.0638	0.06286	1%	0.04984	0.0514	-	0.101	0.102	1%	0.0816	0.0873		0.0816	0.0873
Thallium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005		<0.00005	<0.00005
Tin-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001		<0.0001	<0.0001
Titanium-D	mg/L (ppm)	0.0002	0.0002	0%	0.0007	0.0004	-	<0.0002	<0.0002	-	0.0003	0.0003		0.0003	0.0003
Uranium-D	mg/L (ppm)	0.00009	0.00009	0%	0.00008	<0.00005	-	0.00021	0.00021	0%	0.00019	0.0002		0.00019	0.0002
Vanadium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005		-			-	0.00124	0.00127		0.00124	0.00127
Zinc-D	mg/L (ppm)	0.0025	0.0023	8%	0.003		-			-	0.0018	0.0019		0.0018	0.0019
D-Hardness as CaCO3	mg/L (ppm)	40	40	0%	23	23	-			-					
Cyanide															
Cyanide (Total)	mg/L (ppm)			-		<0.0050	-	<0.0050	<0.0050	-					
Cyanide (WAD)	mg/L (ppm)			-		<0.0050	-	<0.0050	<0.0050	-					
Cyanate	mg/L (ppm)			-	<0.20		-			-					
Thiocyanate (SCN)	mg/L (ppm)			-			-			-					

2013 Lab Duplicates	Lab file #		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181
	sample name	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ3
	type		LD	F		LD	F		LD	F		LD	F		LD
	date		12-Mar-13	12-Mar-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13
Physical Tests	Units														
pH @ 25°C BC-D	pH	0%	7.37	7.32	1%	7.82	7.79	0%	7.37	7.32	1%	7.66	7.7	1%	7.21
Conductivity @ 25°C	uS/cm	0%	60	59	2%	106	106	0%	60	59	2%	99	98	1%	44
T-Dissolved Solids180°C	mg/L (ppm)	8%	32	28	13%	48	52	8%	32	28	13%	44	52	15%	52
Total Suspended Solids @ 105°C	mg/L (ppm)	0%	2	2	0%	2	2	0%	<2	<2	-	<2	<2	-	4
Turbidity	NTU	7%	0.7	0.8	13%	1.3	1.4	7%	0.7	0.8	13%	2.4	2.5	4%	1.7
Hardness as (CaCO3)	mg/L (ppm)	2%	26.2	25.8	2%	49.6	50.2	1%	26.2	25.8	2%	42	41.9	0%	19.7
Dissolved Anions															
Alkalinity as CaCO3	mg/L (ppm)	2%	26	26	0%	58	57	2%	26	26	0%	48	48	0%	22
Fluoride-D	mg/L (ppm)	0%	0.05	0.05	0%	0.08	0.08	0%	0.05	0.05	0%	0.07	0.07	0%	0.06
Sulphate-D	mg/L (ppm)	0%	2.4	2.4	0%	2	2	0%	2.4	2.4	0%	1.8	1.9	5%	1.4
Chloride-D	mg/L (ppm)	0%	0.2	0.2	0%	0.2	0.2	0%	0.2	0.2	0%	0.2	0.2	0%	0.3
Nutrients															
Ammonia - Nitrogen	mg/L (ppm)	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02
Nitrate-N-D	mg/L (ppm)	0%	0.031	0.031	0%	0.037	0.037	0%	0.031	0.031	0%	0.029	0.024	17%	0.019
Nitrite-N-D	mg/L (ppm)	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	-	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	<0.08	-	<0.08	<0.08	-	0.2
Phosphorous-Ortho-DLL	mg/L (ppm)	-			-			-			-			-	
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0%	<0.01	<0.01	-	0.057	0.053	7%	0.027	0.032	16%	0.044	0.043	2%	0.014
Organic Parameters															
Carbon (Total Organic)	mg/L (ppm)	7%	2.4	2.8	14%	1.3	1.4	7%	2.4	2.8	14%	2.4	2.4	0%	12.2
Carbon (Dissolved Organic)	mg/L (ppm)	7%	2.4	2.8	14%	1.3	1.4	7%	2.4	2.8	14%	2.3	2.4	4%	12.2
Total Metals															
Aluminum-T	mg/L (ppm)	3%	0.026	0.027	4%	0.034	0.035	3%	0.026	0.027	4%	0.124	0.128	3%	0.191
Antimony-T	mg/L (ppm)	17%	0.00005	0.00005	0%	0.00005	0.00006	17%	0.00005	0.00005	0%	0.00007	0.00008	13%	0.00007
Arsenic-T	mg/L (ppm)	0%	0.0003	0.0003	0%	0.0012	0.0012	0%	0.0003	0.0003	0%	0.0023	0.0023	0%	0.0005
Barium-T	mg/L (ppm)	2%	0.00553	0.00558	1%	0.00446	0.00457	2%	0.00553	0.00558	1%	0.0106	0.0106	0%	0.00382
Beryllium-T	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-T	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	0.006	0.006	0%	<0.001
Cadmium-T	mg/L (ppm)	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000192
Calcium-T	mg/L (ppm)	2%	8.2	8.1	1%	14.3	14.6	2%	8.2	8.1	1%	11.9	11.9	0%	5.7
Chromium-T	mg/L (ppm)	0%	<0.0003	<0.0003	-	0.001	0.001	0%	<0.0003	<0.0003	-	0.0012	0.0012	0%	0.0004
Cobalt-T	mg/L (ppm)	0%	0.00002	0.00002	0%	0.00002	0.00002	0%	<0.00002	<0.00002	-	0.00009	0.00009	0%	0.00006
Copper-T	mg/L (ppm)	-	0.0002	0.0002	0%	<0.0001	<0.0001	-	0.0002	0.0002	0%	0.0004	0.0004	0%	0.001
Iron-T	mg/L (ppm)	1%	0.0901	0.0905	0%	0.0833	0.0844	1%	0.0901	0.0905	0%	0.314	0.317	1%	0.21
Lead-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00008	0.00009	11%	0.00005
Lithium-T	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-T	mg/L (ppm)	0%	1.37	1.36	1%	3.35	3.35	0%	1.37	1.36	1%	2.97	2.95	1%	1.34
Manganese-T	mg/L (ppm)	0%	0.00557	0.00558	0%	0.00546	0.00545	0%	0.00557	0.00558	0%	0.0259	0.0263	2%	0.00659
Mercury-T	mg/L (ppm)	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-T	mg/L (ppm)	3%	0.0006	0.00058	3%	0.00087	0.0009	3%	0.0006	0.00058	3%	0.00081	0.00083	2%	0.00026
Nickel-T	mg/L (ppm)	14%	0.00012	0.00012	0%	0.00007	0.00006	14%	0.00012	0.00012	0%	0.00015	0.00017	12%	0.00038
Phosphorous-T	mg/L (ppm)	0%	0.02	0.02	0%	0.057	0.053	7%	0.027	0.032	16%	0.044	0.043	2%	0.014
Potassium-T	mg/L (ppm)	0%	<0.5	<0.5	-	0.6	0.6	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-T	mg/L (ppm)	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0001	<0.0001	-	<0.0001
Silicon-T	mg/L (ppm)	0%	4.86	4.81	1%	7.58	7.57	0%	4.86	4.81	1%	7.42	7.24	2%	4.45
Silver-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-T	mg/L (ppm)	0%	2.9	2.9	0%	4.1	4.1	0%	2.9	2.9	0%	3.4	3.3	3%	1.9

2013 Lab Duplicates	Lab file #		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181
	sample name	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ3
	type		LD	F		LD	F		LD	F		LD	F		LD
	date		12-Mar-13	12-Mar-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13
Strontium-T	mg/L (ppm)	2%	0.0573	0.0565	1%	0.0855	0.0873	2%	0.0573	0.0565	1%	0.0804	0.0806	0%	0.0383
Thallium-T	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-T	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-T	mg/L (ppm)	8%	0.0005	0.0005	0%	0.0011	0.0012	8%	0.0005	0.0005	0%	0.0042	0.0042	0%	0.004
Uranium-T	mg/L (ppm)	0%	0.00007	0.00007	0%	0.00021	0.00021	0%	0.00007	0.00007	0%	0.00027	0.00026	4%	0.00013
Vanadium-T	mg/L (ppm)	3%	<0.00005	<0.00005	-	0.00141	0.00145	3%	<0.00005	<0.00005	-	0.00193	0.00196	2%	0.00076
Zinc-T	mg/L (ppm)	3%	0.0022	0.0022	0%	0.0037	0.0038	3%	0.0022	0.0022	0%	0.0022	0.0022	0%	0.0037
T-Hardness as CaCO3	mg/L (ppm)	-			-			-			-			-	
Dissolved Metals															
Aluminum-D	mg/L (ppm)	38%	0.016	0.015	6%	0.008	0.013	38%	0.016	0.015	6%	0.019	0.019	0%	0.183
Antimony-D	mg/L (ppm)	17%	0.00005	0.00005	0%	0.00005	0.00006	17%	0.00005	0.00005	0%	0.00007	0.00008	13%	0.00006
Arsenic-D	mg/L (ppm)	0%	0.0003	0.0003	0%	0.0012	0.0012	0%	0.0003	0.0003	0%	0.0023	0.0023	0%	0.0005
Barium-D	mg/L (ppm)	3%	0.00552	0.00533	3%	0.00368	0.00381	3%	0.00552	0.00533	3%	0.0106	0.0106	0%	0.00346
Beryllium-D	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-D	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	0.006	0.006	0%	<0.001
Cadmium-D	mg/L (ppm)	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000042
Calcium-D	mg/L (ppm)	4%	8.2	8.1	1%	13.6	14.2	4%	8.2	8.1	1%	11.7	11.7	0%	5.7
Chromium-D	mg/L (ppm)	0%	<0.0003	<0.0003	-	0.0009	0.0009	0%	<0.0003	<0.0003	-	0.0008	0.0008	0%	0.0004
Cobalt-D	mg/L (ppm)	-	0.00002	0.00002	0%	<0.00002	<0.00002	-	<0.00002	<0.00002	-	<0.00002	<0.00002	-	0.00006
Copper-D	mg/L (ppm)	0%	0.0002	0.0002	0%	<0.0001	<0.0001	-	0.0002	0.0002	0%	0.0004	0.0004	0%	0.001
Iron-D	mg/L (ppm)	0%	0.0606	0.0604	0%	0.0287	0.0288	0%	0.0606	0.0604	0%	0.0475	0.0471	1%	0.185
Lead-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Lithium-D	mg/L (ppm)	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-D	mg/L (ppm)	0%	1.37	1.36	1%	3.35	3.35	0%	1.37	1.36	1%	2.97	2.9	2%	1.34
Manganese-D	mg/L (ppm)	0%	0.00437	0.00432	1%	0.00237	0.00237	0%	0.00437	0.00432	1%	0.00352	0.00353	0%	0.00643
Mercury-D	mg/L (ppm)	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-D	mg/L (ppm)	4%	0.0006	0.00058	3%	0.0008	0.00083	4%	0.0006	0.00058	3%	0.00081	0.00083	2%	0.00026
Nickel-D	mg/L (ppm)	17%	0.00011	0.00012	8%	0.00006	0.00005	17%	0.00011	0.00012	8%	0.00008	0.00008	0%	0.00038
Phosphorous-D	mg/L (ppm)	0%	<0.01	<0.01	-	0.05	0.05	0%	<0.01	<0.01	-	0.04	0.04	0%	0.03
Potassium-D	mg/L (ppm)	0%	<0.5	<0.5	-	0.6	0.6	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-D	mg/L (ppm)	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0001	<0.0001	-	<0.0001
Silicon-D	mg/L (ppm)	2%	4.86	4.81	1%	7.52	7.34	2%	4.86	4.81	1%	6.62	6.51	2%	4.44
Silver-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-D	mg/L (ppm)	0%	2.9	2.9	0%	4.1	4.1	0%	2.9	2.9	0%	3.4	3.3	3%	1.9
Strontium-D	mg/L (ppm)	7%	0.0567	0.056	1%	0.0816	0.0873	7%	0.0567	0.056	1%	0.0804	0.0806	0%	0.0383
Thallium-D	mg/L (ppm)	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-D	mg/L (ppm)	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-D	mg/L (ppm)	0%	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0004	0.0004	0%	0.0007	0.0007	0%	0.0036
Uranium-D	mg/L (ppm)	5%	0.00007	0.00007	0%	0.00019	0.0002	5%	0.00007	0.00007	0%	0.00016	0.00016	0%	0.00013
Vanadium-D	mg/L (ppm)	2%	<0.00005	<0.00005	-	0.00124	0.00127	2%	<0.00005	<0.00005	-	0.00093	0.00089	4%	0.00067
Zinc-D	mg/L (ppm)	5%	0.0022	0.0022	0%	0.0018	0.0019	5%	0.0022	0.0022	0%	0.0022	0.0022	0%	0.0037
D-Hardness as CaCO3	mg/L (ppm)	-			-			-			-			-	
Cyanide															
Cyanide (Total)	mg/L (ppm)	-			-		<0.0050	-		<0.0050	-		<0.0050	-	
Cyanide (WAD)	mg/L (ppm)	-			-		<0.0050	-		<0.0050	-		<0.0050	-	
Cyanate	mg/L (ppm)	-			-			-			-			-	
Thiocyanate (SCN)	mg/L (ppm)	-			-			-			-	<0.50		-	

2013 Lab Duplicates	Lab file #	~LIMS:EC-65181		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65302	~LIMS:EC-65302		
	sample name	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	
	type	F		LD	F		LD	F		LD	F		LD	F		
	date	13-May-13		21-May-13	21-May-13		27-May-13	27-May-13		04-Jun-13	04-Jun-13		06-Jun-13	06-Jun-13		
Units																
Physical Tests																
pH @ 25°C BC-D	pH	7.33	2%		7.01	-	7.51	7.48	0%	7.11	6.9	3%			7.33	-
Conductivity @ 25°C	uS/cm	45	2%		32	-	50	50	0%	31	34	9%			47	-
T-Dissolved Solids180°C	mg/L (ppm)	60	13%	48	40	17%	80	68	15%		44	-			28	-
Total Suspended Solids @105°C	mg/L (ppm)	4	0%	<2	<2	-	4	3	25%		2	-			4	-
Turbidity	NTU	2	15%		1.1	-	1.5	1.5	0%	1.5	1.6	6%			1.5	-
Hardness as (CaCO3)	mg/L (ppm)	20.4	3%	11.3	11.2	1%	25	24.9	0%		12.5	-	21.3	21.6	1%	
Dissolved Anions																
Alkalinity as CaCO3	mg/L (ppm)	22	0%		12	-	23	22	4%	11	12	8%			21	-
Fluoride-D	mg/L (ppm)	0.07	14%		0.04	-	0.04	0.04	0%	0.03	0.03	0%			0.03	-
Sulphate-D	mg/L (ppm)	1.4	0%		1.7	-	1.4	1.4	0%	0.8	0.7	13%			0.6	-
Chloride-D	mg/L (ppm)	0.3	0%		0.3	-	0.2	0.2	0%	0.2	0.3	33%	0.2		0.3	33%
Nutrients																
Ammonia - Nitrogen	mg/L (ppm)	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-		<0.02	-	<0.02	<0.02	-	
Nitrate-N-D	mg/L (ppm)	0.016	16%		0.033	-	0.006	0.006	0%	0.054	0.055	2%			0.007	-
Nitrite-N-D	mg/L (ppm)	<0.003	-		<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-			<0.003	-
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.24	17%	0.15	0.18	17%	0.13	0.13	0%		0.08	-			0.15	-
Phosphorous-Ortho-DLL	mg/L (ppm)		-			-			-			-				-
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0.017	18%	0.01	0.01	0%	<0.01	<0.01	-		<0.01	-	0.01	0.01	0%	
Organic Parameters																
Carbon (Total Organic)	mg/L (ppm)	11.9	2%	7.8	7.8	0%	11.2	11.4	2%		8	-	11.2	11.1	1%	
Carbon (Dissolved Organic)	mg/L (ppm)	11.9	2%	7.8	7.8	0%	11.2	11.4	2%		8	-	11.1	11.1	0%	
Total Metals																
Aluminum-T	mg/L (ppm)	0.201	5%	0.15	0.153	2%	0.173	0.171	1%		0.134	-	0.156	0.156	0%	
Antimony-T	mg/L (ppm)	0.00007	0%	0.00006	0.00006	0%	0.00007	0.00007	0%		0.00006	-	0.00006	0.00007	14%	
Arsenic-T	mg/L (ppm)	0.0005	0%	0.0007	0.0007	0%	0.0006	0.0005	17%		0.0006	-	0.0005	0.0005	0%	
Barium-T	mg/L (ppm)	0.00379	1%	0.00473	0.00487	3%	0.00386	0.00378	2%		0.00484	-	0.00397	0.00391	2%	
Beryllium-T	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-	
Boron-T	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	0.001	0.001	0%		0.002	-	0.002	0.002	0%	
Cadmium-T	mg/L (ppm)	0.000045	77%	<0.000015	<0.000015	-	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-	
Calcium-T	mg/L (ppm)	5.7	0%	3.7	3.8	3%	7.4	7.4	0%		4	-	6.5	6.6	2%	
Chromium-T	mg/L (ppm)	0.0005	20%	<0.0003	<0.0003	-	0.0006	0.0006	0%		<0.0003	-	0.0005	0.0005	0%	
Cobalt-T	mg/L (ppm)	0.00006	0%	0.00003	0.00003	0%	0.00004	0.00005	20%		0.00003	-	0.00006	0.00006	0%	
Copper-T	mg/L (ppm)	0.0011	9%	0.0001	0.0001	0%	0.0006	0.0006	0%		0.0005	-	0.0007	0.0007	0%	
Iron-T	mg/L (ppm)	0.207	1%	0.101	0.103	2%	0.179	0.178	1%		0.0913	-	0.168	0.167	1%	
Lead-T	mg/L (ppm)	0.00005	0%	<0.00005	<0.00005	-	<0.00005	<0.00005	-		0.00005	-	<0.00005	<0.00005	-	
Lithium-T	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-	
Magnesium-T	mg/L (ppm)	1.48	9%	0.63	0.63	0%	1.59	1.54	3%		0.61	-	1.39	1.42	2%	
Manganese-T	mg/L (ppm)	0.00712	7%	0.00513	0.00512	0%	0.00657	0.00657	0%		0.00539	-	0.00592	0.00593	0%	
Mercury-T	mg/L (ppm)	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-T	mg/L (ppm)	0.00026	0%	0.00028	0.0003	7%	0.00032	0.0003	6%		0.00032	-	0.00028	0.00029	3%	
Nickel-T	mg/L (ppm)	0.00039	3%	0.00029	0.0003	3%	0.00008	0.00007	13%		0.00028	-	0.00025	0.0003	17%	
Phosphorous-T	mg/L (ppm)	0.017	18%	0.01	0.01	0%	<0.01	<0.01	-		0.01	-	0.03	0.03	0%	
Potassium-T	mg/L (ppm)	0.5	-	<0.5	<0.5	-	<0.5	<0.5	-		<0.5	-	<0.5	<0.5	-	
Selenium-T	mg/L (ppm)	<0.0001	-	0.0001	<0.0001	-	0.0001	0.0001	0%		<0.0001	-	0.0001	0.0001	0%	
Silicon-T	mg/L (ppm)	4.53	2%	4.08	4.08	0%	5.1	5.1	0%		4.32	-	5.82	5.84	0%	
Silver-T	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-	
Sodium-T	mg/L (ppm)	2	5%	1.7	1.6	6%	2.4	2.4	0%		1.6	-	2.2	2.2	0%	

2013 Lab Duplicates	Lab file #	~LIMS:EC-65181		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65302	~LIMS:EC-65302	
	sample name	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff	WQ6	WQ6	% Diff	WQ3	WQ3	% Diff
	type	F		LD	F		LD	F		LD	F		LD	F	
	date	13-May-13		21-May-13	21-May-13		27-May-13	27-May-13		04-Jun-13	04-Jun-13		06-Jun-13	06-Jun-13	
Strontium-T	mg/L (ppm)	0.0386	1%	0.0323	0.0326	1%	0.0443	0.0427	4%		0.0299	-	0.0413	0.0422	2%
Thallium-T	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Tin-T	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Titanium-T	mg/L (ppm)	0.0041	2%	0.0019	0.002	5%	0.0038	0.0035	8%		0.0017	-	0.0028	0.0027	4%
Uranium-T	mg/L (ppm)	0.00013	0%	0.00021	0.00022	5%	0.00014	0.00014	0%		0.00024	-	0.00016	0.00017	6%
Vanadium-T	mg/L (ppm)	0.00079	4%	0.00019	0.0002	5%	0.00054	0.0005	7%		<0.00005	-	0.00078	0.00074	5%
Zinc-T	mg/L (ppm)	0.0041	10%	0.0011	0.0011	0%	<0.0005	<0.0005	-		0.0221	-	0.0015	0.0016	6%
T-Hardness as CaCO3	mg/L (ppm)		-			-			-			-			-
Dissolved Metals															
Aluminum-D	mg/L (ppm)	0.201	9%	0.115	0.112	3%	0.138	0.138	0%		0.126	-	0.13	0.129	1%
Antimony-D	mg/L (ppm)	0.00006	0%	0.00006	0.00006	0%	<0.00005	<0.00005	-		0.00005	-	0.00006	0.00006	0%
Arsenic-D	mg/L (ppm)	0.0005	0%	0.0005	0.0005	0%	0.0005	0.0005	0%		0.0005	-	0.0004	0.0005	20%
Barium-D	mg/L (ppm)	0.00345	0%	0.00415	0.00414	0%	0.00342	0.00331	3%		0.0044	-	0.00335	0.00332	1%
Beryllium-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Boron-D	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		0.002	-	0.002	0.002	0%
Cadmium-D	mg/L (ppm)	0.000042	0%	<0.000015	<0.000015	-	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-
Calcium-D	mg/L (ppm)	5.7	0%	3.6	3.6	0%	7.4	7.4	0%		4	-	6.3	6.4	2%
Chromium-D	mg/L (ppm)	0.0005	20%	<0.0003	<0.0003	-	0.0003	0.0003	0%		<0.0003	-	0.0003	0.0003	0%
Cobalt-D	mg/L (ppm)	0.00006	0%	0.00002	0.00002	0%	<0.00002	<0.00002	-		0.00003	-	0.00005	0.00005	0%
Copper-D	mg/L (ppm)	0.0011	9%	0.0001	0.0001	0%	0.0005	0.0005	0%		0.0005	-	0.0007	0.0007	0%
Iron-D	mg/L (ppm)	0.201	8%	0.0675	0.0661	2%	0.117	0.117	0%		0.0648	-	0.112	0.113	1%
Lead-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		0.00005	-	<0.00005	<0.00005	-
Lithium-D	mg/L (ppm)	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-
Magnesium-D	mg/L (ppm)	1.48	9%	0.58	0.57	2%	1.59	1.54	3%		0.61	-	1.38	1.39	1%
Manganese-D	mg/L (ppm)	0.00712	10%	0.00223	0.00215	4%	0.00258	0.00252	2%		0.00247	-	0.00229	0.00232	1%
Mercury-D	mg/L (ppm)	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-
Molybdenum-D	mg/L (ppm)	0.00026	0%	0.00027	0.00027	0%	<0.00005	<0.00005	-		0.00031	-	0.00026	0.00026	0%
Nickel-D	mg/L (ppm)	0.00039	3%	0.00028	0.00027	4%	<0.00005	<0.00005	-		0.00028	-	0.00025	0.0003	17%
Phosphorous-D	mg/L (ppm)	0.03	0%	0.01	0.01	0%	<0.01	<0.01	-		<0.01	-	0.01	0.01	0%
Potassium-D	mg/L (ppm)	0.5	-	<0.5	<0.5	-	<0.5	<0.5	-		<0.5	-	<0.5	<0.5	-
Selenium-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	0.0001	0.0001	0%
Silicon-D	mg/L (ppm)	4.43	0%	3.05	3.19	4%	5.1	5.1	0%		4.32	-	5.82	5.84	0%
Silver-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Sodium-D	mg/L (ppm)	2	5%	1.7	1.6	6%	2.4	2.4	0%		1.6	-	2.1	2.2	5%
Strontium-D	mg/L (ppm)	0.0386	1%	0.0294	0.0294	0%	0.023	0.0237	3%		0.0299	-	0.041	0.0411	0%
Thallium-D	mg/L (ppm)	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-
Tin-D	mg/L (ppm)	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-
Titanium-D	mg/L (ppm)	0.0041	12%	0.0012	0.0013	8%	0.0024	0.0025	4%		0.0017	-	0.0024	0.0023	4%
Uranium-D	mg/L (ppm)	0.00013	0%	0.00019	0.00019	0%	0.00012	0.00012	0%		0.00022	-	0.00013	0.00013	0%
Vanadium-D	mg/L (ppm)	0.00079	15%	<0.00005	<0.00005	-	0.00044	0.00042	5%		<0.00005	-	0.00061	0.00059	3%
Zinc-D	mg/L (ppm)	0.0041	10%	0.0011	0.0011	0%	<0.0005	<0.0005	-		0.0221	-	0.0015	0.0016	6%
D-Hardness as CaCO3	mg/L (ppm)		-			-			-			-			-
Cyanide															
Cyanide (Total)	mg/L (ppm)	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-		<0.0050	-	<0.0050	<0.0050	-
Cyanide (WAD)	mg/L (ppm)	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-		<0.0050	-	<0.0050	<0.0050	-
Cyanate	mg/L (ppm)		-			-			-			-			-
Thiocyanate (SCN)	mg/L (ppm)		-			-			-			-			-

2013 Lab Duplicates	Lab file #	~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391	~LIMS:EC-65391		Mean RPDs
	sample name	WQ3	WQ3	% Diff	WQ3	WQ3	% Diff	
	type	LD	F		LD	F		
	date	10-Jun-13	10-Jun-13		17-Jun-13	17-Jun-13		
Units								
Physical Tests								
pH @ 25°C BC-D	pH		7.42	-	7.37	7.36	0%	1%
Conductivity @ 25°C	uS/cm		62	-	55	55	0%	2%
T-Dissolved Solids180°C	mg/L (ppm)		60	-	80	68	15%	12%
Total Suspended Solids @105°C	mg/L (ppm)		2	-	3	3	0%	4%
Turbidity	NTU		1.7	-	3.4	3.4	0%	6%
Hardness as (CaCO3)	mg/L (ppm)	26	26.3	1%	23.2	23.8	3%	1%
Dissolved Anions								
Alkalinity as CaCO3	mg/L (ppm)		26	-	26	25	4%	2%
Fluoride-D	mg/L (ppm)		0.07	-	0.04	0.04	0%	1%
Sulphate-D	mg/L (ppm)		2.1	-	0.6	0.8	25%	4%
Chloride-D	mg/L (ppm)		0.3	-	0.4	0.5	20%	9%
Nutrients								
Ammonia - Nitrogen	mg/L (ppm)	<0.02	<0.02	-	<0.02	<0.02	-	
Nitrate-N-D	mg/L (ppm)		0.096	-	0.014	0.017	18%	5%
Nitrite-N-D	mg/L (ppm)		<0.003	-	<0.003	<0.003	-	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)		<0.08	-	0.18	0.15	17%	13%
Phosphorous-Ortho-DLL	mg/L (ppm)			-			-	
Phosphorous (Total-Dissolved) LL	mg/L (ppm)	0.01	0.01	0%	0.01	0.01	0%	6%
Organic Parameters								
Carbon (Total Organic)	mg/L (ppm)	7.8	8	3%	9.1	9.1	0%	4%
Carbon (Dissolved Organic)	mg/L (ppm)	7.8	7.6	3%	9	9.1	1%	4%
Total Metals								
Aluminum-T	mg/L (ppm)	0.124	0.116	6%	0.117	0.117	0%	3%
Antimony-T	mg/L (ppm)	0.00009	0.00009	0%	0.00009	0.00008	11%	6%
Arsenic-T	mg/L (ppm)	0.0008	0.0003	63%	0.0005	0.0005	0%	8%
Barium-T	mg/L (ppm)	0.00456	0.00449	2%	0.00498	0.00498	0%	1%
Beryllium-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Boron-T	mg/L (ppm)	<0.001	<0.001	-	0.001	0.001	0%	0%
Cadmium-T	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	77%
Calcium-T	mg/L (ppm)	7.9	7.8	1%	7.4	7.4	0%	1%
Chromium-T	mg/L (ppm)	0.0005	0.0005	0%	0.0004	0.0004	0%	3%
Cobalt-T	mg/L (ppm)	0.00005	0.00005	0%	0.00006	0.00007	14%	3%
Copper-T	mg/L (ppm)	0.0002	0.0002	0%	<0.0001	<0.0001	-	3%
Iron-T	mg/L (ppm)	0.136	0.131	4%	0.145	0.147	1%	2%
Lead-T	mg/L (ppm)	<0.00005	<0.00005	-	0.00005	0.00005	0%	4%
Lithium-T	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	
Magnesium-T	mg/L (ppm)	1.66	1.68	1%	1.57	1.57	0%	2%
Manganese-T	mg/L (ppm)	0.00683	0.00689	1%	0.00643	0.0065	1%	1%
Mercury-T	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-T	mg/L (ppm)	0.00037	0.00045	18%	0.00034	0.00032	6%	5%
Nickel-T	mg/L (ppm)	0.00017	0.0002	15%	0.00457	0.00392	14%	9%
Phosphorous-T	mg/L (ppm)	0.05	0.04	20%	0.03	0.03	0%	7%
Potassium-T	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0%
Selenium-T	mg/L (ppm)	<0.0001	<0.0001	-	0.0001	0.0001	0%	0%
Silicon-T	mg/L (ppm)	5.65	5.52	2%	6.08	6.03	1%	2%
Silver-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Sodium-T	mg/L (ppm)	2.4	2.5	4%	2.5	2.5	0%	2%

2013 Lab Duplicates	Lab file #	~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391	~LIMS:EC-65391		Mean RPDs
	sample name	WQ3	WQ3	% Diff	WQ3	WQ3	% Diff	
	type	LD	F		LD	F		
	date	10-Jun-13	10-Jun-13		17-Jun-13	17-Jun-13		
Strontium-T	mg/L (ppm)	0.0519	0.0519	0%	0.0481	0.0485	1%	1%
Thallium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Tin-T	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Titanium-T	mg/L (ppm)	0.003	0.0028	7%	0.0026	0.0025	4%	4%
Uranium-T	mg/L (ppm)	0.00014	0.00014	0%	0.00015	0.00015	0%	1%
Vanadium-T	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	4%
Zinc-T	mg/L (ppm)	0.0014	0.0015	7%	0.0012	0.0011	8%	4%
T-Hardness as CaCO3	mg/L (ppm)			-			-	
Dissolved Metals								
Aluminum-D	mg/L (ppm)	0.093	0.093	0%	0.103	0.105	2%	9%
Antimony-D	mg/L (ppm)	<0.00005	<0.00005	-	0.00009	0.00008	11%	6%
Arsenic-D	mg/L (ppm)	0.0003	0.0003	0%	<0.0001	<0.0001	-	2%
Barium-D	mg/L (ppm)	0.0039	0.00406	4%	0.00357	0.00376	5%	2%
Beryllium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Boron-D	mg/L (ppm)	<0.001	<0.001	-	0.001	0.001	0%	0%
Cadmium-D	mg/L (ppm)	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0%
Calcium-D	mg/L (ppm)	7.7	7.7	0%	6.9	7.1	3%	1%
Chromium-D	mg/L (ppm)	0.0005	0.0005	0%	<0.0003	<0.0003	-	3%
Cobalt-D	mg/L (ppm)	0.00004	0.00003	25%	0.00004	0.00004	0%	6%
Copper-D	mg/L (ppm)	0.0002	0.0002	0%	<0.0001	<0.0001	-	7%
Iron-D	mg/L (ppm)	0.0951	0.0966	2%	0.099	0.101	2%	1%
Lead-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Lithium-D	mg/L (ppm)	<0.001	<0.001	-	<0.001	<0.001	-	
Magnesium-D	mg/L (ppm)	1.66	1.68	1%	1.46	1.49	2%	2%
Manganese-D	mg/L (ppm)	0.00315	0.00316	0%	0.00113	0.0011	3%	2%
Mercury-D	mg/L (ppm)	<0.000005	<0.000005	-	<0.000005	<0.000005	-	
Molybdenum-D	mg/L (ppm)	0.00033	0.00033	0%	0.00031	0.00027	13%	3%
Nickel-D	mg/L (ppm)	0.00017	0.0002	15%	0.00457	0.00392	14%	9%
Phosphorous-D	mg/L (ppm)	0.01	0.01	0%	0.01	0.01	0%	0%
Potassium-D	mg/L (ppm)	<0.5	<0.5	-	<0.5	<0.5	-	0%
Selenium-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	0%
Silicon-D	mg/L (ppm)	4.88	4.83	1%	4.41	4.49	2%	2%
Silver-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Sodium-D	mg/L (ppm)	2.4	2.5	4%	<0.5	<0.5	-	2%
Strontium-D	mg/L (ppm)	0.0486	0.0494	2%	0.0461	0.046	0%	2%
Thallium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	
Tin-D	mg/L (ppm)	<0.0001	<0.0001	-	<0.0001	<0.0001	-	
Titanium-D	mg/L (ppm)	0.0019	0.0019	0%	0.0021	0.0023	9%	3%
Uranium-D	mg/L (ppm)	0.00012	0.00012	0%	0.00012	0.00011	8%	1%
Vanadium-D	mg/L (ppm)	<0.00005	<0.00005	-	<0.00005	<0.00005	-	5%
Zinc-D	mg/L (ppm)	0.0014	0.0015	7%	0.0012	0.0011	8%	5%
D-Hardness as CaCO3	mg/L (ppm)			-			-	
Cyanide								
Cyanide (Total)	mg/L (ppm)		<0.0050	-		<0.0050	-	
Cyanide (WAD)	mg/L (ppm)		<0.0050	-		<0.0050	-	
Cyanate	mg/L (ppm)			-			-	
Thiocyanate (SCN)	mg/L (ppm)			-			-	

Table 3: 2011 Field Duplicates RPDs

Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Physical Tests																						
pH @ 25°C BC-T	pH units	6.37	6.37	0%	7.07	7.03	1%	7.32	7.31	0%	7.66	7.58	1%	7.55	7.58	0%	8.15	8.08	1%	7.81	7.82	0%
Conductivity @ 25°C	mS/cm	17	23	26%	37	37	0%	37	38	3%	108	110	2%	90	90	0%	146	141	3%	134	135	1%
T-Dissolved Solids180°C	mg/L (ppm)	52	32	38%	20	96	79%	24	24	0%	152	104	32%	100	44	56%	120	104	13%	96	88	8%
Total Suspended Solids @105°C	mg/L (ppm)	< 2	5		7	11	36%	< 2	< 2		< 2	< 2		< 2	< 2		5	5	0%	6	5	17%
Turbidity	NTU	1.1	1.3	15%	3.9	2.9	26%	1.2	0.9	25%	1	0.9	10%	1	0.8	20%	1.6	1.8	11%	3.5	3.3	6%
Dissolved Anions																						
Alkalinity as CaCO3	mg/L (ppm)	3	3	0%	10	13	23%	16	16	0%	53	54	2%	43	43	0%	69	69	0%	63	62	2%
Fluoride-D	mg/L (ppm)	0.2	0.3	33%	0.2	0.3	33%	0.2	0.2	0%	0.05	0.05	0%	0.04	0.04	0%	0.4	0.5	20%	0.07	0.07	0%
Sulphate-D	mg/L (ppm)	0.03	0.04	25%	0.05	0.05	0%	0.03	0.03	0%	1.8	1.9	5%	1.7	1.7	0%	0.08	0.08	0%	4	4.1	2%
Chloride-D	mg/L (ppm)	1.6	2.1	24%	1.5	1.5	0%	0.9	0.8	11%	0.2	0.2	0%	0.2	0.2	0%	4.4	4.8	8%	0.3	0.3	0%
Nutrients																						
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.04	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	0.02	
Nitrate-N-D	mg/L (ppm)	0.006	0.056	89%	0.015	0.016	6%	< 0.005	< 0.005		< 0.005	< 0.005		< 0.005	< 0.005		0.021	0.018	14%	0.007	< 0.005	
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.46	0.61	25%	0.32	0.13	59%	< 0.08	0.09		< 0.08	0.55		< 0.08	< 0.08		0.18	0.28	36%	0.75	1.03	27%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		0.004	0.004	0%	0.004	0.007	43%	0.071	0.064	10%	< 0.003	< 0.003		< 0.003	< 0.003	
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.01	0.009	10%	0.014	0.015	7%	0.005	0.005	0%	0.007	0.007	0%	0.006	0.007	14%	0.004	0.004	0%	0.011	0.011	0%
Organic Parameters																						
Carbon (Total Organic)	mg/L (ppm)	11.9	12.5	5%	20.4	20.5	0%	5.9	5.1	14%	3.6	3.7	3%	5.2	4.8	8%	7	7.3	4%	9.8	9.9	1%
Carbon (Dissolved Organic)	mg/L (ppm)	10.7	11.8	9%	22.1	21.7	2%	5.1	5.1	0%	3.6	3.7	3%	5.2	4.8	8%	10.9	11.2	3%	10	10	0%
Total Metals																						
Aluminum	mg/L (ppm)	0.302	0.304	1%	0.596	0.581	3%	0.07	0.07	0%	0.022	0.022	0%	0.031	0.03	3%	0.039	0.053	26%	0.066	0.07	6%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0008	0.0008	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0005	0.0005	0%
Barium	mg/L (ppm)	0.00319	0.00311	3%	0.00627	0.00628	0%	0.00501	0.0051	2%	0.00845	0.00857	1%	0.00693	0.00671	3%	0.00571	0.00591	3%	0.00623	0.00637	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	0.001		< 0.001	< 0.001		< 0.001	0.003		< 0.001	< 0.001		0.006	0.003	50%	0.003	0.002	33%	0.002	0.002	0%
Cadmium	mg/L (ppm)	0.000027	0.000038	29%	0.000029	0.000041	29%	< 0.000015	< 0.000015		0.00002	< 0.000015		< 0.000015	< 0.000015		0.000024	0.000022	8%	< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	4.7	4.7	0%	5.1	4.8	6%	13.8	13.9	1%	12.4	12.3	1%	20.5	20.6	0%	18.1	18.2	1%
Chromium	mg/L (ppm)	0.0003	0.0003	0%	0.0006	0.0006	0%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00005	0.00005	0%	0.00014	0.00013	7%	0.00003	0.00003	0%	0.00007	0.00003	57%	0.00003	0.00003	0%	0.00003	0.00003	0%	0.00007	0.00006	14%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.001	0.0034	71%	0.0003	0.0002	33%	0.0004	0.0003	25%	0.0002	0.0001	50%	0.0003	0.0002	33%	0.0006	0.0006	0%
Iron	mg/L (ppm)	0.152	0.149	2%	0.5	0.488	2%	0.108	0.108	0%	0.159	0.16	1%	0.128	0.138	7%	0.0541	0.0693	22%	0.128	0.123	4%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		0.00014	0.00011	21%	< 0.00005	0.00005		< 0.00005	< 0.00005		0.00009	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		1.33	1.35	1%	0.8	0.8	0%	3.3	3.37	2%	2.8	2.77	1%	4.61	4.62	0%	4.39	4.42	1%
Manganese	mg/L (ppm)	0.0113	0.0111	2%	0.0335	0.038	12%	0.00769	0.00766	0%	0.0185	0.0187	1%	0.0164	0.0164	0%	0.0063	0.0075	16%	0.0208	0.0194	7%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		0.000016	0.000018	11%	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	0.00009	0.00008	11%	0.00012	0.0001	17%	0.00043	0.00047	9%	0.00074	0.0007	5%	0.00051	0.00049	4%	0.00046	0.00044	4%	0.0005	0.00049	2%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00054	0.00054	0%	0.00017	0.00017	0%	< 0.00005	< 0.00005		0.00013	0.00016	19%	0.00025	0.00028	11%	0.00031	0.0003	3%
Phosphorus	mg/L (ppm)	< 0.02	< 0.02		0.03	0.03	0%	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.02	0.02	0%
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		0.5	0.5	0%	< 0.5	< 0.5		0.8	0.8	0%	0.8	0.8	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.45	3.39	2%	5.21	4.8	8%	5.2	5.32	2%	6.25	6.33	1%	6.3	6.3	0%	3.8	3.87	2%	3.97	4.01	1%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.9	1.9	0%	2	2	0%	3.3	3.4	3%	2.9	3	3%	3.4	3.4	0%	3.2	3.2	0%
Strontium	mg/L (ppm)	0.0147	0.0149	1%	0.0302	0.0298	1%	0.0388	0.0386	1%	0.0883	0.0902	2%	0.0713	0.0717	1%	0.092	0.0933	1%	0.0885	0.0899	2%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	

Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Titanium	mg/L (ppm)	0.0041	0.0037	10%	0.0137	0.0122	11%	0.0013	0.001	23%	0.0006	0.0008	25%	0.0008	0.0006	25%	0.0012	0.0016	25%	0.0021	0.0024	13%
Uranium	mg/L (ppm)	0.00017	0.00017	0%	0.00013	0.00013	0%	0.00015	0.00014	7%	0.00015	0.00016	6%	0.00011	0.00011	0%	0.00009	0.00009	0%	0.0001	0.00009	10%
Vanadium	mg/L (ppm)	0.0002	0.0002	0%	0.001	0.001	0%	0.0001	0.0001	0%	0.0003	0.0003	0%	0.0002	0.0002	0%	< 0.0001	< 0.0001	0%	0.0003	0.0004	25%
Zinc	mg/L (ppm)	0.0047	0.0085	45%	0.0046	0.0054	15%	0.001	0.0016	38%	0.0014	< 0.0005	< 0.0005	< 0.0005	< 0.0005	0%	0.0046	0.0023	50%	0.0012	0.0011	8%
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		17.2	17.3	1%	15.9	15.2	4%	48.1	48.5	1%	42.4	42	1%	70.2	70.5	0%	63.1	63.7	1%
Parameter	Lab file #	EC61018	EC61018	% Diff	EC60904	EC60904	% Diff	EC61543	EC61543	% Diff	EC61850	EC61850	% Diff	EC62129	EC62129	% Diff	EC60941	EC60941	% Diff	EC61071	EC61071	% Diff
Date Sampled	Lab ID	11-6380-	11-6392-		11-5501-	11-5510-		11-10870-	11-10879-		11-13821-	11-13829-		11-16734-	11-16742-		11-5864-	11-5870-		11-6757-	11-6764-	
Sample No.	sample name	WQ1	WQ1-FD		WQ5	WQ5-FD		WQ6	WQ6-FD		WQ7	WQ7-FD		WQ7	WQ7-FD		WQ8	WQ8-FD		WQ8	WQ8-FD	
	date	6-Jun-11	6-Jun-11		17-May-11	17-May-11		15-Aug-11	15-Aug-11		19-Sep-11	19-Sep-11		17-Oct-11	17-Oct-11		24-May-11	24-May-11		13-Jun-11	13-Jun-11	
Dissolved Metals																						
Aluminum	mg/L (ppm)	0.241	0.242	0%	0.253	0.307	18%	0.048	0.046	4%	0.012	0.01	17%	0.019	0.019	0%	0.008	0.008	0%	0.018	0.018	0%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Arsenic	mg/L (ppm)	0.0003	0.0003	0%	0.0003	0.0003	0%	0.0007	0.0007	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0004	0.0004	0%
Barium	mg/L (ppm)	0.0028	0.00284	1%	0.00403	0.00398	1%	0.00465	0.00461	1%	0.00845	0.00853	1%	0.00656	0.00666	2%	0.00528	0.00536	1%	0.00577	0.00586	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Boron	mg/L (ppm)	< 0.001	0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		0.001	< 0.001		0.003	0.002	33%	0.002	0.001	50%
Cadmium	mg/L (ppm)	0.000027	0.000015	44%	0.000029	< 0.000015	< 0.000015	< 0.000015	< 0.000015		0.00002	< 0.000015	< 0.000015	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015	
Calcium	mg/L (ppm)	1.6	1.6	0%	4.6	4.5	2%	4.5	4.5	0%	13.8	13.8	0%	11.5	11.6	1%	19.1	19.1	0%	17.7	17.7	0%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		0.0005	0.0004	20%	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003	
Cobalt	mg/L (ppm)	0.00004	0.00003	25%	0.00006	0.00007	14%	0.00003	0.00002	33%	0.00007	< 0.00002		0.00003	0.00003	0%	< 0.00002	< 0.00002		0.00004	0.00004	0%
Copper	mg/L (ppm)	0.0005	0.0005	0%	0.0008	0.0034	76%	0.0003	0.0002	33%	0.0004	0.0003	25%	< 0.0001	< 0.0001		0.0003	0.0002	33%	0.0006	0.0006	0%
Iron	mg/L (ppm)	0.105	0.108	3%	0.174	0.216	19%	0.0669	0.0652	3%	0.128	0.127	1%	0.1	0.102	2%	0.0143	0.0137	4%	0.0468	0.0438	6%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00009	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001	
Magnesium	mg/L (ppm)	< 0.50	< 0.50		1.33	1.35	1%	0.77	0.77	0%	3.25	3.23	1%	2.74	2.74	0%	4.33	4.42	2%	4.12	4.17	1%
Manganese	mg/L (ppm)	0.00633	0.00636	0%	0.00858	0.00938	9%	0.00542	0.00534	1%	0.0163	0.0161	1%	0.0148	0.015	1%	0.00098	0.00099	1%	0.0122	0.0107	12%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		0.000016	0.000017	6%	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008	
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005		0.00005	0.00006	17%	0.00039	0.00042	7%	0.00074	0.00069	7%	0.0005	0.00047	6%	0.00039	0.00042	7%	0.00049	0.00046	6%
Nickel	mg/L (ppm)	0.00028	0.00028	0%	0.00029	0.00031	6%	0.00017	0.00015	12%	< 0.00005	< 0.00005		0.00013	0.00016	19%	0.00019	0.00018	5%	0.00031	0.0003	3%
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01		0.01	0.01	0%	< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	< 0.01		< 0.01	0.01	
Potassium	mg/L (ppm)	< 0.5	< 0.5		< 0.5	< 0.5		< 0.5	< 0.5		0.5	0.5	0%	< 0.5	0.5		0.7	0.7	0%	0.7	0.7	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006	
Silicon	mg/L (ppm)	3.17	3.26	3%	4.5	4.8	6%	5.2	5.14	1%	6.25	6.33	1%	6.17	6.18	0%	3.66	3.53	4%	3.62	3.7	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Sodium	mg/L (ppm)	1	1	0%	1.9	1.9	0%	1.9	1.9	0%	3.2	3.2	0%	2.9	3	3%	3.2	3.2	0%	3	3	0%
Strontium	mg/L (ppm)	0.0145	0.0144	1%	0.026	0.0255	2%	0.0371	0.0378	2%	0.0883	0.0902	2%	0.0713	0.0717	1%	0.0919	0.0919	0%	0.0871	0.0871	0%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005	
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001	
Titanium	mg/L (ppm)	0.0018	0.0017	6%	0.0023	0.0044	48%	0.0007	0.0005	29%	0.0004	< 0.0002		0.0003	0.0002	33%	0.0003	0.0003	0%	0.0005	0.0005	0%
Uranium	mg/L (ppm)	0.00015	0.00015	0%	0.00007	0.00007	0%	0.00014	0.00013	7%	0.00014	0.00015	7%	0.00011	0.00011	0%	0.00008	0.00008	0%	0.00008	0.00008	0%
Vanadium	mg/L (ppm)	0.00011	0.00011	0%	0.00046	0.00057	19%	0.00009	0.00008	11%	0.00017	0.00008	53%	0.0002	0.0002	0%	< 0.00005	< 0.00005		0.00022	0.00018	18%
Zinc	mg/L (ppm)	0.0044	0.0085	48%	0.002	0.0054	63%	0.001	0.0006	40%	0.0014	< 0.0005		< 0.0005	< 0.0005		0.0046	< 0.0005		0.0012	0.0011	8%
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0		17	16.8	1%	14.4	14.4	0%	47.8	47.9	0%	40	40.3	1%	65.4	65.8	1%	61	61.5	1%

Table 3: 2011 Field Duplicates RPDs

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Physical Tests																	
pH @ 25°C BC-T	pH units	8.23	8.25	0%	8.17	8.18	0%	7.7	7.72	0%	7.75	7.73	0%	7.58	7.6	0%	0%
Conductivity @ 25°C	mS/cm	157	159	1%	155	154	1%	98	98	0%	126	126	0%	181	182	1%	3%
T-Dissolved Solids180°C	mg/L (ppm)	92	92	0%	80	80	0%	76	52	32%	128	104	19%	148	132	11%	24%
Total Suspended Solids @105°C	mg/L (ppm)	3	4	25%	4	5	20%	4	3	25%	29	3	90%	2	2	0%	27%
Turbidity	NTU	1.5	2.4	38%	2.2	2.6	15%	2.9	3.1	6%	1.9	1.3	32%	1.1	1.1	0%	17%
Dissolved Anions																	
Alkalinity as CaCO3	mg/L (ppm)	82	82	0%	76	77	1%	43	43	0%	62	61	2%	88	88	0%	2%
Fluoride-D	mg/L (ppm)	0.09	0.1	10%	0.08	0.09	11%	0.2	0.3	33%	0.07	0.07	0%	0.6	0.6	0%	12%
Sulphate-D	mg/L (ppm)	4.7	5.1	8%	4.4	4.5	2%	0.08	0.08	0%	0.4	0.5	20%	0.07	0.07	0%	5%
Chloride-D	mg/L (ppm)	0.3	0.3	0%	0.4	0.3	25%	5.1	5.3	4%	1.5	1.7	12%	4.4	4.1	7%	8%
Nutrients																	
Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02		< 0.02	< 0.02		< 0.02	< 0.02		0.02	< 0.02		< 0.01	< 0.01		
Nitrate-N-D	mg/L (ppm)	0.069	0.065	6%	0.042	0.042	0%	< 0.005	< 0.005		< 0.005	< 0.005		0.011	0.017	35%	25%
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		0.019	0.015	21%	< 0.003	< 0.003		< 0.003	< 0.003		21%
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	0.28	0.25	11%	0.67	0.58	13%	0.58	0.18	69%	< 0.08	0.12		< 0.08	< 0.08		34%
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		< 0.003	< 0.003		0.009	0.007	22%	19%
Phosphorus-Total Dissolved-LL	mg/L (ppm)	0.012	0.008	33%	0.016	0.016	0%	0.013	0.012	8%	0.008	0.009	11%	< 0.001	< 0.001		8%
Organic Parameters																	
Carbon (Total Organic)	mg/L (ppm)	5.9	6	2%	5.9	7.2	18%	25.1	37.1	32%	12.6	13.6	7%	4.3	4.2	2%	8%
Carbon (Dissolved Organic)	mg/L (ppm)	5.5	5.6	2%	2.6	5.1	49%	12.1	12.5	3%	12.3	13.6	10%	4.3	4.2	2%	8%
Total Metals																	
Aluminum	mg/L (ppm)	0.042	0.0314	25%	0.074	0.051	31%	0.172	0.178	3%	0.742	0.064	91%	0.012	0.008	33%	19%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0004	0.0003	25%	0.0002	0.0002	0%	0.0005	0.0005	0%	0.0011	0.0005	55%	0.0002	0.0002	0%	7%
Barium	mg/L (ppm)	0.00806	0.00792	2%	0.00913	0.00848	7%	0.0077	0.00784	2%	0.0235	0.0113	52%	0.0112	0.011	2%	7%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	0.001	< 0.001		< 0.001	0.001		0.002	0.002	0%	0.002	0.002	0%	0.001	0.001	0%	14%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		0.000018	< 0.000015		< 0.000015	< 0.000015		22%
Calcium	mg/L (ppm)	21.7	22	1%	21.8	21.7	0%	13.7	13.9	1%	20.2	19.2	5%	25.4	25.4	0%	1%
Chromium	mg/L (ppm)	< 0.0005	< 0.0005		< 0.0005	< 0.0005		< 0.0003	< 0.0003		0.0012	< 0.0003		< 0.0003	< 0.0003		0%
Cobalt	mg/L (ppm)	< 0.00005	< 0.00005		0.00007	0.00005	29%	0.00007	0.00008	13%	0.00027	0.00003	89%	0.00003	0.00003	0%	19%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0004	0.0003	25%	0.0007	0.0008	13%	0.0017	0.0005	71%	< 0.0001	< 0.0001		29%
Iron	mg/L (ppm)	0.199	0.179	10%	0.295	0.241	18%	0.193	0.209	8%	1.8	0.318	82%	0.217	0.2	8%	14%
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00019	< 0.00005		< 0.00005	< 0.00005		21%
Lithium	mg/L (ppm)	< 0.005	< 0.005		< 0.005	< 0.005		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	4.89	4.83	1%	4.95	5	1%	3.19	3.24	2%	3.89	3.76	3%	5.42	5.57	3%	1%
Manganese	mg/L (ppm)	0.0292	0.0268	8%	0.0424	0.0372	12%	0.0101	0.0103	2%	0.155	0.0192	88%	0.0241	0.0227	6%	13%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		11%
Molybdenum	mg/L (ppm)	0.00067	0.00068	1%	0.0007	0.00072	3%	0.0005	0.00049	2%	0.00058	0.00049	16%	0.00052	0.00053	2%	6%
Nickel	mg/L (ppm)	0.0002	0.0003	33%	0.00032	0.00029	9%	0.00045	0.00048	6%	0.0011	0.00028	75%	0.00016	0.00016	0%	14%
Phosphorus	mg/L (ppm)	0.02	< 0.02		0.03	0.03	0%	0.02	0.02	0%	0.07	< 0.02		< 0.02	< 0.02		0%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.9	0.9	0%	0.9	0.9	0%	0.5	< 0.5		0.8	0.8	0%	0%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	5.16	5.1	1%	5.4	5.1	6%	4.58	4.39	4%	8.27	7.1	14%	6.78	6.65	2%	4%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	3.7	3.6	3%	3.8	3.8	0%	2.6	2.6	0%	3.1	3.1	0%	4.1	4.2	2%	1%
Strontium	mg/L (ppm)	0.112	0.112	0%	0.116	0.115	1%	0.0735	0.0738	0%	0.106	0.1	6%	0.118	0.118	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		

Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Titanium	mg/L (ppm)	0.0024	0.0017	29%	0.004	0.0025	38%	0.0042	0.0046	9%	0.0168	0.0018	89%	0.0006	0.0005	17%	26%
Uranium	mg/L (ppm)	0.00014	0.00014	0%	0.00016	0.00015	6%	0.00011	0.00011	0%	0.00017	0.00007	59%	0.00014	0.00015	7%	8%
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		0.0004	0.0005	20%	0.0024	0.0005	79%	0.0001	0.0001	0%	14%
Zinc	mg/L (ppm)	0.004	< 0.001		0.002	0.0028	29%	0.0049	0.0022	55%	0.0023	< 0.0005		0.0014	0.0006	57%	37%
T-Hardness as CaCO3	mg/L (ppm)	74.3	74.8	1%	74.7	74.8	0%	47.4	48	1%	66.5	63.5	5%	85.7	86.4	1%	1%
Parameter	Lab file #	EC60612	EC60612	% Diff	EC60740	EC60740	% Diff	EC60968	EC60968	% Diff	EC61343	EC61343	% Diff	EC62363	EC62363	% Diff	Mean
Date Sampled	Lab ID	11-3636-	11-3639-		11-4265-	11-4270-		11-6095-	11-6100-		11-9200-	11-9201-		11-19508-	11-19509-		% Diff
Sample No.	sample name	WQ9	WQ9-FD		WQ9	WQ9-FD		WQ9	WQ9-FD		WQ14	WQ14-FD		WQ14	WQ14-FD		
	date	28-Mar-11	28-Mar-11		19-Apr-11	19-Apr-11		30-May-11	30-May-11		18-Jul-11	18-Jul-11		14-Nov-11	14-Nov-11		
Dissolved Metals																	
Aluminum	mg/L (ppm)	< 0.002	< 0.002		0.031	0.002	94%	0.066	0.058	12%	0.016	0.015	6%	0.003	0.003	0%	14%
Antimony	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Arsenic	mg/L (ppm)	0.0004	0.0003	25%	0.0002	0.0001	50%	0.0004	0.0004	0%	0.0004	0.0004	0%	0.0002	0.0002	0%	6%
Barium	mg/L (ppm)	0.00733	0.00777	6%	0.00863	0.0079	8%	0.00661	0.00647	2%	0.00964	0.00966	0%	0.0107	0.0106	1%	2%
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Boron	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		0.002	0.002	0%	0.002	0.002	0%	0.001	0.001	0%	17%
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		< 0.000015	< 0.000015		44%
Calcium	mg/L (ppm)	21.3	22	3%	21.2	20.7	2%	13.3	13.2	1%	18.1	18.1	0%	25.4	25.4	0%	1%
Chromium	mg/L (ppm)	< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		< 0.0003	< 0.0003		20%
Cobalt	mg/L (ppm)	0.00003	0.00003	0%	0.00006	0.00004	33%	0.00004	0.00003	25%	0.00003	0.00002	33%	< 0.00002	0.00002		18%
Copper	mg/L (ppm)	0.0002	0.0002	0%	0.0003	0.0002	33%	0.0008	0.0006	25%	0.0004	0.0004	0%	< 0.0001	< 0.0001		23%
Iron	mg/L (ppm)	0.0851	0.0817	4%	0.246	0.117	52%	0.0845	0.0755	11%	0.16	0.156	3%	0.109	0.113	4%	9%
Lead-D	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Lithium	mg/L (ppm)	< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		< 0.001	< 0.001		
Magnesium	mg/L (ppm)	4.83	4.7	3%	4.78	5	4%	3.01	2.97	1%	3.45	3.44	0%	5.42	5.57	3%	2%
Manganese	mg/L (ppm)	0.0219	0.0214	2%	0.0393	0.0334	15%	0.00475	0.00464	2%	0.0078	0.00777	0%	0.0176	0.0181	3%	4%
Mercury	mg/L (ppm)	< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		< 0.000008	< 0.000008		6%
Molybdenum	mg/L (ppm)	0.00061	0.00064	5%	0.0006	0.00059	2%	0.0004	0.0004	0%	0.00047	0.00049	4%	0.00051	0.0005	2%	6%
Nickel	mg/L (ppm)	0.0002	0.00023	13%	0.00026	0.00023	12%	0.00033	0.00032	3%	0.0003	0.00028	7%	0.00015	0.00016	6%	8%
Phosphorus-D	mg/L (ppm)	0.01	0.01	0%	0.02	0.01	50%	0.01	0.01	0%	< 0.01	< 0.01		< 0.01	< 0.01		13%
Potassium	mg/L (ppm)	0.9	0.9	0%	0.9	0.9	0%	0.8	0.8	0%	< 0.5	< 0.5		0.8	0.9	11%	2%
Selenium	mg/L (ppm)	< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		< 0.0006	< 0.0006		
Silicon	mg/L (ppm)	5.07	4.96	2%	4.9	4.61	6%	4.13	4.18	1%	5.91	5.9	0%	6.78	6.65	2%	2%
Silver	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Sodium	mg/L (ppm)	3.6	3.5	3%	3.6	3.8	5%	2.5	2.4	4%	2.8	2.8	0%	4.1	4.2	2%	1%
Strontium	mg/L (ppm)	0.107	0.11	3%	0.109	0.107	2%	0.068	0.0675	1%	0.0931	0.0933	0%	0.118	0.118	0%	1%
Thallium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		< 0.00005	< 0.00005		
Tin	mg/L (ppm)	< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		< 0.0001	< 0.0001		
Titanium	mg/L (ppm)	0.0003	0.0003	0%	0.0016	0.0003	81%	0.001	0.0007	30%	0.0005	0.0005	0%	< 0.0002	< 0.0002		23%
Uranium	mg/L (ppm)	0.00012	0.00013	8%	0.00015	0.00015	0%	0.00011	0.0001	9%	0.00006	0.00007	14%	0.00014	0.00014	0%	4%
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005		< 0.00005	< 0.00005		0.00024	0.0002	17%	0.00022	0.00022	0%	0.0001	0.00009	10%	14%
Zinc	mg/L (ppm)	0.0039	0.0009	77%	0.002	0.0028	29%	0.0049	0.0009	82%	0.0013	< 0.0005		0.0014	0.0006	57%	50%
D-Hardness as CaCO3	mg/L (ppm)	73	74.4	2%	72.6	72.3	0%	45.7	45.2	1%	59.3	59.4	0%	85.7	86.4	1%	1%

11.9% Mean of Mear

Table 4: 2012 Field Duplicates RPDs

Analytical Parameter	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
Unit	15-May-12	15-May-12	15-May-12	13-Feb-12	13-Feb-12	13-Feb-12	17-Apr-12	17-Apr-12	17-Apr-12	28-May-12	28-May-12	28-May-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12	
pH @ 25°C BC-D	pH	7.06	6.94	1.71%	7.88	7.86	0.25%	7.83	7.89	0.76%	7.39	7.45	0.81%	7.65	7.74	1.17%	7.86	7.82	0.51%
Conductivity @ 25°C	uS/cm	44	44	0.00%	127	131	3.10%	101	105	3.88%	42	40	4.88%	74	74	0.00%	88	87	1.14%
T-Dissolved Solids180°C	mg/L	56	28	66.67%	72	76	5.41%	80	96	18.18%	56	28	66.67%	84	60	33.33%	76	60	23.53%
Total Suspended Solids @105°C	mg/L	10	8	22.22%	<2	2		<2	<2		40	37	7.79%	4	3	28.57%	2	<2	
Turbidity	NTU	15	16	6.45%	1	1.7	51.85%	1.5	1.6	6.45%	12	13	8.00%	1.1	1.3	16.67%	1.6	1.7	6.06%
Alkalinity as CaCO3	mg/L	11	10	9.52%	62	64	3.17%	52	52	0.00%	17	17	0.00%	43	42	2.35%	44	44	0.00%
Fluoride-D	mg/L	0.08	0.05	46.15%	0.06	0.06	0.00%	0.07	0.07	0.00%	0.05	0.08	46.15%	0.07	0.07	0.00%	<0.02	<0.02	
Sulphate-D	mg/L	8.2	7.1	14.38%	3.4	3.4	0.00%	1.7	1.9	11.11%	1	0.9	10.53%	1.3	1.3	0.00%	2.6	2.6	0.00%
Chloride-D	mg/L	1.8	1.5	18.18%	0.3	0.4	28.57%	0.4	0.4	0.00%	1.5	2	28.57%	0.6	0.6	0.00%	<0.1	<0.1	
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.01	<0.01		<0.02	<0.02		0.02	0.02	0.00%	<0.02	<0.02		<0.02	<0.02	
Nitrate-N-D	mg/L	<0.005	<0.005		0.012	0.013	8.00%	<0.005	<0.005		0.012	0.008	40.00%	0.009	0.011	20.00%	<0.005	<0.005	
Nitrite-N-D	mg/L	0.012	<0.003		0.006	0.005	18.18%	0.013	0.011	16.67%	0.005	0.004	22.22%	0.003	0.003	0.00%	<0.003	<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.48	0.52	8.00%	0.14	0.27	63.41%	0.18	0.2	10.53%	0.15	0.19	23.53%	<0.08	0.11		0.1	0.09	10.53%
Phosphorous-Ortho-DLL	mg/L	0.015	0.012	22.22%	0.007	<0.003		0.006	<0.003		<0.003	<0.003		<0.003	<0.003		<0.003	<0.003	
Phosphorous (Total-Dissolved) LL	mg/L	0.01	0.01	0.00%	<0.01	<0.01		0.02	0.02	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01	
Carbon (Total Organic)	mg/L	16.4	16.5	0.61%	2.2	2.9	27.45%	13.3	13.2	0.75%	11.9	11.8	0.84%	5.7	5.5	3.57%	5.7	5.4	5.41%
Carbon (Dissolved Organic)	mg/L	16.3	16.4	0.61%	2.2	2.4	8.70%	13	12.9	0.77%	11.9	11.8	0.84%	5.6	5.3	5.50%	5.5	5.4	1.83%
Aluminum-T	mg/L	0.899	0.885	1.57%	0.023	0.05	73.97%	0.094	0.091	3.24%	0.291	0.266	8.98%	0.052	0.051	1.94%	0.04	0.052	26.09%
Antimony-T	mg/L	0.00021	0.0002	4.88%	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-T	mg/L	0.0023	0.0023	0.00%	0.0004	0.0005	22.22%	0.0004	0.0004	0.00%	0.0005	0.0005	0.00%	0.0005	0.0006	18.18%	0.0006	0.0006	0.00%
Barium-T	mg/L	0.0108	0.00839	25.12%	0.011	0.0151	31.42%	0.0102	0.0102	0.00%	0.00701	0.00668	4.82%	0.00719	0.00725	0.83%	0.00804	0.00821	2.09%
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.002	66.67%
Cadmium-T	mg/L	0.000072	0.00008	10.53%	<0.000015	0.000054		0.000092	<0.000015		0.000018	0.000025	32.56%	<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-T	mg/L	5.9	6	1.68%	17.2	18.3	6.20%	15.1	15.1	0.00%	4.8	4.9	2.06%	9.6	9.6	0.00%	11.6	11.7	0.86%
Chromium-T	mg/L	0.0008	0.0007	13.33%	<0.0003	0.0006		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003	
Cobalt-T	mg/L	0.00006	0.00005	18.18%	0.00002	0.00003	40.00%	0.00006	0.00005	18.18%	0.00007	0.00005	33.33%	<0.00002	<0.00002		0.00004	0.00005	22.22%
Copper-T	mg/L	0.0006	0.0031	135.14%	0.0002	0.0007	111.11%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0004	28.57%	<0.0001	<0.0001	
Iron-T	mg/L	0.736	0.721	2.06%	0.109	0.152	32.95%	0.223	0.217	2.73%	0.327	0.282	14.78%	0.119	0.118	0.84%	0.194	0.194	0.00%
Lead-T	mg/L	0.00092	0.00093	1.08%	<0.00005	0.0001		0.00074	<0.00005		0.00006	<0.00005		<0.00005	<0.00005		<0.00005	0.00037	
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-T	mg/L	1.2	1.18	1.68%	3.71	3.96	6.52%	3.85	3.75	2.63%	1.13	1.11	1.79%	2.11	2.11	0.00%	2.61	2.58	1.16%
Manganese-T	mg/L	0.0334	0.0338	1.19%	0.0191	0.0195	2.07%	0.0172	0.0169	1.76%	0.0209	0.0174	18.28%	0.0146	0.0144	1.38%	0.0219	0.0225	2.70%
Mercury-T	mg/L	<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	0.000006		<0.000005	<0.000005	

Analytical Parameter	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
Unit	15-May-12	15-May-12	15-May-12	13-Feb-12	13-Feb-12	13-Feb-12	17-Apr-12	17-Apr-12	17-Apr-12	28-May-12	28-May-12	28-May-12	28-May-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Molybdenum-T	mg/L	<0.00005	<0.00005		0.00079	0.00086	8.48%	0.00063	0.00057	10.00%	0.00018	0.00017	5.71%	0.00052	0.00048	8.00%	0.00094	0.0006	44.16%
Nickel-T	mg/L	0.00035	0.00044	22.78%	0.00016	0.00042	89.66%	0.00029	0.00029	0.00%	0.00025	0.0001	85.71%	0.00021	0.00025	17.39%	0.00023	0.00077	108.00%
Phosphorous-T	mg/L	0.03	0.03	0.00%	<0.02	<0.02		0.03	0.03	0.00%	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02	
Potassium-T	mg/L	0.7	0.7	0.00%	0.6	0.6	0.00%	1.6	1.6	0.00%	<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	5.42	5.45	0.55%	6.51	7.08	8.39%	5.57	5.3	4.97%	4.65	4.69	0.86%	6.54	5.91	10.12%	6.91	6.7	3.09%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	2.1	2.1	0.00%	3.5	3.8	8.22%	3.2	3.1	3.17%	1.8	1.8	0.00%	2.7	2.7	0.00%	3.2	3.2	0.00%
Strontium-T	mg/L	0.0362	0.0363	0.28%	0.103	0.11	6.57%	0.0788	0.08	1.51%	0.0339	0.0344	1.46%	0.064	0.0645	0.78%	0.0807	0.0805	0.25%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0357	0.0347	2.84%	0.0012	0.0023	62.86%	0.0032	0.0031	3.17%	0.0061	0.0045	30.19%	0.0014	0.0012	15.38%	0.0011	0.0011	0.00%
Uranium-T	mg/L	0.00007	0.00007	0.00%	0.00023	0.00025	8.33%	0.00024	0.00015	46.15%	0.00018	0.00018	0.00%	0.00008	0.00009	11.76%	0.00012	0.00012	0.00%
Vanadium-T	mg/L	0.0016	0.0015	6.45%	0.0002	0.0003	40.00%	0.0004	0.0004	0.00%	0.0009	0.0007	25.00%	0.0005	0.0005	0.00%	0.0006	0.0006	0.00%
Zinc-T	mg/L	0.0596	0.0592	0.67%	0.024	0.0681	95.77%	0.0007	<0.0005		0.001	0.0012	18.18%	0.0007	<0.0005		<0.0005	0.0108	
T-Hardness as CaCO3	mg/L	19.7	19.8	0.51%	58.2	62	6.32%	53.4	53.2	0.38%	16.7	16.7	0.00%	32.8	32.6	0.61%	39.7	39.8	0.25%
Aluminum-D	mg/L	0.206	0.214	3.81%	<0.002	<0.002		0.028	0.027	3.64%	0.139	0.161	14.67%	0.024	0.025	4.08%	0.02	0.019	5.13%
Antimony-D	mg/L	0.00017	0.00019	11.11%	<0.00005	<0.00005		0.00014	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-D	mg/L	0.0014	0.0013	7.41%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0003	0.00%	0.0004	0.0005	22.22%	0.0006	0.0006	0.00%
Barium-D	mg/L	0.00277	0.00264	4.81%	0.00861	0.00908	5.31%	0.00962	0.0096	0.21%	0.00434	0.00456	4.94%	0.00693	0.00701	1.15%	0.00804	0.00809	0.62%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		0.001	0.002	66.67%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		0.000092	<0.000015		0.000018	0.000025	32.56%	<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-D	mg/L	5.4	5.5	1.83%	16.2	16.5	1.83%	15.1	14.7	2.68%	4.8	4.9	2.06%	9.2	9.2	0.00%	11.6	11.7	0.86%
Chromium-D	mg/L	<0.0003	0.0004		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003	
Cobalt-D	mg/L	<0.00002	0.00003		0.00002	0.00003	40.00%	0.00004	0.00004	0.00%	<0.00002	0.00003		<0.00002	<0.00002		0.00004	0.00003	28.57%
Copper-D	mg/L	0.0004	0.0031	154.29%	0.0002	0.0003	40.00%	0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0001	<0.0001		<0.0001	<0.0001	
Iron-D	mg/L	0.127	0.146	13.92%	0.0507	0.0472	7.15%	0.129	0.123	4.76%	0.102	0.119	15.38%	0.0718	0.0727	1.25%	0.148	0.145	2.05%
Lead-D	mg/L	0.00006	0.00023	117.24%	<0.00005	<0.00005		0.00014	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	0.91	0.91	0.00%	3.53	3.6	1.96%	3.85	3.75	2.63%	1.06	1.08	1.87%	2.07	2.1	1.44%	2.61	2.58	1.16%
Manganese-D	mg/L	0.0103	0.0106	2.87%	0.0132	0.0139	5.17%	0.0147	0.0143	2.76%	0.00537	0.00591	9.57%	0.0104	0.0108	3.77%	0.019	0.0188	1.06%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000008	<0.000008		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	
Molybdenum-D	mg/L	<0.00005	<0.00005		0.00073	0.00071	2.78%	0.00051	0.00054	5.71%	0.00018	0.00017	5.71%	0.00046	0.00047	2.15%	0.00094	0.00055	52.35%
Nickel-D	mg/L	0.00033	0.00044	28.57%	0.00013	0.00015	14.29%	0.00025	0.00027	7.69%	0.00025	0.0001	85.71%	0.00015	0.00012	22.22%	0.00023	0.00024	4.26%
Phosphorous-D	mg/L	0.01	0.01	0.00%	<0.01	<0.01		0.02	0.02	0.00%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01	
Potassium-D	mg/L	0.5	0.5	0.00%	0.5	0.5	0.00%	1.5	1.5	0.00%	<0.5	<0.5		<0.5	<0.5		0.6	0.6	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	4.52	4.59	1.54%	6.45	6.5	0.77%	5.27	4.99	5.46%	4.65	4.69	0.86%	5.82	5.86	0.68%	6.91	6.7	3.09%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	2	2	0.00%	3.4	3.5	2.90%	3.2	3.1	3.17%	1.8	1.8	0.00%	2.7	2.7	0.00%	3.2	3.2	0.00%
Strontium-D	mg/L	0.0315	0.0318	0.95%	0.0972	0.0984	1.23%	0.0739	0.08	7.93%	0.0339	0.0344	1.46%	0.064	0.0645	0.78%	0.0807	0.0805	0.25%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0025	0.003	18.18%	<0.0002	<0.0002		0.0006	0.0005	18.18%	0.0012	0.0019	45.16%	0.0004	0.0003	28.57%	0.0004	0.0004	0.00%

	ID	WQ Duplicate	WQ4		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7		WQ Duplicate	WQ7	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-63191	~LIMS:EC-63191	%	~LIMS:EC-62773	~LIMS:EC-62773	%	~LIMS:EC-63034	~LIMS:EC-63034	%	~LIMS:EC-63271	~LIMS:EC-63271	%	~LIMS:EC-63577	~LIMS:EC-63577	%	~LIMS:EC-63753	~LIMS:EC-63753	%
Analytical Parameter	Unit	15-May-12	15-May-12	15-May-12	13-Feb-12	13-Feb-12	13-Feb-12	17-Apr-12	17-Apr-12	17-Apr-12	28-May-12	28-May-12	28-May-12	16-Jul-12	16-Jul-12	16-Jul-12	13-Aug-12	13-Aug-12	13-Aug-12
Uranium-D	mg/L	<0.00005	<0.00005		0.00022	0.00022	0.00%	0.00024	0.00015	46.15%	0.00013	0.00014	7.41%	0.00008	0.00009	11.76%	0.0001	0.0001	0.00%
Vanadium-D	mg/L	0.00009	0.0001	10.53%	<0.00005	<0.00005		0.00013	0.00013	0.00%	0.00025	0.00027	7.69%	0.00041	0.00043	4.76%	0.00058	0.00057	1.74%
Zinc-D	mg/L	0.052	0.0534	2.66%	0.0111	0.0276	85.27%	<0.0005	<0.0005		<0.0005	0.0012		0.0007	<0.0005		<0.0005	0.0025	
D-Hardness as CaCO3	mg/L	17.4	17.6	1.14%	54.9	56	1.98%	53.4	52.2	2.27%	16.4	16.6	1.21%	31.5	31.8	0.95%	39.7	39.8	0.25%

Table 4: 2012 Field Duplicates RPDs

Analytical Parameter	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%
Unit	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Mar-12	12-Mar-12	12-Mar-12	11-Jun-12	11-Jun-12	11-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	16-Oct-12	16-Oct-12	16-Oct-12	
pH @ 25°C BC-D	pH	7.77	7.87	1.28%	7.8	7.84	0.51%	7.57	7.6	0.40%	7.78	7.78	0.00%	7.93	7.91	0.25%	8	8.1	1.24%
Conductivity @ 25°C	uS/cm	113	111	1.79%	148	148	0.00%	52	53	1.90%	119	120	0.84%	111	111	0.00%	185	185	0.00%
T-Dissolved Solids180°C	mg/L	100	70	35.29%	80	90	11.76%	48	40	18.18%	88	92	4.44%	80	90	11.76%	96	96	0.00%
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	6		7	8	13.33%	<2	<2		<2	<2	
Turbidity	NTU	0.9	0.9	0.00%	1.1	1.3	16.67%	1.2	1.8	40.00%	2.8	2.6	7.41%	1.8	3.5	64.15%	1.1	1	9.52%
Alkalinity as CaCO3	mg/L	60	60	0.00%	80	80	0.00%	25	25	0.00%	63	65	3.13%	60	60	0.00%	100	99	1.01%
Fluoride-D	mg/L	0.05	0.05	0.00%	0.07	0.07	0.00%	0.03	0.03	0.00%	0.06	0.06	0.00%	0.06	0.06	0.00%	0.07	0.07	0.00%
Sulphate-D	mg/L	2.5	2.5	0.00%	5.6	5.5	1.80%	1.2	1.2	0.00%	2.9	3	3.39%	2.2	2	9.52%	4.2	4.3	2.35%
Chloride-D	mg/L	0.3	0.3	0.00%	0.7	0.7	0.00%	0.2	0.2	0.00%	0.3	0.5	50.00%	0.8	0.7	13.33%	0.7	0.4	54.55%
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02	
Nitrate-N-D	mg/L	0.009	<0.005		0.103	0.112	8.37%	0.03	0.032	6.45%	<0.005	<0.005		0.006	<0.005		0.009	0.011	20.00%
Nitrite-N-D	mg/L	<0.003	<0.003		0.02	0.014	35.29%	<0.003	<0.003		<0.003	0.003		<0.003	<0.003		<0.003	<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.4	0.46	13.95%	0.25	0.2	22.22%	<0.08	<0.08		0.11	0.11	0.00%	0.13	0.14	7.41%	0.14	<0.08	
Phosphorous-Ortho-DLL	mg/L							<0.003	<0.003		<0.003	<0.003							
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		0.01	0.02	66.67%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		<0.01	<0.01	
Carbon (Total Organic)	mg/L	3.8	3.8	0.00%	6.8	6.6	2.99%	5.5	5.7	3.57%	8.4	8	4.88%	10	11	9.52%	16.5	16.3	1.22%
Carbon (Dissolved Organic)	mg/L	3.8	3.7	2.67%	6.8	6.6	2.99%	5.5	5.4	1.83%	8.2	7.7	6.29%	10	10	0.00%	16.5	15.7	4.97%
Aluminum-T	mg/L	0.021	0.03	35.29%	0.016	0.009	56.00%	0.057	0.141	84.85%	0.061	0.032	62.37%	0.019	0.02	5.13%	0.019	0.016	17.14%
Antimony-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-T	mg/L	0.0003	0.0003	0.00%	0.0005	0.0005	0.00%	0.0002	0.0003	40.00%	0.0006	0.0004	40.00%	0.0003	0.0002	40.00%	0.0002	0.0002	0.00%
Barium-T	mg/L	0.00887	0.00873	1.59%	0.00737	0.00719	2.47%	0.00649	0.00864	28.42%	0.00697	0.092	171.83%	0.00836	0.00834	0.24%	0.0118	0.0118	0.00%
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	0.009		<0.001	<0.001		<0.001	<0.001	
Cadmium-T	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	0.000017		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-T	mg/L	15	15	0.00%	23	22	4.44%	7.3	7.4	1.36%	15.7	15.7	0.00%	15	15	0.00%	28.3	28.7	1.40%
Chromium-T	mg/L	<0.0003	0.0003		<0.0003	<0.0003		<0.0003	0.0005		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003	
Cobalt-T	mg/L	0.00004	0.00005	22.22%	0.00003	0.00003	0.00%	0.00006	0.00018	100.00%	0.00003	0.00002	40.00%	<0.00002	0.00002		0.00003	0.00002	40.00%
Copper-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		0.0003	0.0023	153.85%	0.0002	0.0003	40.00%	0.0001	0.0003	100.00%
Iron-T	mg/L	0.1127	0.1141	1.23%	0.1332	0.1339	0.52%	0.288	0.628	74.24%	0.136	0.0685	66.01%	0.1407	0.1467	4.18%	0.224	0.206	8.37%
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-T	mg/L	3.71	3.64	1.90%	5.19	5.06	2.54%	1.27	1.31	3.10%	3.93	3.54	10.44%	3.1	3.14	1.28%	6.29	5.8	8.11%
Manganese-T	mg/L	0.02334	0.02344	0.43%	0.02636	0.02579	2.19%	0.0424	0.144	109.01%	0.0209	0.0117	56.44%	0.00787	0.00909	14.39%	0.0147	0.012	20.22%
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	

Analytical Parameter	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%
Unit	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Mar-12	12-Mar-12	12-Mar-12	12-Mar-12	11-Jun-12	11-Jun-12	11-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	16-Oct-12	16-Oct-12	16-Oct-12
Molybdenum-T	mg/L	0.0006	0.00058	3.39%	0.0006	0.00059	1.68%	0.00064	0.00069	7.52%	0.00046	0.00047	2.15%	0.00046	0.0005	8.33%	0.00052	0.00052	0.00%
Nickel-T	mg/L	0.00018	0.00017	5.71%	0.0002	0.00019	5.13%	0.0001	0.00017	51.85%	0.00029	0.00026	10.91%	0.00023	0.00021	9.09%	0.00007	0.00008	13.33%
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02	
Potassium-T	mg/L	0.5	0.5	0.00%	0.9	0.9	0.00%	<0.5	<0.5		0.7	0.6	15.38%	0.5	0.5	0.00%	1.2	1	18.18%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-T	mg/L	6.77	6.43	5.15%	5.22	5.02	3.91%	3.81	3.94	3.35%	4.78	4.95	3.49%	5.68	5.62	1.06%	6.52	6.41	1.70%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-T	mg/L	3.7	3.6	2.74%	3.8	3.8	0.00%	2	2.1	4.88%	3.3	3.1	6.25%	2.7	2.8	3.64%	4.8	4.7	2.11%
Strontium-T	mg/L	0.09096	0.0889	2.29%	0.1043	0.1029	1.35%	0.0582	0.0582	0.00%	0.0842	0.0834	0.95%	0.07719	0.07757	0.49%	0.131	0.133	1.52%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-T	mg/L	0.0006	0.0008	28.57%	0.0005	0.0004	22.22%	0.0015	0.0039	88.89%	0.002	0.0006	107.69%	0.0006	0.0006	0.00%	0.0006	0.0006	0.00%
Uranium-T	mg/L	0.00017	0.00017	0.00%	0.00012	0.00012	0.00%	0.00019	0.00024	23.26%	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00014	0.00013	7.41%
Vanadium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	0.0002		0.0002	0.0001	66.67%	<0.0001	<0.0001		<0.0001	<0.0001	
Zinc-T	mg/L	<0.0005	0.018		0.0007	0.0008	13.33%	0.0025	0.0041	48.48%	<0.0005	0.0389		<0.0005	<0.0005		<0.0005	0.0022	
T-Hardness as CaCO3	mg/L	53	52	1.90%	78	76	2.60%	23.5	24	2.11%	55.5	53.8	3.11%	50	50	0.00%	96.6	95.6	1.04%
Aluminum-D	mg/L	0.01	0.011	9.52%	0.003	0.003	0.00%	0.02	0.02	0.00%	0.028	0.026	7.41%	0.016	0.016	0.00%	0.003	0.002	40.00%
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	0.00006		<0.00005	<0.00005		<0.00005	<0.00005	
Arsenic-D	mg/L	0.0003	0.0003	0.00%	0.0004	0.0005	22.22%	0.0002	0.0001	66.67%	0.0006	0.0004	40.00%	0.0001	0.0001	0.00%	0.0002	0.0002	0.00%
Barium-D	mg/L	0.0085	0.00841	1.06%	0.00737	0.00719	2.47%	0.00549	0.00555	1.09%	0.00627	0.00627	0.00%	0.00805	0.00799	0.75%	0.011	0.0109	0.91%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015		<0.000015	<0.000015	
Calcium-D	mg/L	15	14	6.90%	23	22	4.44%	6.8	6.8	0.00%	14.9	15.2	1.99%	14	14	0.00%	27	27.1	0.37%
Chromium-D	mg/L	<0.0003	0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003		<0.0003	<0.0003	
Cobalt-D	mg/L	0.00004	0.00004	0.00%	<0.00002	<0.00002		<0.00002	<0.00002		0.00003	0.00002	40.00%	<0.00002	<0.00002		<0.00002	<0.00002	
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		0.0002	0.0001	66.67%	0.0002	0.0003	40.00%	<0.0001	<0.0001	
Iron-D	mg/L	0.0793	0.0756	4.78%	0.082	0.0838	2.17%	0.142	0.134	5.80%	0.0749	0.0653	13.69%	0.0991	0.0964	2.76%	0.114	0.105	8.22%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001		<0.001	<0.001	
Magnesium-D	mg/L	3.71	3.64	1.90%	5.19	5.06	2.54%	1.19	1.16	2.55%	3.93	3.44	13.30%	3	3.01	0.33%	5.84	5.8	0.69%
Manganese-D	mg/L	0.02201	0.0218	0.96%	0.02383	0.02364	0.80%	0.00728	0.00749	2.84%	0.0135	0.0117	14.29%	0.0046	0.00462	0.43%	0.00556	0.00557	0.18%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		<0.000008	<0.000008		<0.000005	<0.000005		<0.000005	<0.000005		<0.000005	<0.000005	
Molybdenum-D	mg/L	0.00056	0.00057	1.77%	0.00059	0.00051	14.55%	0.00056	0.00054	3.64%	0.00046	0.00047	2.15%	0.00042	0.00044	4.65%	0.00049	0.00048	2.06%
Nickel-D	mg/L	0.00007	0.00007	0.00%	0.00014	0.00014	0.00%	0.00007	0.00007	0.00%	0.00029	0.00026	10.91%	0.00023	0.00021	9.09%	0.00007	0.00008	13.33%
Phosphorous-D	mg/L	<0.01	<0.01		0.01	0.02	66.67%	<0.01	<0.01		<0.01	<0.01		<0.01	<0.01		<0.01	<0.01	
Potassium-D	mg/L	0.5	0.5	0.00%	0.9	0.9	0.00%	<0.5	<0.5		0.7	0.6	15.38%	0.5	0.5	0.00%	1	1	0.00%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006		<0.0006	<0.0006	
Silicon-D	mg/L	6.77	6.43	5.15%	5.22	5.02	3.91%	3.13	3.12	0.32%	4.78	4.95	3.49%	5.68	5.54	2.50%	6.3	6.27	0.48%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Sodium-D	mg/L	3.7	3.6	2.74%	3.8	3.8	0.00%	2	1.9	5.13%	3.3	2.9	12.90%	2.7	2.8	3.64%	4.8	4.7	2.11%
Strontium-D	mg/L	0.08651	0.0841	2.83%	0.1043	0.1011	3.12%	0.0529	0.0537	1.50%	0.0799	0.0806	0.87%	0.07518	0.07448	0.94%	0.125	0.124	0.80%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001		<0.0001	<0.0001	
Titanium-D	mg/L	0.0003	0.0003	0.00%	<0.0002	<0.0002		0.0003	0.0003	0.00%	0.0004	0.0004	0.00%	0.0003	0.0004	28.57%	<0.0002	<0.0002	

	ID	WQ Duplicate	WQ7		WQ Duplicate	WQ9		WQ Duplicate	WQ12		WQ Duplicate	WQ13		WQ Duplicate	WQ14		Duplicate	WQ14	
	Type	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD	FD	F	RPD
	Comment	~LIMS:EC-64399	~LIMS:EC-64399	%	~LIMS:EC-64543	~LIMS:EC-64543	%	~LIMS:EC-62887	~LIMS:EC-62887	%	~LIMS:EC-63357	~LIMS:EC-63357	%	~LIMS:EC-63325	~LIMS:EC-63325	%	~LIMS:EC-64183	~LIMS:EC-64183	%
Analytical Parameter	Unit	12-Nov-12	12-Nov-12	12-Nov-12	10-Dec-12	10-Dec-12	10-Dec-12	12-Mar-12	12-Mar-12	12-Mar-12	11-Jun-12	11-Jun-12	11-Jun-12	04-Jun-12	04-Jun-12	04-Jun-12	16-Oct-12	16-Oct-12	16-Oct-12
Uranium-D	mg/L	0.00016	0.00016	0.00%	0.0001	0.0001	0.00%	0.00015	0.00015	0.00%	0.00008	0.00008	0.00%	<0.00005	<0.00005		0.00013	0.00013	0.00%
Vanadium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		<0.00005	<0.00005		0.00022	0.00015	37.84%	<0.00005	<0.00005		<0.00005	<0.00005	
Zinc-D	mg/L	<0.0005	0.0012		0.0007	<0.0005		0.0025	0.0036	36.07%	<0.0005	<0.0005		<0.0005	<0.0005		<0.0005	0.0022	
D-Hardness as CaCO3	mg/L	52	51	1.94%	78	76	2.60%	21.8	21.8	0.00%	53.5	52.1	2.65%	48	48	0.00%	91.4	91.4	0.00%

**Table 4: 2012 Field Duplicates
RPDs**

	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Analytical Parameter	Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12	
pH @ 25°C BC-D	pH	7.25	7.29	0.55%	7.55	7.56	0.13%	0.68%
Conductivity @ 25°C	uS/cm	29	29	0.00%	70	70	0.00%	1.25%
T-Dissolved Solids180°C	mg/L	36	12	100.00%	56	48	15.38%	29.33%
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		17.98%
Turbidity	NTU	0.9	0.4	76.92%	0.6	0.7	15.38%	23.25%
Alkalinity as CaCO3	mg/L	10	11	9.52%	34	34	0.00%	2.05%
Fluoride-D	mg/L	0.04	0.04	0.00%	0.05	0.05	0.00%	7.10%
Sulphate-D	mg/L	0.7	0.7	0.00%	2.5	2.4	4.08%	4.08%
Chloride-D	mg/L	0.2	0.3	40.00%	<0.1	<0.1		19.43%
Ammonia - Nitrogen	mg/L	<0.02	<0.02		<0.02	<0.02		0.00%
Nitrate-N-D	mg/L	0.005	0.009	57.14%	0.014	0.012	15.38%	21.92%
Nitrite-N-D	mg/L	<0.003	<0.003		<0.003	<0.003		18.47%
Total Kjeldahl Nitrogen (TKN)	mg/L	0.11	0.2	58.06%	<0.08	0.12		21.76%
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003					22.22%
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01		<0.01	<0.01		22.22%
Carbon (Total Organic)	mg/L	10.1	9.6	5.08%	10.9	12	9.61%	5.39%
Carbon (Dissolved Organic)	mg/L	10.1	9.6	5.08%	10.9	11.7	7.08%	3.51%
Aluminum-T	mg/L	0.194	0.217	11.19%	0.029	0.031	6.67%	28.17%
Antimony-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		4.88%
Arsenic-T	mg/L	0.0005	0.0006	18.18%	0.0004	0.0004	0.00%	12.76%
Barium-T	mg/L	0.00342	0.00337	1.47%	0.00692	0.00631	9.22%	19.97%
Beryllium-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Boron-T	mg/L	<0.001	<0.001		<0.001	<0.001		66.67%
Cadmium-T	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		21.54%
Calcium-T	mg/L	3.2	3.7	14.49%	8	8	0.00%	2.32%
Chromium-T	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		13.33%
Cobalt-T	mg/L	<0.00002	0.00003		0.00006	0.00006	0.00%	30.38%
Copper-T	mg/L	0.0004	0.0007	54.55%	0.0011	0.0005	75.00%	69.82%
Iron-T	mg/L	0.093	0.0934	0.43%	0.0934	0.0962	2.95%	15.09%
Lead-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		1.08%
Lithium-T	mg/L	<0.001	<0.001		<0.001	<0.001		
Magnesium-T	mg/L	0.77	0.87	12.20%	2.28	2.26	0.88%	3.87%
Manganese-T	mg/L	0.00379	0.00335	12.32%	0.0139	0.0137	1.45%	17.42%
Mercury-T	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		

Analytical Parameter	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12		
Molybdenum-T	mg/L	0.00059	0.00057	3.45%	0.0017	0.00191	11.63%	8.81%
Nickel-T	mg/L	0.00024	0.00025	4.08%	0.00023	0.00025	8.33%	30.86%
Phosphorous-T	mg/L	<0.02	<0.02		<0.02	<0.02		0.00%
Potassium-T	mg/L	<0.5	<0.5		<0.5	<0.5		3.73%
Selenium-T	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-T	mg/L	4.44	4.4	0.90%	6.43	6.15	4.45%	3.71%
Silver-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-T	mg/L	1.6	1.9	17.14%	3	3	0.00%	3.44%
Strontium-T	mg/L	0.0217	0.0229	5.38%	0.051	0.0524	2.71%	1.82%
Thallium-T	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Tin-T	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-T	mg/L	0.0014	0.0014	0.00%	0.0004	0.0004	0.00%	25.84%
Uranium-T	mg/L	0.00019	0.00016	17.14%	0.00007	0.00007	0.00%	8.77%
Vanadium-T	mg/L	0.0003	0.0002	40.00%	0.0002	0.0002	0.00%	19.79%
Zinc-T	mg/L	0.0019	0.0036	61.82%	0.0026	0.001	88.89%	46.74%
T-Hardness as CaCO3	mg/L	11.1	12.8	14.23%	29.4	29.4	0.00%	2.36%
Aluminum-D	mg/L	0.17	0.153	10.53%	0.029	0.026	10.91%	8.44%
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		11.11%
Arsenic-D	mg/L	0.0005	0.0006	18.18%	0.0004	0.0004	0.00%	12.62%
Barium-D	mg/L	0.00313	0.0033	5.29%	0.0065	0.00664	2.13%	2.20%
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001		66.67%
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015		32.56%
Calcium-D	mg/L	3.2	3.7	14.49%	8	8	0.00%	2.68%
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003		
Cobalt-D	mg/L	<0.00002	0.00003		0.00003	0.00003	0.00%	18.10%
Copper-D	mg/L	<0.0001	<0.0001		0.0005	0.0005	0.00%	42.99%
Iron-D	mg/L	0.0771	0.0593	26.10%	0.0808	0.0809	0.12%	7.73%
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		117.24%
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001		
Magnesium-D	mg/L	0.76	0.87	13.50%	2.28	2.26	0.88%	3.20%
Manganese-D	mg/L	0.00242	0.00335	32.24%	0.0139	0.0137	1.45%	5.60%
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005		
Molybdenum-D	mg/L	0.00056	0.00024	80.00%	0.00165	0.00191	14.61%	14.78%
Nickel-D	mg/L	0.00024	0.00025	4.08%	0.00023	0.00019	19.05%	15.66%
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01		22.22%
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5		1.71%
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006		
Silicon-D	mg/L	4.17	4.4	5.37%	6.43	6.15	4.45%	2.72%
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Sodium-D	mg/L	1.6	1.9	17.14%	3	3	0.00%	3.55%
Strontium-D	mg/L	0.0211	0.0229	8.18%	0.051	0.0524	2.71%	2.40%
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005		
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001		
Titanium-D	mg/L	0.0009	0.001	10.53%	0.0003	0.0003	0.00%	13.56%

	ID	WQ Duplicate	WQ17		WQ Duplicate	WQ17		
	Type	FD	F	RPD	FD	F	RPD	Mean RPD
	Comment	~LIMS:EC-63411	~LIMS:EC-63412	%	~LIMS:EC-63959	~LIMS:EC-63959	%	%
Analytical Parameter	Unit	18-Jun-12	18-Jun-12	18-Jun-12	17-Sep-12	17-Sep-12	17-Sep-12	
Uranium-D	mg/L	0.00019	0.0001	62.07%	0.00007	0.00006	15.38%	11.90%
Vanadium-D	mg/L	0.00031	0.00021	38.46%	0.00018	0.00018	0.00%	12.63%
Zinc-D	mg/L	0.0019	0.0036	61.82%	0.0026	0.001	88.89%	54.94%
D-Hardness as CaCO3	mg/L	11	12.8	15.13%	29.4	29.4	0.00%	2.15%

17.25% Mean of means

2013 Field Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706	% Diff	~LIMS:EC-64814	~LIMS:EC-64814	% Diff	~LIMS:EC-64914	~LIMS:EC-64914	% Diff	~LIMS:EC-65054	~LIMS:EC-65054	% Diff	~LIMS:EC-65181	~LIMS:EC-65181
	sample name	WQ Duplicate	WQ7	% Diff	WQ Duplicate	WQ7	% Diff	Duplicate 2	WQ8	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14
	type	FD	F		FD	F		FD	F		FD	F		FD	F
	date	15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13	13-May-13
	Units														
Physical Tests															
pH @ 25°C BC-D	pH	7.64	7.66	0%	7.77	7.78	0%	7.88	7.87	0%	7.74	7.79	1%	7.54	7.55
Conductivity @ 25°C	uS/cm	131	131	0%	127	128	1%	153	153	0%	120	120	0%	90	90
T-Dissolved Solids180°C	mg/L	90	80	11%	76	68	11%	104	92	12%	52	52	0%	64	68
Total Suspended Solids @ 105°C	mg/L	2	5	60%	<2	3	-	<2	3	-	<2	<2	-	<2	4
Turbidity	NTU	1.6	3.8	58%	0.6	0.7	14%	0.7	1.4	50%	0.9	1.2	25%	1.2	1.2
Hardness as (CaCO3)	mg/L	64	63	2%	60	59.1	2%	84.6	82.6	2%	52.1	53.2	2%	45.8	45.9
Dissolved Anions															
Alkalinity as CaCO3	mg/L	70	70	0%	66	66	0%	79	80	1%	54	55	2%	48	47
Fluoride-D	mg/L	0.06	0.06	0%	0.07	0.07	0%	0.08	0.08	0%	0.08	0.08	0%	0.07	0.07
Sulphate-D	mg/L	3.6	3.6	0%	3.3	3.4	3%	4.5	4.4	2%	3.2	3.1	3%	2.3	2.2
Chloride-D	mg/L	0.3	0.5	40%	0.4	0.5	20%	0.3	0.5	40%	0.5	0.5	0%	0.4	0.4
Nutrients															
Ammonia - Nitrogen	mg/L	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02
Nitrate-N-D	mg/L	0.06	0.086	30%	0.043	0.04	7%	0.086	0.088	2%	0.12	0.03	75%	0.006	0.016
Nitrite-N-D	mg/L	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.000	<0.000	-	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	-	<0.08	0.16	-	0.18	0.29	38%	0.25	0.24	4%	0.19	0.28
Phosphorous-Ortho-DLL	mg/L			-			-			-			-		
Phosphorous (Total-Dissolved) LL	mg/L	0.02	0.01	50%	0.002	0.007	71%	0.027	0.032	16%	0.02	0.01	50%	<0.001	<0.001
Organic Parameters															
Carbon (Total Organic)	mg/L	3.2	2.9	9%	3.4	3.1	9%	7.7	7.5	3%	7.2	7.1	1%	13	12.6
Carbon (Dissolved Organic)	mg/L	3	2.9	3%	3.4	3.1	9%	7.4	7.4	0%	7.2	7.1	1%	13	12.4
Total Metals															
Aluminum-T	mg/L	0.026	0.065	60%	0.01	0.039	74%	0.004	<0.002	-	0.03	0.04	25%	0.045	0.073
Antimony-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Arsenic-T	mg/L	0.0004	0.0004	0%	0.0003	0.0003	0%	0.0005	0.0005	0%	0	0	-	0.0002	0.0002
Barium-T	mg/L	0.01138	0.01205	6%	0.00813	0.00903	10%	0.00613	0.00604	1%	0.01	0.01	0%	0.0072	0.00773
Beryllium-T	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	0.000017	-	0.000017	0.000105	84%	<0.000015	<0.000015	-	<0.000000	<0.000000	-	<0.000015	<0.000015
Calcium-T	mg/L	19	19	0%	17.5	17.1	2%	24.7	24.1	2%	14.7	15	2%	13.6	13.6
Chromium-T	mg/L	<0.0003	<0.0003	-	<0.0003	0.0005	-	<0.0003	<0.0003	-	<0.0000	<0.0000	-	<0.0003	<0.0003
Cobalt-T	mg/L	0.00005	0.00008	38%	0.00003	0.00006	50%	<0.00002	<0.00002	-	0	0	-	0.00003	0.00004
Copper-T	mg/L	0.0003	0.0003	0%	<0.0001	0.0011	-	0.0005	0.0004	20%	0	0	-	0.0005	0.0005
Iron-T	mg/L	0.1465	0.2277	36%	0.109	0.158	31%	0.0178	0.014	21%	0.17	0.17	0%	0.18	0.251
Lead-T	mg/L	<0.00005	<0.00005	-	<0.00005	0.00007	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Magnesium-T	mg/L	4.22	4.24	0%	3.96	4	1%	5.55	5.43	2%	3.74	3.82	2%	2.88	2.91
Manganese-T	mg/L	0.02873	0.07517	62%	0.0225	0.0271	17%	0.00166	0.00137	17%	0.02	0.02	0%	0.0104	0.019
Mercury-T	mg/L	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000000	<0.000000	-	<0.000005	<0.000005
Molybdenum-T	mg/L	0.00075	0.00078	4%	0.0008	0.00078	3%	0.00059	0.00058	2%	0	0	-	0.0004	0.0004
Nickel-T	mg/L	0.00013	0.00012	8%	0.00005	0.00021	76%	0.00026	0.00024	8%	0	0	-	0.00026	0.00026
Phosphorous-T	mg/L	0.02	0.02	0%	0.002	0.007	71%	0.027	0.032	16%	0.02	0.01	50%	<0.001	<0.001
Potassium-T	mg/L	0.6	0.7	14%	0.6	1	40%	1	1	0%	0.7	0.7	0%	0.6	0.6
Selenium-T	mg/L	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0006	<0.0006	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Silicon-T	mg/L	6.68	6.38	4%	6.17	6.28	2%	4.16	4.15	0%	5.76	5.55	4%	4.4	4.3
Silver-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Sodium-T	mg/L	4	4	0%	4	4	0%	4.1	4.1	0%	3.4	3.6	6%	2.4	2.4

2013 Field Duplicates	Lab file #	~LIMS:EC-64706	~LIMS:EC-64706		~LIMS:EC-64814	~LIMS:EC-64814		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:EC-65054	~LIMS:EC-65054		~LIMS:EC-65181	~LIMS:EC-65181
	sample name	WQ Duplicate	WQ7	% Diff	WQ Duplicate	WQ7	% Diff	Duplicate 2	WQ8	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14
	type	FD	F		FD	F		FD	F		FD	F		FD	F
	date	15-Jan-13	15-Jan-13		12-Feb-13	12-Feb-13		13-Mar-13	13-Mar-13		15-Apr-13	15-Apr-13		13-May-13	13-May-13
		mg/L													
Strontium-T	mg/L	0.1068	0.107	0%	0.0989	0.0992	0%	0.11	0.107	3%	0.09	0.09	0%	0.0671	0.0667
Thallium-T	mg/L	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Titanium-T	mg/L	0.0018	0.0034	47%	0.0006	0.0023	74%	<0.0002	<0.0002	-	0	0	-	0.0011	0.0016
Uranium-T	mg/L	0.00026	0.00026	0%	0.00021	0.00022	5%	0.0001	0.0001	0%	0	0	-	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	0.0002	-	<0.0001	<0.0001	-	<0.00005	<0.00005	-	0	0	-	<0.00005	<0.00005
Zinc-T	mg/L	0.0074	0.0197	62%	0.0074	0.0178	58%	0.0056	0.002	64%	<0.0000	0	-	0.0028	<0.0005
T-Hardness as CaCO3	mg/L	64	65	2%			-			-			-		
Dissolved Metals															
Aluminum-D	mg/L	0.008	0.008	0%	0.01	0.012	17%	<0.002	<0.002	-	0.02	0.02	0%	0.028	0.029
Antimony-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Arsenic-D	mg/L	0.0003	0.0003	0%			-	0.0005	0.0005	0%	0	0	-	0.0002	0.0002
Barium-D	mg/L	0.00944	0.00959	2%			-	0.00537	0.00554	3%	0.01	0.01	0%	0.0066	0.00666
Beryllium-D	mg/L	<0.0001	<0.0001	-			-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	-			-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Cadmium-D	mg/L	0.000015	0.000017	12%			-	<0.000015	<0.000015	-	<0.000000	<0.000000	-	<0.000015	<0.000015
Calcium-D	mg/L	19	18	5%			-	23.5	24.1	2%	14.5	14.5	0%	13.6	13.6
Chromium-D	mg/L	<0.0003	<0.0003	-			-	<0.0003	<0.0003	-	<0.0000	<0.0000	-	<0.0003	<0.0003
Cobalt-D	mg/L	0.00003	0.00004	25%			-	<0.00002	<0.00002	-	0	0	-	0.00002	0.00002
Copper-D	mg/L	0.0003	0.0003	0%			-	0.0005	0.0004	20%	0	0	-	0.0005	0.0005
Iron-D	mg/L	0.0627	0.0644	3%			-	0.0099	0.0105	6%	0.12	0.12	0%	0.105	0.11
Lead-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	-			-	<0.001	<0.001	-	<0.000	<0.000	-	<0.001	<0.001
Magnesium-D	mg/L	4.22	4.21	0%			-	5.55	5.43	2%	3.74	3.82	2%	2.88	2.91
Manganese-D	mg/L	0.02451	0.02546	4%			-	0.00084	0.00059	30%	0.01	0.01	0%	0.00239	0.00257
Mercury-D	mg/L	<0.000005	<0.000005	-			-	<0.000005	<0.000005	-	<0.000000	<0.000000	-	<0.000005	<0.000005
Molybdenum-D	mg/L	0.00072	0.00076	5%			-	0.00055	0.00054	2%	0	0	-	0.0004	0.0004
Nickel-D	mg/L	0.00013	0.00012	8%			-	0.00025	0.00024	4%	0	0	-	0.00026	0.00026
Phosphorous-D	mg/L	0.02	0.01	50%			-	0.02	0.02	0%	<0.01	<0.01	-	<0.01	<0.01
Potassium-D	mg/L	0.6	0.6	0%			-	1	1	0%	0.7	0.7	0%	0.6	0.6
Selenium-D	mg/L	<0.0006	<0.0006	-			-	<0.0006	<0.0006	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Silicon-D	mg/L	6.68	6.05	9%			-	4.16	4.1	1%	4.88	4.91	1%	4.4	4.3
Silver-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Sodium-D	mg/L	4	4	0%			-	4.1	4.1	0%	3.4	3.6	6%	2.3	2.3
Strontium-D	mg/L	0.1068	0.1063	0%			-	0.105	0.106	1%	0.09	0.09	0%	0.0671	0.0667
Thallium-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	-			-	<0.0001	<0.0001	-	<0.0000	<0.0000	-	<0.0001	<0.0001
Titanium-D	mg/L	0.0002	0.0002	0%			-	<0.0002	<0.0002	-	0	0	-	0.0006	0.0007
Uranium-D	mg/L	0.00026	0.00026	0%			-	0.00009	0.00009	0%	0	0	-	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	-			-	<0.00005	<0.00005	-	<0.00000	<0.00000	-	<0.00005	<0.00005
Zinc-D	mg/L	0.0071	0.0131	46%			-	0.0056	0.002	64%	<0.0000	0	-	0.0028	<0.0005
D-Hardness as CaCO3	mg/L	64	63	2%			-			-			-		
Cyanide															
Cyanide (Total)	mg/L			-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050
Cyanide (WAD)	mg/L			-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050
Cyanate	mg/L	<0.20	<0.20	-			-			-			-		
Thiocyanate (SCN)	mg/L			-			-			-			-		

2013 Field Duplicates	Lab file #		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391
	sample name	% Diff	WQ1-FD	WQ1	% Diff	Duplicate	WQ9	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14	% Diff	Duplicate
	type		FD	F		FD	F		FD	F		FD	F		FD
	date		21-May-13	21-May-13		28-May-13	28-May-13		04-Jun-13	04-Jun-13		11-Jun-13	11-Jun-13		18-Jun-13
	Units														
Physical Tests															
pH @ 25°C BC-D	pH	0%	6.4	6.55	2%	7.83	7.87	1%	7.37	7.35	0%	7.73	7.74	0%	7.48
Conductivity @ 25°C	uS/cm	0%	20	19	5%	104	104	0%	44	44	0%	123	125	2%	56
T-Dissolved Solids180°C	mg/L	6%	64	28	56%	88	64	27%	24	20	17%	104	112	7%	76
Total Suspended Solids @ 105°C	mg/L	-	<2	<2	-	6	7	14%	15	14	7%	<2	<2	-	12
Turbidity	NTU	0%	1.5	1.6	6%	17	2.3	86%	3.8	4.1	7%	1.2	1.4	14%	2.8
Hardness as (CaCO3)	mg/L	0%	<6.0	<6.0	-	59.5	61.5	3%	20.9	20.9	0%	62.7	62.2	1%	24.5
Dissolved Anions															
Alkalinity as CaCO3	mg/L	2%	7	5	29%	50	50	0%	20	18	10%	59	58	2%	26
Fluoride-D	mg/L	0%	0.04	0.03	25%	0.04	0.04	0%	0.03	0.03	0%	0.05	0.06	17%	0.04
Sulphate-D	mg/L	4%	1.7	1.5	12%	3.3	3.4	3%	0.8	0.8	0%	1.7	1.8	6%	0.8
Chloride-D	mg/L	0%	0.2	0.2	0%	0.6	0.5	17%	0.3	0.3	0%	0.5	0.9	44%	0.3
Nutrients															
Ammonia - Nitrogen	mg/L	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02	<0.02	-	<0.02
Nitrate-N-D	mg/L	63%	0.017	0.008	53%	0.032	0.026	19%	0.017	0.036	53%	0.026	0.055	53%	0.009
Nitrite-N-D	mg/L	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003	<0.003	-	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	32%	0.25	0.16	36%	0.17	0.14	18%	0.12	0.12	0%	0.23	0.17	26%	0.65
Phosphorous-Ortho-DLL	mg/L	-			-			-			-			-	
Phosphorous (Total-Dissolved) LL	mg/L	-	0.01	0.01	0%	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01
Organic Parameters															
Carbon (Total Organic)	mg/L	3%	10.4	10.4	0%	9.7	9.7	0%	10.5	10.4	1%	10.2	10	2%	10.7
Carbon (Dissolved Organic)	mg/L	5%	10.4	10.4	0%	9.7	9.7	0%	10.5	10.4	1%	10.1	10	1%	10.7
Total Metals															
Aluminum-T	mg/L	38%	0.311	0.313	1%	0.134	0.121	10%	0.185	0.194	5%	0.015	0.011	27%	0.15
Antimony-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007
Arsenic-T	mg/L	0%	0.0004	0.0004	0%	0.0005	0.0005	0%	0.0004	0.0004	0%	0.0001	<0.0001	-	0.0003
Barium-T	mg/L	7%	0.00293	0.00317	8%	0.00661	0.00652	1%	0.00582	0.00581	0%	0.00949	0.00938	1%	0.0067
Beryllium-T	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-T	mg/L	-	<0.001	<0.001	-	0.001	0.001	0%	0.002	0.002	0%	0.001	0.001	0%	0.001
Cadmium-T	mg/L	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000019	<0.000015	-	<0.000015
Calcium-T	mg/L	0%	1.7	1.8	6%	17.7	18.3	3%	6.3	6.3	0%	18.9	19.4	3%	7.9
Chromium-T	mg/L	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003
Cobalt-T	mg/L	25%	0.00005	0.00005	0%	0.00005	0.00004	20%	0.00009	0.00009	0%	0.00002	0.00004	50%	0.00008
Copper-T	mg/L	0%	<0.0001	0.0001	-	0.0006	0.0006	0%	0.0007	0.0007	0%	<0.0001	<0.0001	-	<0.0001
Iron-T	mg/L	28%	0.159	0.159	0%	0.181	0.169	7%	0.208	0.204	2%	0.162	0.163	1%	0.172
Lead-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007	0.00008	13%	<0.00005	0.00046	-	0.00006
Lithium-T	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-T	mg/L	1%	<0.50	<0.50	-	3.71	3.83	3%	1.34	1.35	1%	3.75	3.76	0%	1.68
Manganese-T	mg/L	45%	0.00491	0.00537	9%	0.0197	0.018	9%	0.0149	0.0139	7%	0.00863	0.00842	2%	0.014
Mercury-T	mg/L	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-T	mg/L	0%	0.00009	0.00008	11%	0.0005	0.00049	2%	0.00026	0.00025	4%	0.00044	0.00045	2%	0.00028
Nickel-T	mg/L	0%	0.00027	0.00029	7%	0.00015	0.00016	6%	0.00031	0.00056	45%	0.00027	0.00026	4%	0.00024
Phosphorous-T	mg/L	-	0.01	0.02	50%	<0.01	<0.01	-	0.02	0.02	0%	<0.01	<0.01	-	0.02
Potassium-T	mg/L	0%	<0.5	<0.5	-	0.8	0.8	0%	<0.5	<0.5	-	0.5	0.5	0%	<0.5
Selenium-T	mg/L	-	<0.0001	<0.0001	-	0.0001	<0.0001	-	0.0001	0.0001	0%	0.0002	0.0001	50%	<0.0001
Silicon-T	mg/L	2%	3.8	3.81	0%	3.98	3.97	0%	4.66	4.74	2%	5	5.11	2%	4.68
Silver-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-T	mg/L	0%	1.4	1.4	0%	3.1	3.2	3%	2	2.1	5%	3.2	3.2	0%	2.3

2013 Field Duplicates	Lab file #		~LIMS:EC-65224	~LIMS:EC-65224		~LIMS:EC-65253	~LIMS:EC-65253		~LIMS:EC-65302	~LIMS:EC-65302		~LIMS:EC-65342	~LIMS:EC-65342		~LIMS:EC-65391
	sample name	% Diff	WQ1-FD	WQ1	% Diff	Duplicate	WQ9	% Diff	Duplicate	WQ7	% Diff	Duplicate	WQ14	% Diff	Duplicate
	type		FD	F		FD	F		FD	F		FD	F		FD
	date		21-May-13	21-May-13		28-May-13	28-May-13		04-Jun-13	04-Jun-13		11-Jun-13	11-Jun-13		18-Jun-13
Strontium-T	mg/L	1%	0.017	0.0186	9%	0.0804	0.0782	3%	0.0394	0.039	1%	0.099	0.0989	0%	0.0486
Thallium-T	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-T	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-T	mg/L	31%	0.0039	0.0037	5%	0.0042	0.0042	0%	0.0036	0.0035	3%	0.0007	0.0009	22%	0.0031
Uranium-T	mg/L	-	0.00016	0.00017	6%	0.0001	0.0001	0%	0.00018	0.00017	6%	0.00005	0.00006	17%	0.00014
Vanadium-T	mg/L	-	0.00033	0.00032	3%	<0.00005	<0.00005	-	0.00026	0.00026	0%	<0.00005	<0.00005	-	<0.00005
Zinc-T	mg/L	-	0.0015	0.0017	12%	<0.0005	<0.0005	-	0.0027	0.0017	37%	<0.0005	0.0005	-	<0.0005
T-Hardness as CaCO3	mg/L	-			-			-			-			-	
Dissolved Metals															
Aluminum-D	mg/L	3%	0.263	0.256	3%	0.052	0.053	2%	0.128	0.128	0%	0.009	0.008	11%	0.114
Antimony-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	0.00007
Arsenic-D	mg/L	0%	0.0002	0.0003	33%	0.0005	0.0005	0%	0.0003	0.0003	0%	<0.0001	<0.0001	-	<0.0001
Barium-D	mg/L	1%	0.00262	0.00259	1%	0.006	0.00595	1%	0.00454	0.0044	3%	0.00949	0.00922	3%	0.00536
Beryllium-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Boron-D	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	0.001	0.002	50%	<0.001	<0.001	-	0.001
Cadmium-D	mg/L	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	<0.000015	<0.000015	-	0.000019	<0.000015	-	<0.000015
Calcium-D	mg/L	0%	1.7	1.7	0%	17.7	18.3	3%	6.2	6.2	0%	18.9	18.7	1%	7.3
Chromium-D	mg/L	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003	<0.0003	-	<0.0003
Cobalt-D	mg/L	0%	0.00003	0.00003	0%	<0.00002	<0.00002	-	0.00004	0.00009	56%	0.00002	0.00002	0%	0.00004
Copper-D	mg/L	0%	0.0001	0.0001	0%	0.0004	0.0005	20%	0.0007	0.0007	0%	0.0001	<0.0001	-	<0.0001
Iron-D	mg/L	5%	0.13	0.125	4%	0.0751	0.0743	1%	0.0937	0.0944	1%	0.125	0.123	2%	0.0995
Lead-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	0.00046	-	<0.00005
Lithium-D	mg/L	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001	<0.001	-	<0.001
Magnesium-D	mg/L	1%	<0.50	<0.50	-	3.71	3.83	3%	1.33	1.35	1%	3.75	3.76	0%	1.55
Manganese-D	mg/L	7%	0.00345	0.00335	3%	0.0103	0.0102	1%	0.00616	0.006	3%	0.00504	0.00504	0%	0.00479
Mercury-D	mg/L	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005	<0.000005	-	<0.000005
Molybdenum-D	mg/L	0%	0.00007	0.00007	0%	0.0001	0.00011	9%	0.00022	0.00023	4%	0.00044	0.00043	2%	0.00026
Nickel-D	mg/L	0%	0.00024	0.00024	0%	<0.00005	<0.00005	-	0.00031	0.00056	45%	0.00027	0.00026	4%	0.00024
Phosphorous-D	mg/L	-	0.01	0.01	0%	<0.01	<0.01	-	<0.01	<0.01	-	<0.01	<0.01	-	<0.01
Potassium-D	mg/L	0%	<0.5	<0.5	-	0.8	0.8	0%	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Selenium-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Silicon-D	mg/L	2%	3.2	3.18	1%	3.89	3.97	2%	4.66	4.74	2%	4.19	4.24	1%	3.56
Silver-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Sodium-D	mg/L	0%	1.4	1.4	0%	3.1	3.2	3%	2	2.1	5%	3.2	3.2	0%	<0.5
Strontium-D	mg/L	1%	0.0168	0.0169	1%	0.0619	0.0635	3%	0.0394	0.0388	2%	0.0908	0.0901	1%	0.0466
Thallium-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Tin-D	mg/L	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001	<0.0001	-	<0.0001
Titanium-D	mg/L	14%	0.0027	0.0026	4%	0.001	0.0009	10%	0.0017	0.0017	0%	0.0003	0.0004	25%	0.002
Uranium-D	mg/L	-	0.00014	0.00015	7%	0.00009	0.00009	0%	0.00014	0.00014	0%	0.00005	0.00005	0%	0.00011
Vanadium-D	mg/L	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005	<0.00005	-	<0.00005
Zinc-D	mg/L	-	0.0014	0.0017	18%	<0.0005	<0.0005	-	0.0027	0.0017	37%	<0.0005	0.0005	-	<0.0005
D-Hardness as CaCO3	mg/L	-			-			-			-			-	
Cyanide															
Cyanide (Total)	mg/L	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cyanide (WAD)	mg/L	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050	<0.0050	-	<0.0050
Cyanate	mg/L	-			-			-			-			-	
Thiocyanate (SCN)	mg/L	-			-			-			-			-	

2013 Field Duplicates	Lab file #	~LIMS:EC-65391		Mean
	sample name	WQ7	% Diff	% Diff
	type	F		
	date	18-Jun-13		
	Units			
Physical Tests				
pH @ 25°C BC-D	pH	7.46	0%	1%
Conductivity @ 25°C	uS/cm	56	0%	1%
T-Dissolved Solids180°C	mg/L	40	47%	19%
Total Suspended Solids @ 105°C	mg/L	10	17%	28%
Turbidity	NTU	3.5	20%	18%
Hardness as (CaCO3)	mg/L	24.6	0%	1%
Dissolved Anions				
Alkalinity as CaCO3	mg/L	25	4%	6%
Fluoride-D	mg/L	0.04	0%	5%
Sulphate-D	mg/L	0.8	0%	3%
Chloride-D	mg/L	0.3	0%	13%
Nutrients				
Ammonia - Nitrogen	mg/L	<0.02	-	
Nitrate-N-D	mg/L	0.025	64%	50%
Nitrite-N-D	mg/L	<0.003	-	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.5	23%	20%
Phosphorous-Ortho-DLL	mg/L		-	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	-	43%
Organic Parameters				
Carbon (Total Organic)	mg/L	10.7	0%	3%
Carbon (Dissolved Organic)	mg/L	10.7	0%	3%
Total Metals				
Aluminum-T	mg/L	0.142	5%	29%
Antimony-T	mg/L	0.00005	29%	29%
Arsenic-T	mg/L	0.0003	0%	0%
Barium-T	mg/L	0.00646	4%	4%
Beryllium-T	mg/L	<0.0001	-	
Boron-T	mg/L	<0.001	-	0%
Cadmium-T	mg/L	<0.000015	-	84%
Calcium-T	mg/L	8	1%	2%
Chromium-T	mg/L	<0.0003	-	
Cobalt-T	mg/L	0.00007	13%	25%
Copper-T	mg/L	<0.0001	-	0%
Iron-T	mg/L	0.157	9%	13%
Lead-T	mg/L	<0.00005	-	13%
Lithium-T	mg/L	<0.001	-	
Magnesium-T	mg/L	1.66	1%	1%
Manganese-T	mg/L	0.012	14%	20%
Mercury-T	mg/L	<0.000005	-	
Molybdenum-T	mg/L	0.00028	0%	3%
Nickel-T	mg/L	0.00027	11%	21%
Phosphorous-T	mg/L	0.02	0%	29%
Potassium-T	mg/L	<0.5	-	11%
Selenium-T	mg/L	0.0001	-	25%
Silicon-T	mg/L	4.82	3%	2%
Silver-T	mg/L	<0.00005	-	
Sodium-T	mg/L	2.3	0%	1%

2013 Field Duplicates	Lab file #	~LIMS:EC-65391		Mean
	sample name	WQ7	% Diff	% Diff
	type	F		
	date	18-Jun-13		
Strontium-T	mg/L	0.0488	0%	1%
Thallium-T	mg/L	<0.00005	-	
Tin-T	mg/L	<0.0001	-	
Titanium-T	mg/L	0.0026	16%	28%
Uranium-T	mg/L	0.00014	0%	5%
Vanadium-T	mg/L	<0.00005	-	2%
Zinc-T	mg/L	0.0018	-	42%
T-Hardness as CaCO3	mg/L		-	
Dissolved Metals				
Aluminum-D	mg/L	0.112	2%	4%
Antimony-D	mg/L	<0.00005	-	
Arsenic-D	mg/L	<0.0001	-	8%
Barium-D	mg/L	0.00518	3%	2%
Beryllium-D	mg/L	<0.0001	-	
Boron-D	mg/L	<0.001	-	50%
Cadmium-D	mg/L	<0.000015	-	12%
Calcium-D	mg/L	7.3	0%	1%
Chromium-D	mg/L	<0.0003	-	
Cobalt-D	mg/L	0.00004	0%	13%
Copper-D	mg/L	<0.0001	-	0%
Iron-D	mg/L	0.0981	1%	2%
Lead-D	mg/L	<0.00005	-	
Lithium-D	mg/L	<0.001	-	
Magnesium-D	mg/L	1.55	0%	1%
Manganese-D	mg/L	0.00469	2%	3%
Mercury-D	mg/L	<0.000005	-	
Molybdenum-D	mg/L	0.00024	8%	3%
Nickel-D	mg/L	0.00027	11%	11%
Phosphorous-D	mg/L	<0.01	-	25%
Potassium-D	mg/L	<0.5	-	0%
Selenium-D	mg/L	<0.0001	-	
Silicon-D	mg/L	3.63	2%	3%
Silver-D	mg/L	<0.00005	-	
Sodium-D	mg/L	<0.5	-	2%
Strontium-D	mg/L	0.0459	2%	1%
Thallium-D	mg/L	<0.00005	-	
Tin-D	mg/L	<0.0001	-	
Titanium-D	mg/L	0.0016	20%	10%
Uranium-D	mg/L	0.0001	9%	3%
Vanadium-D	mg/L	<0.00005	-	
Zinc-D	mg/L	0.0018	-	33%
D-Hardness as CaCO3	mg/L		-	
Cyanide				
Cyanide (Total)	mg/L	<0.0050	-	
Cyanide (WAD)	mg/L	<0.0050	-	
Cyanate	mg/L		-	
Thiocyanate (SCN)	mg/L		-	

2011 Blanks

Parameter	Lab file #	EC60612	EC60740	EC60904	EC60941	EC60968	EC61018	EC61071	EC61343	EC61543	EC60941	EC60612	EC60740	EC60904	EC60968	EC61018	EC61071	EC61343	EC61543	EC61850
Date Sampled	Lab ID	11-3640-	11-4271-	11-5511-	11-5871-	11-6101-	11-6393-	11-6765-	11-9202-	11-10880-	11-5872-	11-3641-	11-4272-	11-5512-	11-6102-	11-6394-	11-6766-	11-9203-	11-10881-	11-13830-
Sample No.	sample name	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Field Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Trip Blank	Field Blank
	date	28-Mar-11	19-Apr-11	17-May-11	25-May-11	30-May-11	6-Jun-11	13-Jun-11	18-Jul-11	15-Aug-11	27-May-11	28-Mar-11	19-Apr-11	17-May-11	30-May-11	6-Jun-11	14-Jun-11	18-Jul-11	15-Aug-11	19-Sep-11

Physical Tests

pH @ 25°C BC-T	pH units	6.34	6.24	5.98	6.06	5.92	5.86	---	5.91	---	5.82	6.38	6.2	5.97	5.97	5.78	---	5.83	5.58	5.65
Conductivity @ 25°C	mS/cm	3	2	6	5	6	5	3	2	-	4	4	3	5	6	7	3	2	1	1
T-Dissolved Solids180°C	mg/L (ppm)	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	---	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	---	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Turbidity	NTU	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	---	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.5	0.4

Dissolved Anions

Alkalinity as CaCO3	mg/L (ppm)	2	2	4	< 1	< 1	< 1	< 1	< 1	---	< 1	2	2	4	< 1	< 1	< 1	< 1	< 1	< 1
Fluoride-D	mg/L (ppm)	0.03	0.02	0.2	0.1	< 0.1	0.1	< 0.02	0.02	---	0.3	0.04	0.02	< 0.1	< 0.1	0.2	< 0.02	0.03	< 0.1	< 0.02
Sulphate-D	mg/L (ppm)	0.8	< 0.5	0.02	0.02	0.03	0.03	0.8	0.3	---	0.02	0.9	0.5	0.02	0.03	0.03	0.8	0.2	< 0.02	< 0.5
Chloride-D	mg/L (ppm)	< 0.1	< 0.1	1.5	1.2	2	1.2	< 0.1	< 0.5	---	1.2	< 0.1	0.2	1.2	2	1.7	0.1	< 0.5	< 0.5	0.1

Nutrients

Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02	0.04	< 0.02	0.03	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02	0.03	< 0.02	< 0.02
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	---	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	---	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	< 0.08	< 0.08	< 0.08	0.17	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.08	< 0.08	< 0.08	< 0.08	< 0.08
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	---	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Organic Parameters

Carbon (Total Organic)	mg/L (ppm)	< 0.1	< 0.1	0.2	0.1	0.1	< 0.1	0.2	0.2	< 0.1	< 0.1	0.2	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1
Carbon (Dissolved Organic)	mg/L (ppm)	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	0.2

Total Metals

Aluminum	mg/L (ppm)	< 0.0025	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.003	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0002	< 0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	0.00011	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.002	0.002	0.003	0.003	0.003	0.001	0.003	0.005	0.006	0.003	0.002	0.002	0.003	0.003	0.001	0.003	0.005	0.006	0.007
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0005	< 0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0005	< 0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00005	< 0.00005	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	< 0.0001	< 0.0001	0.0004	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	0.0002	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0003	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.005	< 0.005	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.0001	< 0.00010	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.0001	< 0.00010	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5															

2011 Blanks

Parameter	Lab file #	EC61850	EC62129	EC62129	EC62363	EC62363	EC62562	EC62562
Date Sampled	Lab ID	11-13831-	11-16743-	11-16744-	11-19510-	11-19511-	11-21064-	11-21065-
Sample No.	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	19-Sep-11	17-Oct-11	17-Oct-11	14-Nov-11	14-Nov-11	13/12/2011	13/12/2011

Physical Tests

pH @ 25°C BC-T	pH units	5.37	5.59	5.33	5.49	5.22	5.5	5.14
Conductivity @ 25°C	mS/cm	1	1	1	<1	<1	1	<1
T-Dissolved Solids180°C	mg/L (ppm)	< 4	< 4	< 4	< 4	< 4	4	< 4
Total Suspended Solids @105°C	mg/L (ppm)	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Turbidity	NTU	0.4	0.2	0.3	0.3	0.3	0.8	0.6

Dissolved Anions

Alkalinity as CaCO3	mg/L (ppm)	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Fluoride-D	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.1	0.1	< 0.02	< 0.02
Sulphate-D	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.02	< 0.02	< 0.5	< 0.5
Chloride-D	mg/L (ppm)	< 0.1	0.1	< 0.1	< 0.5	< 0.5	< 0.1	< 0.1

Nutrients

Ammonia - Nitrogen	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.02	< 0.02
Nitrate-N-D	mg/L (ppm)	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Nitrite-N-D	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
Phosphorus-Total Dissolved-LL	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

Organic Parameters

Carbon (Total Organic)	mg/L (ppm)	< 0.1	< 0.1	< 0.1	0.6	0.3	0.6	< 0.1
Carbon (Dissolved Organic)	mg/L (ppm)	< 0.1	0.2	< 0.1	0.5	0.1	0.6	< 0.1

Total Metals

Aluminum	mg/L (ppm)	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.008	0.003	0.003	0.001	0.001	0.001	0.001
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	0.00003	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	0.0005	0.0002	0.0012	< 0.0001	< 0.0001	0.0002
Lead-T	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus	mg/L (ppm)	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium	mg/L (ppm)	< 0.000005	< 0.000005	< 0.000005	0.000006	< 0.000005	< 0.000005	< 0.000005
Thallium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Tin	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005

Parameter	Lab file #	EC61850	EC62129	EC62129	EC62363	EC62363	EC62562	EC62562
Date Sampled	Lab ID	11-13831-	11-16743-	11-16744-	11-19510-	11-19511-	11-21064-	11-21065-
Sample No.	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	19-Sep-11	17-Oct-11	17-Oct-11	14-Nov-11	14-Nov-11	13/12/2011	13/12/2011
Vanadium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Zinc	mg/L (ppm)	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
T-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0

Dissolved Metals

Aluminum	mg/L (ppm)	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Arsenic	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Barium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Beryllium	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Boron	mg/L (ppm)	0.006	0.003	0.003	0.002	0.002	0.002	0.001
Cadmium	mg/L (ppm)	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
Calcium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chromium	mg/L (ppm)	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
Cobalt	mg/L (ppm)	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
Copper	mg/L (ppm)	0.0011	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Iron	mg/L (ppm)	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Lead-D	mg/L (ppm)	0.00009	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Lithium	mg/L (ppm)	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Magnesium	mg/L (ppm)	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Manganese	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Mercury	mg/L (ppm)	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
Molybdenum	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Nickel	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Phosphorus-D	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Potassium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium	mg/L (ppm)	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
Silicon	mg/L (ppm)	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
Silver	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Sodium	mg/L (ppm)	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium	mg/L (ppm)	< 0.000005	< 0.000005	< 0.000005	0.000052	0.000034	< 0.000005	< 0.000005
Thallium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Tin	mg/L (ppm)	0.0002	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Titanium	mg/L (ppm)	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Uranium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Vanadium	mg/L (ppm)	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
Zinc	mg/L (ppm)	0.0022	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
D-Hardness as CaCO3	mg/L (ppm)	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0	< 6.0

Cyanide

Cyanide, total	mg/L (ppm)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
Cyanide, WAD	mg/L (ppm)	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		
cyanate	mg/L (ppm)		<1	<1				
thiocyanate	mg/L (ppm)		<0.050	<0.050				

2012 Blanks

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
pH @ 25°C BC-D	pH	5.60	5.23			5.51	5.84	5.42	5.68				5.74	5.70
Conductivity @ 25°C	uS/cm	<1	<1			<1	<1	<1	<1				1	<1
T-Dissolved Solids180°C	mg/L	<4	<4			<4	<4	<4	<4				<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2			<2	<2	<2	<2				<2	<2
Turbidity	NTU	0.3	0.2			0.4	0.3	0.2	0.3				0.2	0.7
Alkalinity as CaCO3	mg/L	<1	<1			<1	<1	<1	<1				<1	2
Fluoride-D	mg/L	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02				<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5				<0.5	<0.5
Chloride-D	mg/L	<0.1	<0.1			<0.1	0.1	<0.1	<0.1				<0.1	<0.1
Ammonia - Nitrogen	mg/L	<0.02	<0.02			<0.01	<0.01	<0.02	<0.02			<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005			<0.005	<0.005	<0.005	<0.005				<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	0.004			<0.003	<0.003	<0.003	<0.003				<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08			<0.08	<0.08	<0.08	<0.08			<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003				<0.003	<0.003
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	0.5	<0.1			0.2	0.4	0.5	<0.1			0.2	<0.1	0.1
Carbon (Dissolved Organic)	mg/L	0.4	<0.1			0.2	0.4	0.4	<0.1			0.2	<0.1	0.1
Aluminum-T	mg/L	0.002	<0.002			<0.002	<0.002	<0.002	<0.002			0.003	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	0.0014			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			0.00344	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
Manganese-T	mg/L	0.00007	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000008	<0.000008			<0.000008	<0.000008	<0.000008	<0.000008			<0.000008	<0.000008	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01			<0.01	0.02	<0.01	<0.01			<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005			<0.000005	0.000012	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0
Aluminum-D	mg/L	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50

	ID	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	WQ FIELD BLANK	WQ TRIP BLANK	Field Blank	Trip Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-62667	~LIMS:EC-62667	~LIMS:L1105609	~LIMS:L1105609	~LIMS:EC-62773	~LIMS:EC-62773	~LIMS:EC-62887	~LIMS:EC-62887	~LIMS:L1136681	~LIMS:L1136681	~LIMS:EC-63034	~LIMS:EC-63034	~LIMS:EC-63189
Analytical Parameter	Unit	12-Jan-12	12-Jan-12	16-Jan-12	16-Jan-12	13-Feb-12	13-Feb-12	12-Mar-12	12-Mar-12	16-Apr-12	16-Apr-12	17-Apr-12	17-Apr-12	14-May-12
Manganese-D	mg/L	0.00007	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000008	<0.000008			<0.000008	<0.000008	<0.000008	<0.000008			<0.000008	<0.000008	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006	<0.0006			<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0
Cyanide (Total)	mg/L											<0.0050	<0.0050	
Cyanide (WAD)	mg/L											<0.0050	<0.0050	
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L			<0.50	<0.50					<0.50	<0.50			

2012 Blanks

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
pH @ 25°C BC-D	pH	5.53	6.73	6.31	6.04	5.91		5.81		5.48	5.23	5.83	5.47	
Conductivity @ 25°C	uS/cm	<1	7	6	<2.0	3		4		<1	<1	<1	<1	
T-Dissolved Solids180°C	mg/L	8	<4	4	<10	8		4		<4	<4	4	<4	
Total Suspended Solids @105°C	mg/L	<2	<2	<2		<2		<2		<2	<2	<2	<2	
Turbidity	NTU	0.7	0.2	0.2	<0.10	<0.1		<0.1		0.1	<0.1	0.1	<0.1	
Alkalinity as CaCO3	mg/L	2	3	2	<2.0	2		2		<1	<1	3	2	
Fluoride-D	mg/L	0.05	0.03	0.03	<0.020	0.02		<0.02		<0.02	<0.02	<0.02	<0.02	
Sulphate-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Chloride-D	mg/L	1.0	0.7	0.6	<0.50	0.7		0.8		0.3	0.3	<0.1	<0.1	
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.0050	<0.02		0.03		<0.02	<0.02	<0.02	<0.02	
Nitrate-N-D	mg/L	0.007	<0.005	<0.005	<0.0050	0.010		0.010		<0.005	<0.005	<0.005	<0.005	
Nitrite-N-D	mg/L	0.003	<0.003	<0.003	<0.0010	<0.003		<0.003		<0.003	<0.003	<0.003	<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.050	<0.08		<0.08		<0.08	<0.08	<0.08	<0.08	
Phosphorous-Ortho-DLL	mg/L	0.015	0.016	0.016		<0.003		<0.003				<0.003	<0.003	
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.30	<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Carbon (Total Organic)	mg/L	0.1	<0.1	<0.1	<0.50	0.1		<0.1		0.5	<0.1	<0.1	<0.1	
Carbon (Dissolved Organic)	mg/L	0.1	<0.1	<0.1		0.1		<0.1		0.4	<0.1	<0.1	<0.1	
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.0030	<0.002		<0.002		<0.002	<0.002	0.058	<0.002	
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	0.0004	<0.0001	
Barium-T	mg/L	0.00014	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.00706	0.00014	
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Boron-T	mg/L	<0.001	<0.001	<0.001	<0.010	<0.001		<0.001		<0.001	<0.001	<0.001	0.002	
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000010	<0.000015		<0.000015		<0.000015	<0.000015	<0.000015	<0.000015	
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	15.9	<0.5	
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.00010	<0.0003		<0.0003		<0.0003	<0.0003	<0.0003	<0.0003	
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00010	<0.00002		<0.00002		<0.00002	<0.00002	0.00002	<0.00002	
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00050	<0.0001		<0.0001		<0.0001	<0.0001	0.0004	<0.0001	
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.010	<0.0001		<0.0001		<0.0001	<0.0001	0.1330	<0.0001	
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.00050	<0.001		<0.001		<0.001	<0.001	<0.001	<0.001	
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.10	<0.50		<0.50		<0.50	<0.50	3.57	<0.50	

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.02160	<0.00005	
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000010	<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000050	<0.00005		<0.00005		<0.00005	<0.00005	0.00043	<0.00005	
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00050	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Phosphorous-T	mg/L	<0.02	<0.02	<0.02	<0.30	<0.02		<0.02		<0.02	<0.02	<0.02	<0.02	
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	0.6	<0.5	
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.00010	<0.0006		<0.0006		<0.0006	<0.0006	<0.0006	<0.0006	
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.050	<0.01		<0.01		<0.01	<0.01	4.61	<0.01	
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.050	<0.5		<0.5		<0.5	<0.5	2.9	<0.5	
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.00020	<0.000005		<0.000005		<0.000005	<0.000005	0.083900	<0.000005	
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.010	<0.0002		<0.0002		<0.0002	<0.0002	0.0016	<0.0002	
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.000010	<0.00005		<0.00005		<0.00005	<0.00005	0.00008	<0.00005	
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0010	<0.0001		<0.0001		<0.0001	<0.0001	0.0002	<0.0001	
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0030	<0.0005		<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	
T-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0		<6.0		<6.0		<6.0	<6.0	54.4	<6.0	
Aluminum-D	mg/L	<0.002	<0.002	<0.002		<0.002		<0.002		<0.002	<0.002	<0.002	<0.002	
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Barium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Boron-D	mg/L	<0.001	<0.001	<0.001		<0.001		<0.001		<0.001	<0.001	0.002	<0.001	
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015		<0.000015		<0.000015		<0.000015	<0.000015	<0.000015	<0.000015	
Calcium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003		<0.0003		<0.0003		<0.0003	<0.0003	<0.0003	<0.0003	
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002		<0.00002		<0.00002		<0.00002	<0.00002	<0.00002	<0.00002	
Copper-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Iron-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Lead-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Lithium-D	mg/L	<0.001	<0.001	<0.001		<0.001		<0.001		<0.001	<0.001	<0.001	<0.001	
Magnesium-D	mg/L	<0.50	<0.50	<0.50		<0.50		<0.50		<0.50	<0.50	<0.50	<0.50	

	ID	Field Blank	Field Blank	Trip Blank	TRAVEL BLANK	Field Blank	FILED BLANK	Travel Blank	TRAVEL BLANK	Field Blank	Travel Blank	Field Blank	Travel Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63191	~LIMS:EC-63233	~LIMS:EC-63233	~LIMS:	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63271	~LIMS:L1154508	~LIMS:EC-63325	~LIMS:EC-63325	~LIMS:EC-63357	~LIMS:EC-63357	~LIMS:L1161703
Analytical Parameter	Unit	15-May-12	22-May-12	22-May-12	27-May-12	28-May-12	28-May-12	28-May-12	28-May-12	04-Jun-12	04-Jun-12	11-Jun-12	11-Jun-12	12-Jun-12
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005		<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Phosphorous-D	mg/L	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Potassium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006		<0.0006		<0.0006		<0.0006	<0.0006	<0.0006	<0.0006	
Silicon-D	mg/L	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01	<0.01	<0.01	<0.01	
Silver-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Sodium-D	mg/L	<0.5	<0.5	<0.5		<0.5		<0.5		<0.5	<0.5	<0.5	<0.5	
Strontium-D	mg/L	0.000007	<0.000005	<0.000005		<0.000005		<0.000005		<0.000005	<0.000005	<0.000005	<0.000005	
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Tin-D	mg/L	<0.0001	<0.0001	<0.0001		<0.0001		<0.0001		<0.0001	<0.0001	<0.0001	<0.0001	
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002		<0.0002		<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005		<0.00005		<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005		<0.0005		<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	
D-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0		<6.0		<6.0		<6.0	<6.0	<6.0	<6.0	
Cyanide (Total)	mg/L						<0.0050		<0.0050	<0.0050	<0.0050			<0.0050
Cyanide (WAD)	mg/L				<0.0050		<0.0050		<0.0050	<0.0050	<0.0050			<0.0050
Cyanate	mg/L				<0.0050									
Thiocyanate (SCN)	mg/L													

2012 Blanks

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
pH @ 25°C BC-D	pH				5.53	5.48	6.29	5.65	5.75	5.51	5.91	5.55	5.74	5.52
Conductivity @ 25°C	uS/cm				<1	<1	3	<1	1	<1	1	1	<1	<1
T-Dissolved Solids180°C	mg/L				<4	<4	4	4	<4	<4	36	20	<4	<4
Total Suspended Solids @105°C	mg/L				<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity	NTU				0.2	0.2	<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
Alkalinity as CaCO3	mg/L				3	2	2	1	2	1	2	2	2	2
Fluoride-D	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L				<0.1	<0.1	<0.1	<0.1	0.4	0.4	<0.1	0.1	0.3	0.4
Ammonia - Nitrogen	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L				<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L				0.16	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L				<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.068	<0.003
Phosphorous (Total-Dissolved) LL	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L				0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	<0.1
Carbon (Dissolved Organic)	mg/L				0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.0	<0.1
Aluminum-T	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005
Beryllium-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L				0.003	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L				<0.000015	0.000028	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L				<0.00002	0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
Manganese-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L				<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L				<0.0005	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L				<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L				<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L				0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L				<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L				<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L				<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Lead-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L				<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRAVEL BLANK	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1161703	~LIMS:L1165411	~LIMS:L1165411	~LIMS:EC-63411	~LIMS:EC-63411	~LIMS:EC-63456	~LIMS:EC-63456	~LIMS:EC-63521	~LIMS:EC-63521	~LIMS:EC-63577	~LIMS:EC-63577	~LIMS:EC-63634	~LIMS:EC-63634
Analytical Parameter	Unit	12-Jun-12	16-Jun-12	16-Jun-12	18-Jun-12	18-Jun-12	25-Jun-12	25-Jun-12	09-Jul-12	09-Jul-12	16-Jul-12	16-Jul-12	23-Jul-12	23-Jul-12
Manganese-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L				<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L				<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L				<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L										<0.50	<0.50		

2012 Blanks

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
pH @ 25°C BC-D	pH	5.83	5.61	5.82	5.65	5.70	5.53	5.70	5.19		6.00	6.28	5.81	5.94
Conductivity @ 25°C	uS/cm	1	<1	1	1	<1	<1	<1	<1		<1	1	<1	<1
T-Dissolved Solids180°C	mg/L	4	4	<4	<4	4	<4	<4	<4		<4	<4	20	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2	<2	<2		<2	<2	<2	<2
Turbidity	NTU	0.2	0.1	0.2	0.1	0.2	0.2	0.4	3.9		0.7	0.9	0.2	0.4
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1		10	8	8	10
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	<0.1	<0.1	<0.1
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08		<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003							
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	<0.1	0.1	0.2	<0.1	<0.1	<0.1	0.4	0.3		0.3	0.1	<0.1	0.4
Carbon (Dissolved Organic)	mg/L	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.4	0.2		0.2	0.1	<0.1	0.4
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	0.001	0.002	0.002	0.002	0.002	0.002	0.001	0.001		<0.001	<0.001	0.002	0.002
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015		<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		0.0002	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	0.000015	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0		<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	0.001	0.001	0.002	0.002	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015		<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003		<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		<0.50	<0.50	<0.50	<0.50

	ID	Field Blank	Travel Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FEILD BLANK	Field Blank	Trip Blank	Field Blank	Field Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63753	~LIMS:EC-63753	~LIMS:EC-63756	~LIMS:EC-63756	~LIMS:EC-63808	~LIMS:EC-63808	~LIMS:EC-63883	~LIMS:EC-63883	~LIMS:L1208861	~LIMS:EC-63925	~LIMS:EC-63925	~LIMS:EC-63961	~LIMS:EC-63959
Analytical Parameter	Unit	13-Aug-12	13-Aug-12	14-Aug-12	14-Aug-12	21-Aug-12	21-Aug-12	04-Sep-12	04-Sep-12	12-Sep-12	12-Sep-12	12-Sep-12	17-Sep-12	17-Sep-12
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006		<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	0.000005	<0.000005	0.000009	<0.000005		<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0		<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050		<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050	<0.0050		<0.0050		<0.0050
Cyanate	mg/L													
Thiocyanate (SCN)	mg/L													

2012 Blanks

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
pH @ 25°C BC-D	pH	5.76	5.67		5.72	5.35	5.90	5.90	5.75	5.63	5.52	5.80	5.67	5.66
Conductivity @ 25°C	uS/cm	<1	<1	<2.0	<1	<1	<2.0	1	<1	<1	<1			<2.0
T-Dissolved Solids180°C	mg/L	<4	8	<10	<4	<4	<10	<4	<4	<4	<4			<10
Total Suspended Solids @105°C	mg/L	<2	<2		<2	<2		<2	<2	<2	<2	<2	<2	
Turbidity	NTU	0.5	<0.1	<0.10	0.7	0.8	<0.10	0.2	0.2	0.7	0.6			<0.10
Alkalinity as CaCO3	mg/L	9	5	1.3	<1	<1	1.4	<1	<1	<1	<1			<2.0
Fluoride-D	mg/L	<0.02	<0.02	<0.020	<0.02	<0.02	<0.020	<0.02	<0.02	<0.02	<0.02			<0.020
Sulphate-D	mg/L	<0.5	<0.5		<0.5	<0.5		<0.5	<0.5	<0.5	<0.5			
Chloride-D	mg/L	<0.1	<0.1	<0.50	<0.1	<0.1	<0.50	<0.1	<0.1	<0.1	0.3	0.2	0.2	<0.50
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.0050	<0.02	<0.02	<0.0050	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.0050
Nitrate-N-D	mg/L	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050
Nitrite-N-D	mg/L	<0.003	<0.003	<0.0010	<0.003	<0.003	<0.0010	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.0010
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.050	<0.08	<0.08	<0.050	<0.08	<0.08	<0.08	<0.08			<0.050
Phosphorous-Ortho-DLL	mg/L													
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.30	<0.01	<0.01	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Carbon (Total Organic)	mg/L	0.1	<0.1	<0.50	<0.1	<0.1	<0.50	<0.1	0.1	0.6	0.2			<0.50
Carbon (Dissolved Organic)	mg/L	0.1	<0.1		<0.1	<0.1	<0.50	<0.1	0.1	0.2	0.1			<0.50
Aluminum-T	mg/L	<0.002	<0.002	<0.0030	<0.002	<0.002	<0.0030	<0.002	<0.002	<0.002	<0.002			<0.0030
Antimony-T	mg/L	<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005			<0.00010
Arsenic-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001			<0.00010
Barium-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	0.00015	<0.00005			<0.000050
Beryllium-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001			<0.00010
Boron-T	mg/L	0.002	0.002	<0.010	<0.001	<0.001	<0.010	<0.001	<0.001	0.001	0.001			<0.010
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015			<0.000010
Calcium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5			<0.050
Chromium-T	mg/L	<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003			<0.00010
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002			<0.00010
Copper-T	mg/L	<0.0001	<0.0001	<0.00050	<0.0001	<0.0001	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001			<0.00050
Iron-T	mg/L	<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.0001	<0.0001			<0.010
Lead-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005			<0.000050
Lithium-T	mg/L	<0.001	<0.001	<0.00050	<0.001	<0.001	<0.00050	<0.001	<0.001	<0.001	<0.001			<0.00050
Magnesium-T	mg/L	<0.50	<0.50	<0.10	<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50			<0.10

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
Manganese-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005		<0.000050	
Mercury-T	mg/L	<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005		<0.000010	
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005		<0.000050	
Nickel-T	mg/L	<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005		<0.00050	
Phosphorous-T	mg/L	<0.02	<0.02	<0.30	<0.02	<0.02	<0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.050
Potassium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5		<0.10	
Selenium-T	mg/L	<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006		<0.00010	
Silicon-T	mg/L	<0.01	<0.01	<0.050	<0.01	<0.01	<0.050	<0.01	<0.01	<0.01	<0.01		<0.050	
Silver-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Sodium-T	mg/L	<0.5	<0.5	<0.050	<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5		<0.050	
Strontium-T	mg/L	<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005		<0.00020	
Thallium-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Tin-T	mg/L	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001		<0.00010	
Titanium-T	mg/L	<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.0002	<0.0002		<0.010	
Uranium-T	mg/L	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005		<0.000010	
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0010	<0.0001	<0.0001	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001		<0.0010	
Zinc-T	mg/L	<0.0005	<0.0005	<0.0030	0.0006	<0.0005	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005		<0.0030	
T-Hardness as CaCO3	mg/L	<6.0	<6.0		<6.0	<6.0		<6.0	<6.0	<6.0	<6.0			
Aluminum-D	mg/L	<0.002	<0.002		<0.002	<0.002	<0.0010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0010
Antimony-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010
Arsenic-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010
Barium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Beryllium-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010
Boron-D	mg/L	<0.001	<0.001		<0.001	<0.001	<0.010	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.010
Cadmium-D	mg/L	<0.000015	<0.000015		<0.000015	<0.000015	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000010
Calcium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
Chromium-D	mg/L	<0.0003	<0.0003		<0.0003	<0.0003	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00010
Cobalt-D	mg/L	<0.00002	<0.00002		<0.00002	<0.00002	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00010
Copper-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00020	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00020
Iron-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.010
Lead-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Lithium-D	mg/L	<0.001	<0.001		<0.001	<0.001	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050
Magnesium-D	mg/L	<0.50	<0.50		<0.50	<0.50	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.10

	ID	Travel Blank	Trip Blank	TRAVEL BLANK	Field Blank	Trip Blank	MWFB	Travel Blank	Field Blank	Field Blank	Trip Blank	Field Blank	Trip Blank	FIELD BLANK
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:EC-63959	~LIMS:EC-63961	~LIMS:	~LIMS:EC-64031	~LIMS:EC-64031	~LIMS:L1217111	~LIMS:EC-64183	~LIMS:EC-64183	~LIMS:EC-64256	~LIMS:EC-64256	~LIMS:EC-64304	~LIMS:EC-64304	~LIMS:L1231320
Analytical Parameter	Unit	17-Sep-12	17-Sep-12	19-Sep-12	24-Sep-12	24-Sep-12	28-Sep-12	15-Oct-12	16-Oct-12	22-Oct-12	22-Oct-12	29-Oct-12	29-Oct-12	30-Oct-12
Manganese-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Mercury-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000010
Molybdenum-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050
Nickel-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00050
Phosphorous-D	mg/L	<0.01	<0.01		<0.01	<0.01	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Potassium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.10
Selenium-D	mg/L	<0.0006	<0.0006		<0.0006	<0.0006	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.00010
Silicon-D	mg/L	<0.01	<0.01		<0.01	<0.01	<0.050	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.050
Silver-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Sodium-D	mg/L	<0.5	<0.5		<0.5	<0.5	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.050
Strontium-D	mg/L	<0.000005	<0.000005		<0.000005	<0.000005	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00020
Thallium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Tin-D	mg/L	<0.0001	<0.0001		<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010
Titanium-D	mg/L	<0.0002	<0.0002		<0.0002	<0.0002	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.010
Uranium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010
Vanadium-D	mg/L	<0.00005	<0.00005		<0.00005	<0.00005	<0.0010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0010
Zinc-D	mg/L	<0.0005	<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010
D-Hardness as CaCO3	mg/L	<6.0	<6.0		<6.0	<6.0		<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	
Cyanide (Total)	mg/L	<0.0050		<0.0050	<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050
Cyanide (WAD)	mg/L	<0.0050			<0.005	<0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050
Cyanate	mg/L			<0.0050			<0.0050							<0.0050
Thiocyanate (SCN)	mg/L						<0.50		<0.50					<0.50

2012 Blanks

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
pH @ 25°C BC-D	pH	5.74	5.67	5.56	5.63	5.49	5.58	5.54	5.59	5.73	5.60	5.51	5.69	5.53
Conductivity @ 25°C	uS/cm	<2.0	1	1	<1	<1	<2.0	<2.0	<1	1	<1	<1	<1	<1
T-Dissolved Solids180°C	mg/L	<10	<4	4	4	4	<10	<10	<4	<4	<4	<4	<4	<4
Total Suspended Solids @105°C	mg/L		<2	<2	<2	<2			<2	<2	<2	<2	<2	<2
Turbidity	NTU	<0.10	0.5	0.5	0.6	0.6	<0.10	<0.10	0.6	0.4	0.4	0.5	1.3	1.3
Alkalinity as CaCO3	mg/L	<2.0	<1	<1	<1	<1	<1.0	<1.0	<1	<1	<1	<1	<1	<1
Fluoride-D	mg/L	<0.020	<0.02	<0.02	<0.02	<0.02	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L		<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.50	<0.1	<0.1	<0.1	<0.1	<0.50	<0.50	0.1	0.1	<0.1	<0.1	0.1	0.1
Ammonia - Nitrogen	mg/L	<0.0050	<0.02	<0.02	<0.02	<0.02	<0.0050	0.0093	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.0010	<0.003	<0.003	<0.003	<0.003	<0.0010	<0.0010	<0.003	0.004	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.050	<0.08	<0.08	<0.08	<0.08	<0.050	0.088	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L													
Phosphorous (Total-Dissolved) LL	mg/L	<0.050	<0.01	<0.01	<0.01	<0.01	<0.30	<0.30	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Carbon (Total Organic)	mg/L	<0.50	0.9	<0.1	<0.1	<0.1	<0.50		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon (Dissolved Organic)	mg/L	<0.50	0.9	<0.1	<0.1	<0.1	<0.50	<0.50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aluminum-T	mg/L	<0.0030	<0.002	<0.002	<0.002	<0.002	<0.0030	<0.0030	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00010	<0.00010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.010	<0.001	<0.001	<0.001	<0.001	<0.010	<0.010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	0.000011	<0.000010	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.050	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.00010	<0.00010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00010	<0.00010	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001	<0.00050	<0.00050	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.010	<0.010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.10	<0.50	<0.50	<0.50	<0.50	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
Manganese-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	0.000065	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000010	<0.000010	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00050	<0.00050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.050	<0.02	<0.02	<0.02	<0.02	<0.30	<0.30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Potassium-T	mg/L	<0.10	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.00010	<0.00010	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.050	<0.01	<0.01	<0.01	<0.01	<0.050	<0.050	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.050	<0.5	<0.5	<0.5	<0.5	<0.050	<0.050	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.00020	<0.00020	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.010	<0.010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.000010	<0.000010	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0010	<0.0010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Zinc-T	mg/L	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005	<0.0030	<0.0030	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L		<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Aluminum-D	mg/L		<0.002	<0.002	<0.002	<0.002	<0.0010		<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	0.000080		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L		<0.001	<0.001	<0.001	<0.001	<0.010		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L		<0.000015	<0.000015	<0.000015	<0.000015	<0.000010		<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L		<0.0003	<0.0003	<0.0003	<0.0003	<0.00010		<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L		<0.00002	<0.00002	<0.00002	<0.00002	<0.00010		<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00020		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L		<0.001	<0.001	<0.001	<0.001	<0.00050		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L		<0.50	<0.50	<0.50	<0.50	<0.10		<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

	ID	TRIP BLANK	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Field Blank	Travel Blank	Trip Blank	Field Blank	Trip Blank
	Matrix	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC	Water QC
	Comment	~LIMS:L1231320	~LIMS:EC-64399	~LIMS:EC-64399	~LIMS:EC-64411	~LIMS:EC-64411	~LIMS:	~LIMS:L1247429	~LIMS:EC-64545	~LIMS:EC-64543	~LIMS:EC-64543	~LIMS:EC-64545	~LIMS:EC-64590	~LIMS:EC-64590
Analytical Parameter	Unit	30-Oct-12	12-Nov-12	12-Nov-12	19-Nov-12	19-Nov-12	04-Dec-12	06-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	10-Dec-12	17-Dec-12	17-Dec-12
Manganese-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L		<0.000005	<0.000005	<0.000005	<0.000005	<0.000010		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00050		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L		<0.01	<0.01	<0.01	<0.01	<0.30		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L		<0.0006	<0.0006	<0.0006	<0.0006	<0.00010		<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L		<0.01	<0.01	<0.01	<0.01	<0.050		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L		<0.5	<0.5	<0.5	<0.5	<0.050		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L		<0.000005	<0.000005	<0.000005	<0.000005	<0.00020		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.00010		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	<0.010		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.000010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.0010		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0010		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L		<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050		<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050		<0.0050	<0.0050
Cyanate	mg/L	<0.0050					<0.0050							
Thiocyanate (SCN)	mg/L	<0.50					<0.50							

2013 Blanks	Lab file #	~LIMS:EC-64814	~LIMS:EC-64814	~LIMS:EC-64914	~LIMS:EC-64914	~LIMS:EC-65054	~LIMS:EC-65054	~LIMS:L1291117	~LIMS:L1291117	~LIMS:EC-65181	~LIMS:EC-65181	~LIMS:EC-65224	~LIMS:EC-65224
	sample name	Field Blank	Travel Blank	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	12-Feb-13	12-Feb-13	13-Mar-13	13-Mar-13	15-Apr-13	15-Apr-13	16-Apr-13	16-Apr-13	13-May-13	13-May-13	21-May-13	22-May-13
Physical Tests	Units												
pH @ 25°C BC-D	pH	5.75	5.62	5.78	5.83	5.64	5.53			7.62	5.84	5.59	5.69
Conductivity @ 25°C	uS/cm	<1	1	<1	<1	1	<1			16	<1	1	1
T-Dissolved Solids180°C	mg/L	4	<4	<4	<4	<4	<4			<4	<4	<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2			<2	<2	<2	<2
Turbidity	NTU	0.4	0.3	0.5	0.5	0.2	0.2			0.5	0.5	0.4	0.5
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0			<6.0	<6.0	<6.0	<6.0
Dissolved Anions													
Alkalinity as CaCO3	mg/L	<1	<1	<1	1	<1	<1			5	1	1	<1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	0.2	0.2	<0.1	<0.1	<0.1	<0.1			0.1	0.1	<0.1	0.6
Nutrients													
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02			<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	0.005			<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003			<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08			<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L												
Phosphorous (Total-Dissolved) LL	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.01	<0.01
Organic Parameters													
Carbon (Total Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			0.2	<0.1	0.2	0.1
Carbon (Dissolved Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1	<0.1	0.2	<0.1
Total Metals													
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	<0.001	<0.001	0.002	0.002			<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.01	<0.01
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005

2013 Blanks	Lab file #	~LIMS:EC-64814	~LIMS:EC-64814	~LIMS:EC-64914	~LIMS:EC-64914	~LIMS:EC-65054	~LIMS:EC-65054	~LIMS:L1291117	~LIMS:L1291117	~LIMS:EC-65181	~LIMS:EC-65181	~LIMS:EC-65224	~LIMS:EC-65224
	sample name	Field Blank	Travel Blank	Field Blank	Travel Blank	Field Blank	Trip Blank	FIELD BLANK	TRIP BLANK	Field Blank	Trip Blank	Field Blank	Trip Blank
	date	12-Feb-13	12-Feb-13	13-Mar-13	13-Mar-13	15-Apr-13	15-Apr-13	16-Apr-13	16-Apr-13	13-May-13	13-May-13	21-May-13	22-May-13
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005			0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L												
Dissolved Metals													
Aluminum-D	mg/L	<0.002		<0.002	<0.002	<0.002	<0.002			<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L			<0.000015	<0.000015	<0.000015	<0.000015			<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L			<0.0003	<0.0003	<0.0003	<0.0003			<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L			<0.00002	<0.00002	<0.00002	<0.00002			<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L			<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L			<0.50	<0.50	<0.50	<0.50			<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L			<0.0006	<0.0006	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Silicon-D	mg/L			<0.01	<0.01	<0.01	<0.01			<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L			<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L			<0.000005	<0.000005	<0.000005	<0.000005			<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L			<0.0001	<0.0001	<0.0001	<0.0001			<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L			<0.0002	<0.0002	<0.0002	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L			<0.00005	<0.00005	<0.00005	<0.00005			<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L			<0.0005	<0.0005	<0.0005	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L												
Cyanide													
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050			<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L												
Thiocyanate (SCN)	mg/L							<0.50	<0.50				

2013 Blanks	Lab file #	~LIMS:EC-65253	~LIMS:EC-65253	~LIMS:EC-65302	~LIMS:EC-65302	~LIMS:EC-65342	~LIMS:EC-65342	~LIMS:EC-65391	~LIMS:EC-65391
	sample name	Field Blank	Trip Blank	Field Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Trip Blank
	date	28-May-13	28-May-13	04-Jun-13	06-Jun-13	10-Jun-13	11-Jun-13	17-Jun-13	17-Jun-13
Physical Tests	Units								
pH @ 25°C BC-D	pH	5.71	6.21	5.68	6.10	5.78	5.78	5.74	5.64
Conductivity @ 25°C	uS/cm	1	1	1	1	1	1	1	1
T-Dissolved Solids180°C	mg/L	4	4	<4	<4	<4	4	<4	<4
Total Suspended Solids @105°C	mg/L	<2	<2	<2	<2	<2	<2	<2	<2
Turbidity	NTU	0.5	0.5	0.7	0.4	1.3	0.7	1.1	1.0
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0
Dissolved Anions									
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	<1	<1	<1	<1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	0.02	0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	0.1	0.1	0.1	0.1	0.1	<0.1	<0.1	<0.1
Nutrients									
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L								
Phosphorous (Total-Dissolved) LL	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Organic Parameters									
Carbon (Total Organic)	mg/L	0.2	0.2	<0.1	<0.1	0.1	0.1	0.3	0.1
Carbon (Dissolved Organic)	mg/L	0.2	0.2	<0.1	<0.1	0.1	<0.1	0.3	<0.1
Total Metals									
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	0.000021	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005

2013 Blanks	Lab file #	~LIMS:EC-65253	~LIMS:EC-65253	~LIMS:EC-65302	~LIMS:EC-65302	~LIMS:EC-65342	~LIMS:EC-65342	~LIMS:EC-65391	~LIMS:EC-65391
	sample name	Field Blank	Trip Blank	Field Blank	Trip Blank	Trip Blank	Field Blank	Field Blank	Trip Blank
	date	28-May-13	28-May-13	04-Jun-13	06-Jun-13	10-Jun-13	11-Jun-13	17-Jun-13	17-Jun-13
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L								
Dissolved Metals									
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L								
Cyanide									
Cyanide (Total)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanide (WAD)	mg/L	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
Cyanate	mg/L								
Thiocyanate (SCN)	mg/L								

2013 Lake Blanks

Lab ID	~LIMS:EC-64761	~LIMS:EC-64781	~LIMS:EC-64781	~LIMS:EC-64914	~LIMS:EC-64914	
sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank	
type	TB	FB	TB	FB	TB	
date	28-Jan-13	04-Feb-13	04-Feb-13	13-Mar-13	13-Mar-13	
Units						
Physical Tests						
pH @ 25°C BC-D	pH	5.75	5.75	5.75	5.78	5.83
Conductivity @ 25°C	uS/cm	1	1	1	<1	<1
T-Dissolved Solids180°C	mg/L	<4	<4	<4	<4	<4
Total Suspended Solids @ 105°C	mg/L	<2	<2	<2	<2	<2
Turbidity	NTU	0.7	1.2	1.2	0.5	0.5
Hardness as (CaCO3)	mg/L	<6.0	<6.0	<6.0	<6.0	<6.0
Dissolved Anions						
Alkalinity as CaCO3	mg/L	<1	<1	<1	<1	1
Fluoride-D	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Sulphate-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chloride-D	mg/L	<0.1	0.2	0.2	<0.1	<0.1
Nutrients						
Ammonia - Nitrogen	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate-N-D	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrite-N-D	mg/L	<0.003	<0.003	<0.003	<0.003	<0.003
Total Kjeldahl Nitrogen (TKN)	mg/L	<0.08	<0.08	<0.08	<0.08	<0.08
Phosphorous-Ortho-DLL	mg/L					
Phosphorous (Total-Dissolved) LL	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Organic Parameters						
Carbon (Total Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Carbon (Dissolved Organic)	mg/L	<0.1	<0.1	<0.1	<0.1	<0.1
Total Metals						
Aluminum-T	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-T	mg/L	<0.001	0.002	0.002	<0.001	<0.001
Cadmium-T	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-T	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-T	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-T	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-T	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-T	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-T	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-T	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-T	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-T	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium-T	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-T	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-T	mg/L	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005
Zinc-T	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
T-Hardness as CaCO3	mg/L					
Dissolved Metals						
Aluminum-D	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002
Antimony-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Arsenic-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	<0.000015	<0.000015	<0.000015
Calcium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium-D	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Copper-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Iron-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Lead-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Lithium-D	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium-D	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50
Manganese-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Nickel-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Phosphorous-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Selenium-D	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Silicon-D	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01
Silver-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium-D	mg/L	<0.5	<0.5	<0.5	<0.5	<0.5
Strontium-D	mg/L	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Thallium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Tin-D	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001

2013 Lake Blanks	Lab ID	~LIMS:EC-64761	~LIMS:EC-64781	~LIMS:EC-64781	~LIMS:EC-64914	~LIMS:EC-64914
	sample name	Trip Blank	Field Blank	Trip Blank	Field Blank	Travel Blank
	type	TB	FB	TB	FB	TB
	date	28-Jan-13	04-Feb-13	04-Feb-13	13-Mar-13	13-Mar-13
Titanium-D	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium-D	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Zinc-D	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
D-Hardness as CaCO3	mg/L					
Cyanide						
Cyanide (Total)	mg/L				<0.0050	<0.0050
Cyanide (WAD)	mg/L				<0.0050	<0.0050
Cyanate	mg/L					
Thiocyanate (SCN)	mg/L					

2013 Lake Lab Duplicates	Lab file #	~LIMS:EC-64761	~LIMS:EC-64761		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:L1279413	~LIMS:EC-64914	
	sample name	WQ21-Epi	WQ21-Epi	% Diff	WQ20 met	WQ20 met	% Diff	WQ22-epi	WQ22-epi	% Diff	WQ23-Epi	WQ23-Epi	% Diff	WQ25-Hypo	WQ25-Hypo	
	type	LD	F		LD	F		LD	F		LD	F		LD	F	
	date	28-Jan-13	28-Jan-13		04-Feb-13	04-Feb-13		04-Feb-13	04-Feb-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13	
	Units															
Physical Tests																
pH @ 25°C BC-D	pH	7.79	7.76	0%	7.76	7.75	0%		7.33	-	7.45	7.39	1%		7.4	
Conductivity @ 25°C	uS/cm	162	164	1%	162	161	1%		108	-	56	57	2%		57	
T-Dissolved Solids180°C	mg/L	92	104	12%		100	-	68	72	6%		52	-		32	
Total Suspended Solids @ 105°C	mg/L	<2	<2	-		<2	-	<2	<2	-		<2	-		<2	
Turbidity	NTU	1	1.2	17%	3.5	3.4	3%		2.5	-	0.5	0.7	29%		0.8	
Hardness as (CaCO3)	mg/L	85.4	84.8	1%		85.1	-	51.5	51.3	0%		25.8	-		28.5	
Dissolved Anions																
Alkalinity as CaCO3	mg/L	85	85	0%	89	90	1%		55	-	25	25	0%		25	
Fluoride-D	mg/L	0.09	0.09	0%	0.07	0.08	13%		0.06	-	0.05	0.05	0%		0.04	
Sulphate-D	mg/L	5	4.9	2%	2.2	2.1	5%		1.2	-	2.2	2.2	0%		1.6	
Chloride-D	mg/L	0.3	0.4	25%	0.4	0.6	33%		0.4	-	0.3	0.3	0%		0.3	
Nutrients																
Ammonia - Nitrogen	mg/L	<0.02	<0.02	-		<0.02	-	<0.02	<0.02	-		<0.02	-		<0.02	
Nitrate-N-D	mg/L	0.084	0.081	4%	0.112	0.107	4%		0.252	-	0.066	0.067	1%		0.066	
Nitrite-N-D	mg/L	<0.003	<0.003	-	<0.003	<0.003	-		<0.003	-	<0.003	<0.003	-		<0.003	
Total Kjeldahl Nitrogen (TKN)	mg/L	0.13	0.12	8%	0.25	0.24	4%	0.44	0.45	2%		0.09	-		0.16	
Phosphorous-Ortho-DLL	mg/L			-			-			-			-			
Phosphorous (Total-Dissolved) LL	mg/L	0.02	0.019	5%		0.011	-	0.015	0.015	0%		0.023	-		0.025	
Organic Parameters																
Carbon (Total Organic)	mg/L	7.6	7.6	0%		7.8	-	16	16	0%		3.5	-		7	
Carbon (Dissolved Organic)	mg/L	7.5	7.3	3%		7.8	-	15	14.8	1%		2.9	-		6.9	
Total Metals																
Aluminum-T	mg/L	0.003	0.006	50%		0.003	-	0.012	0.012	0%		0.003	-		0.016	
Antimony-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	0.00008	0.00009	11%		0.00007	-		<0.00005	
Arsenic-T	mg/L	0.0005	0.0005	0%		0.0003	-	0.0003	0.0003	0%		0.0006	-		0.0002	
Barium-T	mg/L	0.00611	0.0062	1%		0.00878	-	0.00727	0.00737	1%		0.00291	-		0.00963	
Beryllium-T	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001	
Boron-T	mg/L	0.003	0.004	25%		0.001	-	0.003	0.003	0%		<0.001	-		<0.001	
Cadmium-T	mg/L	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-		<0.000015	-		<0.000015	
Calcium-T	mg/L	24.9	24.8	0%		23.3	-	14.2	14.1	1%		8.1	-		9.3	
Chromium-T	mg/L	<0.0003	<0.0003	-		<0.0003	-	<0.0003	<0.0003	-		<0.0003	-		<0.0003	
Cobalt-T	mg/L	<0.00002	<0.00002	-		<0.00002	-	<0.00002	<0.00002	-		<0.00002	-		<0.00002	
Copper-T	mg/L	0.0008	0.0008	0%		<0.0001	-	0.0003	0.0004	25%		0.0002	-		0.0002	
Iron-T	mg/L	0.0087	0.0083	5%		0.0104	-	0.0674	0.0632	6%		0.0275	-		0.0564	
Lead-T	mg/L	0.00073	0.00075	3%		<0.00005	-	0.00177	0.00179	1%		<0.00005	-		<0.00005	
Lithium-T	mg/L	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-		<0.001	-		<0.001	
Magnesium-T	mg/L	5.66	5.57	2%		6.58	-	3.91	3.9	0%		1.34	-		1.25	
Manganese-T	mg/L	0.00331	0.00326	2%		0.0189	-	0.0127	0.0119	6%		0.00056	-		0.0659	
Mercury-T	mg/L	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-		<0.000005	-		<0.000005	
Molybdenum-T	mg/L	0.00056	0.00063	11%		0.00061	-	0.00033	0.00033	0%		0.00075	-		0.00062	
Nickel-T	mg/L	0.00024	0.00025	4%		0.00036	-	0.0003	0.00028	7%		<0.00005	-		0.00009	
Phosphorous-T	mg/L	0.02	0.019	5%		0.011	-	0.015	0.015	0%		0.023	-		0.025	
Potassium-T	mg/L	1	1	0%		1.1	-	1.3	1.3	0%		<0.5	-		<0.5	
Selenium-T	mg/L	<0.0006	<0.0006	-		<0.0006	-	<0.0006	<0.0006	-		<0.0006	-		<0.0006	
Silicon-T	mg/L	5.47	5.92	8%		7.94	-	5.73	6.26	8%		3.67	-		1.91	
Silver-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005	
Sodium-T	mg/L	4.2	4.1	2%		3.9	-	3.8	3.8	0%		2.5	-		1.9	

2013 Lake Lab Duplicates	Lab file #	~LIMS:EC-64761	~LIMS:EC-64761		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64781	~LIMS:EC-64781		~LIMS:EC-64914	~LIMS:EC-64914		~LIMS:L1279413	~LIMS:EC-64914
	sample name	WQ21-Epi	WQ21-Epi	% Diff	WQ20 met	WQ20 met	% Diff	WQ22-epi	WQ22-epi	% Diff	WQ23-Epi	WQ23-Epi	% Diff	WQ25-Hypo	WQ25-Hypo
	type	LD	F		LD	F		LD	F		LD	F		LD	F
	date	28-Jan-13	28-Jan-13		04-Feb-13	04-Feb-13		04-Feb-13	04-Feb-13		13-Mar-13	13-Mar-13		13-Mar-13	13-Mar-13
Strontium-T	mg/L	0.106	0.108	2%		0.111	-	0.0748	0.0751	0%		0.0492	-		0.0856
Thallium-T	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Tin-T	mg/L	<0.00001	<0.00001	-		<0.00001	-	<0.00001	<0.00001	-		<0.00001	-		<0.00001
Titanium-T	mg/L	0.0002	0.0002	0%		<0.0002	-	0.0003	0.0002	33%		<0.0002	-		0.0002
Uranium-T	mg/L	0.00009	0.00011	18%		<0.00005	-	<0.00005	<0.00005	-		0.0001	-		0.00012
Vanadium-T	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.00005	-		<0.00005
Zinc-T	mg/L	0.0026	0.0027	4%		0.0057	-	0.0048	0.0051	6%		0.0027	-		0.0009
T-Hardness as CaCO3	mg/L			-			-			-			-		
Dissolved Metals															
Aluminum-D	mg/L	<0.002	<0.002	-		<0.002	-	0.01	0.008	20%		<0.002	-		0.013
Antimony-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	0.00006	0.00008	25%		0.00007	-		<0.00005
Arsenic-D	mg/L	0.0005	0.0005	0%		0.0003	-	0.0002	0.0003	33%		0.0006	-		0.0002
Barium-D	mg/L	0.00588	0.00571	3%		0.00878	-	0.00707	0.00702	1%		0.0026	-		0.00874
Beryllium-D	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001
Boron-D	mg/L	0.003	0.004	25%		<0.001	-	0.001	0.001	0%		<0.001	-		<0.001
Cadmium-D	mg/L	<0.000015	<0.000015	-		<0.000015	-	<0.000015	<0.000015	-		<0.000015	-		<0.000015
Calcium-D	mg/L	21.7	24.8	13%		23.3	-	14.2	14.1	1%		8.1	-		9.2
Chromium-D	mg/L	<0.0003	<0.0003	-		<0.0003	-	<0.0003	<0.0003	-		<0.0003	-		<0.0003
Cobalt-D	mg/L	<0.00002	<0.00002	-		<0.00002	-	<0.00002	<0.00002	-		<0.00002	-		<0.00002
Copper-D	mg/L	0.0008	0.0008	0%		<0.0001	-	0.0003	0.0004	25%		0.0002	-		0.0002
Iron-D	mg/L	0.0073	0.0072	1%		0.0074	-	0.0505	0.0537	6%		0.0135	-		0.0435
Lead-D	mg/L	0.00038	0.00048	21%		<0.00005	-	0.00061	0.00061	0%		<0.00005	-		<0.00005
Lithium-D	mg/L	<0.001	<0.001	-		<0.001	-	<0.001	<0.001	-		<0.001	-		<0.001
Magnesium-D	mg/L	5.66	5.57	2%		6.58	-	3.74	3.9	4%		1.34	-		1.24
Manganese-D	mg/L	0.00043	0.00041	5%		0.00404	-	0.00799	0.00815	2%		<0.00005	-		0.0635
Mercury-D	mg/L	<0.000005	<0.000005	-		<0.000005	-	<0.000005	<0.000005	-		<0.000005	-		<0.000005
Molybdenum-D	mg/L	0.00051	0.00063	19%		0.00061	-	0.0003	0.00029	3%		0.00073	-		0.00062
Nickel-D	mg/L	0.00012	0.00012	0%		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		0.00006
Phosphorous-D	mg/L	0.02	0.02	0%		0.01	-	0.01	0.02	50%		<0.01	-		<0.01
Potassium-D	mg/L	1	1	0%		1.1	-	1.3	1.3	0%		<0.5	-		<0.5
Selenium-D	mg/L	<0.0006	<0.0006	-		<0.0006	-	<0.0006	<0.0006	-		<0.0006	-		<0.0006
Silicon-D	mg/L	5.47	5.92	8%		7.94	-	5.73	6.26	8%		3.67	-		1.91
Silver-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Sodium-D	mg/L	4.2	4.1	2%		3.9	-	3.7	3.8	3%		2.5	-		1.9
Strontium-D	mg/L	0.105	0.107	2%		0.111	-	0.0731	0.0736	1%		0.0486	-		0.0791
Thallium-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Tin-D	mg/L	<0.0001	<0.0001	-		<0.0001	-	<0.0001	<0.0001	-		<0.0001	-		<0.0001
Titanium-D	mg/L	<0.0002	<0.0002	-		<0.0002	-	<0.0002	0.0002	-		<0.0002	-		<0.0002
Uranium-D	mg/L	0.00009	0.00011	18%		<0.00005	-	<0.00005	<0.00005	-		0.0001	-		0.00011
Vanadium-D	mg/L	<0.00005	<0.00005	-		<0.00005	-	<0.00005	<0.00005	-		<0.00005	-		<0.00005
Zinc-D	mg/L	0.0025	0.0025	0%		0.0017	-	0.0048	0.0051	6%		0.0027	-		0.0005
D-Hardness as CaCO3	mg/L			-			-			-			-		
Cyanide															
Cyanide (Total)	mg/L			-			-			-		<0.0050	-	<0.005	<0.0050
Cyanide (WAD)	mg/L			-			-			-		<0.0050	-	<0.005	<0.0050
Cyanate	mg/L			-			-			-			-		
Thiocyanate (SCN)	mg/L			-			-			-			-		

2013 Lake Lab Duplicates	Lab file #		Mean
	sample name	% Diff	% Diff
	type		
	date		
Physical Tests	Units		
pH @ 25°C BC-D	pH	-	0%
Conductivity @ 25°C	uS/cm	-	1%
T-Dissolved Solids180°C	mg/L	-	9%
Total Suspended Solids @ 105°C	mg/L	-	
Turbidity	NTU	-	16%
Hardness as (CaCO3)	mg/L	-	1%
Dissolved Anions			
Alkalinity as CaCO3	mg/L	-	0%
Fluoride-D	mg/L	-	4%
Sulphate-D	mg/L	-	2%
Chloride-D	mg/L	-	19%
Nutrients			
Ammonia - Nitrogen	mg/L	-	
Nitrate-N-D	mg/L	-	3%
Nitrite-N-D	mg/L	-	
Total Kjeldahl Nitrogen (TKN)	mg/L	-	5%
Phosphorous-Ortho-DLL	mg/L	-	
Phosphorous (Total-Dissolved) LL	mg/L	-	3%
Organic Parameters			
Carbon (Total Organic)	mg/L	-	0%
Carbon (Dissolved Organic)	mg/L	-	2%
Total Metals			
Aluminum-T	mg/L	-	25%
Antimony-T	mg/L	-	11%
Arsenic-T	mg/L	-	0%
Barium-T	mg/L	-	1%
Beryllium-T	mg/L	-	
Boron-T	mg/L	-	13%
Cadmium-T	mg/L	-	
Calcium-T	mg/L	-	1%
Chromium-T	mg/L	-	
Cobalt-T	mg/L	-	
Copper-T	mg/L	-	13%
Iron-T	mg/L	-	5%
Lead-T	mg/L	-	2%
Lithium-T	mg/L	-	
Magnesium-T	mg/L	-	1%
Manganese-T	mg/L	-	4%
Mercury-T	mg/L	-	
Molybdenum-T	mg/L	-	6%
Nickel-T	mg/L	-	5%
Phosphorous-T	mg/L	-	3%
Potassium-T	mg/L	-	0%
Selenium-T	mg/L	-	
Silicon-T	mg/L	-	8%
Silver-T	mg/L	-	
Sodium-T	mg/L	-	1%

2013 Lake Lab Duplicates	Lab file #		Mean
	sample name	% Diff	% Diff
	type		
	date		
Strontium-T	mg/L	-	1%
Thallium-T	mg/L	-	
Tin-T	mg/L	-	
Titanium-T	mg/L	-	17%
Uranium-T	mg/L	-	18%
Vanadium-T	mg/L	-	
Zinc-T	mg/L	-	5%
T-Hardness as CaCO3	mg/L	-	
Dissolved Metals			
Aluminum-D	mg/L	-	20%
Antimony-D	mg/L	-	25%
Arsenic-D	mg/L	-	17%
Barium-D	mg/L	-	2%
Beryllium-D	mg/L	-	
Boron-D	mg/L	-	13%
Cadmium-D	mg/L	-	
Calcium-D	mg/L	-	7%
Chromium-D	mg/L	-	
Cobalt-D	mg/L	-	
Copper-D	mg/L	-	13%
Iron-D	mg/L	-	4%
Lead-D	mg/L	-	10%
Lithium-D	mg/L	-	
Magnesium-D	mg/L	-	3%
Manganese-D	mg/L	-	3%
Mercury-D	mg/L	-	
Molybdenum-D	mg/L	-	11%
Nickel-D	mg/L	-	0%
Phosphorous-D	mg/L	-	25%
Potassium-D	mg/L	-	0%
Selenium-D	mg/L	-	
Silicon-D	mg/L	-	8%
Silver-D	mg/L	-	
Sodium-D	mg/L	-	3%
Strontium-D	mg/L	-	1%
Thallium-D	mg/L	-	
Tin-D	mg/L	-	
Titanium-D	mg/L	-	
Uranium-D	mg/L	-	18%
Vanadium-D	mg/L	-	
Zinc-D	mg/L	-	3%
D-Hardness as CaCO3	mg/L	-	
Cyanide			
Cyanide (Total)	mg/L	-	
Cyanide (WAD)	mg/L	-	
Cyanate	mg/L	-	
Thiocyanate (SCN)	mg/L	-	

Annex 4 Water Quality Database

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
RC	2011/03/30	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	82	81	55	79	82
RC	2011/03/30	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.157	0.159	0.110	0.150	0.159
RC	2011/03/31	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.09	0.08	0.08	0.07	0.10
JL	2011/03/30	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.069	0.068	0.033	0.062	0.065
JL	2011/03/30	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2011/03/30	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	4.7	4.6	3.7	3.2	5.1
JO	2011/03/31	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	92	92	72	100	92
JO	2011/03/30	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	3	3	< 2	< 2	4
JO	2011/03/30	Turbidity	NTU	APHA 2130-b	0.1	1.5	1.5	0.2	0.5	2.4
JL	2011/03/30	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.3	0.2	0.3	0.3

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2011/03/30	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	2	2
RC	2011/03/30	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.003	0.004
RC	2011/03/31	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.04
JL	2011/03/30	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
JL	2011/03/30	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
JL	2011/03/30	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.8	0.9
JO	2011/03/31	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4
JO	2011/03/30	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2
JO	2011/03/30	Turbidity	NTU	APHA 2130-b	0.1	< 0.1	< 0.1
JL	2011/03/30	Chloride-D	mg/L (ppm)	APHA 4110	0.1	< 0.1	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

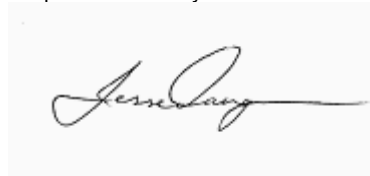
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
JO	2011/03/31	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/03/31	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.5	5.5	1.5	3.8	5.6
BM	2011/03/31	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	5.9	5.9	2.0	4.2	6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

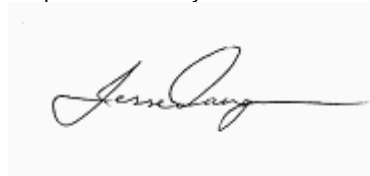
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
JO	2011/03/31	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02
BM	2011/03/31	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	< 0.1
BM	2011/03/31	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	< 0.1	0.2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
BM	2011/03/31	Aluminum	mg/L (ppm)	APHA 3030 E/3125 B	0.0025	0.0420	0.0431	0.0149	0.0942	0.0314
BM	2011/03/31	Antimony	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Arsenic	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0004	0.0004	0.0003	< 0.0002	0.0003
BM	2011/03/31	Barium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00806	0.00798	0.00725	0.0114	0.00792
BM	2011/03/31	Beryllium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Boron	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
BM	2011/03/31	Cadmium	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/03/31	Chromium	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
BM	2011/03/31	Cobalt	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Copper	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	< 0.0001	0.0007	0.0002
BM	2011/03/31	Iron	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.199	0.198	0.0239	0.0474	0.179
BM	2011/03/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Lithium	mg/L (ppm)	APHA 3030 E/3125 B	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BM	2011/03/31	Manganese	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0292	0.0290	0.00153	0.00181	0.0268
BM	2011/03/31	Mercury	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	0.000010	< 0.000008	< 0.000008
BM	2011/03/31	Molybdenum	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00067	0.00069	0.00088	0.00035	0.00068
BM	2011/03/31	Nickel	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0003	0.0001	0.0003	0.0003
BM	2011/03/31	Selenium	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/03/31	Silver	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Strontium	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.112	0.113	0.0965	0.120	0.112
BM	2011/03/31	Thallium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Tin	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Titanium	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0024	0.0022	0.0004	0.0021	0.0017
BM	2011/03/31	Uranium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00014	0.00014	0.00029	0.00035	0.00014
BM	2011/03/31	Vanadium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Zinc	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.004	0.004	0.003	0.006	< 0.001
RC	2011/03/30	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	8.23	8.23	8.14	8.21	8.25

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/03/31	Aluminum	mg/L (ppm)	APHA 3030 E/3125 B	0.0025	< 0.0025	< 0.0025
BM	2011/03/31	Antimony	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Arsenic	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/03/31	Barium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Beryllium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Boron	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002	0.002
BM	2011/03/31	Cadmium	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/03/31	Chromium	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
BM	2011/03/31	Cobalt	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Copper	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Iron	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Lithium	mg/L (ppm)	APHA 3030 E/3125 B	0.005	< 0.005	< 0.005
BM	2011/03/31	Manganese	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Mercury	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/03/31	Molybdenum	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Nickel	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Selenium	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/03/31	Silver	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Strontium	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/03/31	Thallium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Tin	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Titanium	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/03/31	Uranium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Vanadium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Zinc	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
RC	2011/03/30	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	6.34	6.38

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
BM	2011/03/31	Aluminum	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	0.002	0.010	0.040	< 0.002
BM	2011/03/31	Antimony	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Arsenic	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0003	< 0.0001	0.0003
BM	2011/03/31	Barium	mg/L (ppm)	APHA 3125 B	0.00005	0.00733	0.00756	0.00718	0.0111	0.00777
BM	2011/03/31	Beryllium	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Boron	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/03/31	Cadmium	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/03/31	Chromium	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/03/31	Cobalt	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	< 0.00002	0.00003	0.00003
BM	2011/03/31	Copper	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	0.0002	< 0.0001	0.0007	0.0002
BM	2011/03/31	Iron	mg/L (ppm)	APHA 3125 B	0.0001	0.0851	0.0856	0.0159	0.0195	0.0817
BM	2011/03/31	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Lithium	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/03/31	Manganese	mg/L (ppm)	APHA 3125 B	0.00005	0.0219	0.0219	0.00115	0.00081	0.0214
BM	2011/03/31	Mercury	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	0.000010	< 0.000008	< 0.000008
BM	2011/03/31	Molybdenum	mg/L (ppm)	APHA 3125 B	0.00005	0.00061	0.00063	0.00081	0.00035	0.00064
BM	2011/03/31	Nickel	mg/L (ppm)	APHA 3125 B	0.00005	0.00020	0.00021	0.00008	0.00027	0.00023
BM	2011/03/31	Selenium	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/03/31	Silver	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Strontium	mg/L (ppm)	APHA 3125 B	0.000005	0.107	0.108	0.0928	0.121	0.110
BM	2011/03/31	Thallium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Tin	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Titanium	mg/L (ppm)	APHA 3125 B	0.0002	0.0003	0.0003	0.0003	0.0009	0.0003
BM	2011/03/31	Uranium	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00012	0.00027	0.00032	0.00013
BM	2011/03/31	Vanadium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Zinc	mg/L (ppm)	APHA 3125 B	0.0005	0.0039	0.0077	0.0028	0.0058	0.0009
RC	2011/03/30	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	8.23	8.23	8.14	8.21	8.25

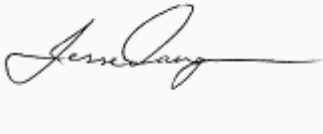
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Samples were filtered and preserved in laboratory.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/03/31	Aluminum	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
BM	2011/03/31	Antimony	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Arsenic	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Barium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Beryllium	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Boron	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/03/31	Cadmium	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/03/31	Chromium	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/03/31	Cobalt	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/03/31	Copper	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Iron	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Lithium	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/03/31	Manganese	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Mercury	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/03/31	Molybdenum	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Nickel	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Selenium	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/03/31	Silver	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Strontium	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/03/31	Thallium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Tin	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/03/31	Titanium	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/03/31	Uranium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Vanadium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/03/31	Zinc	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005
RC	2011/03/30	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.34	6.38

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Samples were filtered and preserved in laboratory.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
BM	2011/03/31	Calcium	mg/L (ppm)	APHA 3125 B	0.5	21.3	21.6	13.7	21.3	22.0
BM	2011/03/31	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	4.83	4.83	2.72	4.11	4.70
BM	2011/03/31	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	0.01	< 0.01	< 0.01	0.01
BM	2011/03/31	Potassium	mg/L (ppm)	APHA 3125 B	0.5	0.9	0.9	< 0.5	0.5	0.9
BM	2011/03/31	Silicon	mg/L (ppm)	APHA 3125 B	0.01	5.07	5.01	6.22	6.26	4.96
BM	2011/03/31	Sodium	mg/L (ppm)	APHA 3125 B	0.5	3.6	3.6	3.2	3.5	3.5
BM	2011/03/31	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	73.0	73.9	45.5	70.1	74.4

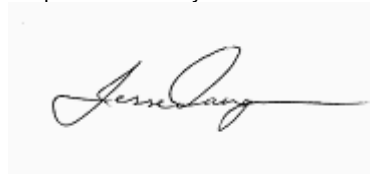
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Samples were filtered and preserved in laboratory.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/03/31	Calcium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
BM	2011/03/31	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/03/31	Potassium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	Silicon	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/03/31	Sodium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Samples were filtered and preserved in laboratory.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

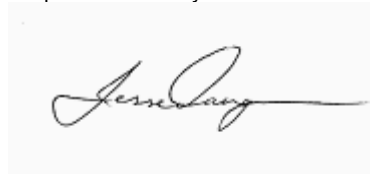
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
BM	2011/03/31	Calcium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	21.7	21.6	14.3	21.3	22.0
BM	2011/03/31	Magnesium	mg/L (ppm)	APHA 3030 E/3125 B	0.50	4.89	4.87	2.76	4.11	4.83
BM	2011/03/31	Phosphorus	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	0.02	< 0.02	< 0.02	< 0.02
BM	2011/03/31	Potassium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.9	0.9	< 0.5	0.5	0.9
BM	2011/03/31	Silicon	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.16	5.09	6.23	6.26	5.10
BM	2011/03/31	Sodium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.7	3.7	3.2	3.5	3.6
BM	2011/03/31	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	74.3	73.9	46.9	70.1	74.8

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/03/31	Calcium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	Magnesium	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
BM	2011/03/31	Phosphorus	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/03/31	Potassium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	Silicon	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
BM	2011/03/31	Sodium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/03/31	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

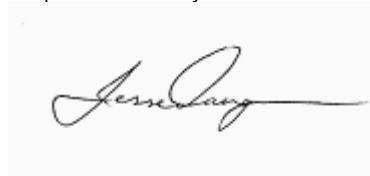
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3636	11-3636-D	11-3637	11-3638	11-3639
					Client ID:	WQ9	WQ9	WQ10	WQ11	Field dup WQ9
					Sample Date:	N/P	Lab Duplicate	N/P	N/P	N/P
					MDL					
JL	2011/03/30	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/03/31	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.012	0.010	< 0.001	< 0.001	0.008
JO	2011/03/31	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.28	0.27	0.19	0.27	0.25

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
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Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/03/30
Report Date: 2011/04/07

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-3640	11-3641
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
JL	2011/03/30	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
BM	2011/03/31	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
JO	2011/03/31	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
		Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	63	56-77	65.00	QC-ALK/F-39
RC	2011/03/30	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.75	2.539-2.939	2.79	CC-EC-0.02M-35
RC	2011/03/31	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-39
JL	2011/03/30	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.58	1.44-1.76	1.60	CC-Anion-110B
JL	2011/03/30	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.560	0.54-0.66	0.60	CC-Anion-110B
JL	2011/03/30	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.3	25.2-30.8	28.00	CC-Anion-110B
JO	2011/03/31	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	764	552-934	743.00	QCP-C2-SLD02006
JO	2011/03/30	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	25	22.2-31.7	27.00	QCP-C2-SLD02006
JO	2011/03/30	Turbidity	NTU	APHA 2130-b	0.1	17	14.53-19.49	17.01	D2-TURB01052
JL	2011/03/30	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.0	3.6-4.4	4.00	CC-Anion-110B

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

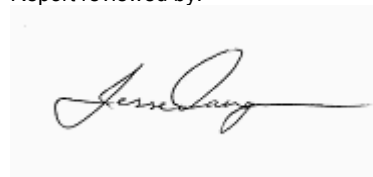
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/03/31	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.83	0.702-1.052	0.86	NH3SC-001
BM	2011/03/31	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.8	3.3-4.3	3.80	DMD-TOC-77-Low
BM	2011/03/31	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-77-Low

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



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Director of QA/QC
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ANALYTICAL REPORT

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Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/03/31	Aluminum	µg/L (ppb)	APHA 3125 B	2.0000	52.1	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Antimony	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/03/31	Arsenic	µg/L (ppb)	APHA 3125 B	0.1000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/03/31	Barium	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Beryllium	µg/L (ppb)	APHA 3125 B	0.1000	49.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Boron	µg/L (ppb)	APHA 3125 B	1.000	48.1	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Cadmium	µg/L (ppb)	APHA 3125 B	0.015000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Chromium	µg/L (ppb)	APHA 3125 B	0.3000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Cobalt	µg/L (ppb)	APHA 3125 B	0.02000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Copper	µg/L (ppb)	APHA 3125 B	0.1000	49.2	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Iron	µg/L (ppb)	APHA 3125 B	0.1000	53.5	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/03/31	Lithium	µg/L (ppb)	APHA 3125 B	1.000	50.8	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/03/31	Manganese	µg/L (ppb)	APHA 3125 B	0.05000	52.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Mercury	µg/L (ppb)	APHA 3112	0.008000	0.177	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/03/31	Molybdenum	µg/L (ppb)	APHA 3125 B	0.05000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Nickel	µg/L (ppb)	APHA 3125 B	0.0500	52.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Selenium	µg/L (ppb)	APHA 3125 B	0.6000	51.1	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Silver	µg/L (ppb)	APHA 3125 B	0.05000	13.2	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/03/31	Strontium	µg/L (ppb)	APHA 3125 B	0.005000	53.1	45-55	50.00	MS-CCV-HIGH
BM	2011/03/31	Thallium	µg/L (ppb)	APHA 3125 B	0.05000	249	225-275	250.00	MS-CCV-HIGH
BM	2011/03/31	Tin	µg/L (ppb)	APHA 3125 B	0.1000	256	225-275	250.00	MS-CCV-HIGH
BM	2011/03/31	Titanium	µg/L (ppb)	APHA 3125 B	0.2000	53.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Uranium	µg/L (ppb)	APHA 3125 B	0.05000	105	90-110	100.00	MS-CCV-HIGH
BM	2011/03/31	Vanadium	µg/L (ppb)	APHA 3125 B	0.0500	53.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Zinc	µg/L (ppb)	APHA 3125 B	0.500	50.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/03/30	pH @ 25°C BC-T	---	APHA 4500H	0.01	6.02	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
LL	2011/04/05	Aluminum	µg/L (ppb)	APHA 3125 B	2.000	51.2	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Antimony	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
LL	2011/04/05	Arsenic	µg/L (ppb)	APHA 3125 B	0.1000	99.8	90.0-110	100.00	MS-CCV-HIGH
LL	2011/04/05	Barium	µg/L (ppb)	APHA 3125 B	0.05000	50.4	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Beryllium	µg/L (ppb)	APHA 3125 B	0.1000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Baron	µg/L (ppb)	APHA 3125 B	1.000	47.7	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Cadmium	µg/L (ppb)	APHA 3125 B	0.015000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Chromium	µg/L (ppb)	APHA 3125 B	0.3000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Cobalt	µg/L (ppb)	APHA 3125 B	0.02000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Copper	µg/L (ppb)	APHA 3125 B	0.1000	48.1	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Iron	µg/L (ppb)	APHA 3125 B	0.1000	53.3	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
LL	2011/04/05	Lithium	µg/L (ppb)	APHA 3125 B	1.000	51.4	45.0-55.5	50.00	MS-CCV-HIGH
LL	2011/04/05	Manganese	µg/L (ppb)	APHA 3125 B	0.05000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/03/31	Mercury	µg/L (ppb)	APHA 3112	0.008000	0.177	0.134-0.217	0.18	BZ-QCPHG008
LL	2011/04/05	Molybdenum	µg/L (ppb)	APHA 3125 B	0.05000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Nickel	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Selenium	µg/L (ppb)	APHA 3125 B	0.6000	51.2	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Silver	µg/L (ppb)	APHA 3125 B	0.05000	13.0	11.25-13.75	12.50	MS-CCV-HIGH
LL	2011/04/05	Strontium	µg/L (ppb)	APHA 3125 B	0.005000	52.4	45-55	50.00	MS-CCV-HIGH
LL	2011/04/05	Thallium	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
LL	2011/04/05	Tin	µg/L (ppb)	APHA 3125 B	0.1000	249	225-275	250.00	MS-CCV-HIGH
LL	2011/04/05	Titanium	µg/L (ppb)	APHA 3125 B	0.2000	49.1	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Uranium	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
LL	2011/04/05	Vanadium	µg/L (ppb)	APHA 3125 B	0.05000	49.2	45.0-55.0	50.00	MS-CCV-HIGH
LL	2011/04/05	Zinc	µg/L (ppb)	APHA 3125 B	0.5000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/03/30	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.02	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Samples were filtered and preserved in laboratory.

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
LL	2011/04/05	Calcium	mg/L (ppm)	APHA 3125 B	0.5	39.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
LL	2011/04/05	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	38.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
LL	2011/04/05	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	4.99	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
LL	2011/04/05	Potassium	mg/L (ppm)	APHA 3125 B	0.5	42.5	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
LL	2011/04/05	Silicon	mg/L (ppm)	APHA 3125 B	0.01	2.43	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
LL	2011/04/05	Sodium	mg/L (ppm)	APHA 3125 B	0.5	38.2	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

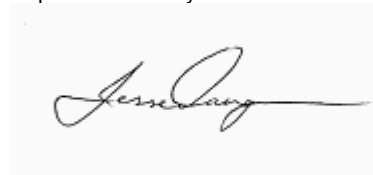
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Report reviewed by:



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Laboratory Services



Charlene Rollheiser
Director of QA/QC
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ANALYTICAL REPORT

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Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/03/31	Calcium	mg/L (ppm)	APHA 3125 B	0.5	39.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/03/31	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	38.6	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/03/31	Phosphorus	mg/L (ppm)	APHA 3125 B	0.02	4.96	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/03/31	Potassium	mg/L (ppm)	APHA 3125 B	0.5	41.9	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/03/31	Silicon	mg/L (ppm)	APHA 3125 B	0.01	2.39	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/03/31	Sodium	mg/L (ppm)	APHA 3125 B	0.5	37.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Report reviewed by:

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Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/04/07

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60612

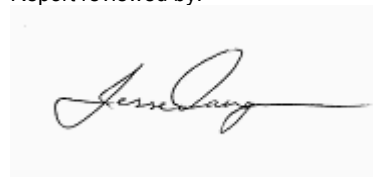
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JL	2011/03/30	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	0.756	0.72-0.88	0.80	CC-Anion-1108L
BM	2011/03/31	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3125 B	0.020	4.96	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/03/31	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-D	0.08	14.8	12.08 - 18.12	15.10	QC-Nut-B2-01111

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG ~ CHEMISTRY
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 30-MAR-11
Report Date: 04-APR-11 15:37 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L990525
Project P.O. #: 845467
Job Reference: EC-60612
Legal Site Desc:
C of C Numbers:

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LIMITED Part of the ALS Group A Campbell Brothers Limited Company

ALS LABORATORY GROUP ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L990525-1 11-3636~(WQ9) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963
L990525-2 11-3637~(WQ10) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963
L990525-3 11-3638~(WQ11) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963
L990525-4 11-3639~(FIELD DUP WQ9) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963
L990525-5 11-3640~(FIELD BLANK) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963
L990525-6 11-3641~(TRIP BLANK) Sampled By: CLIENT on 30-MAR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	01-APR-11 01-APR-11	01-APR-11 01-APR-11	R2136943 R2136963

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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 LABORATORY GROUP - VANCOUVER, BC, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L990525

Report Date: 04-APR-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
 5667 - 70 STREET
 EDMONTON AB T6B 3P6

Contact: JESSE DANG ~ CHEMISTRY

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-HH-COL-VA Water								
Batch R2136943								
WG1259980-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			95		%		80-120	01-APR-11
WG1259980-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	01-APR-11
CN-WAD-MID-COL-VA Water								
Batch R2136963								
WG1259974-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			105		%		80-120	01-APR-11
WG1259974-4	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			105		%		80-120	01-APR-11
WG1259974-3	DUP	L989815-1						
Cyanide, Weak Acid Diss		0.0328	0.0368		mg/L	5.2	20	01-APR-11
WG1259974-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	01-APR-11

Quality Control Report

Workorder: L990525

Report Date: 04-APR-11

Page 2 of 2

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

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.

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
RC	2011/04/21	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	67	67	76	76	54
RC	2011/04/21	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.131	0.131	0.153	0.155	0.108
RC	2011/04/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.07	0.09	0.08	0.07
JL	2011/04/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.040	0.040	0.041	0.042	0.008
JL	2011/04/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2011/04/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.1	3.0	4.2	4.4	3.3
JO	2011/04/25	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	112	104	84	80	60
AD	2011/04/26	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	< 2	4	< 2
JO	2011/04/21	Turbidity	NTU	APHA 2130-b	0.1	0.7	0.7	0.5	2.2	0.1
JL	2011/04/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.3	0.4	0.2

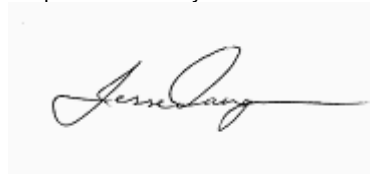
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
RC	2011/04/21	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	60	28	79	77	2
RC	2011/04/21	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.118	0.058	0.157	0.154	0.002
RC	2011/04/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.06	0.09	0.09	0.02
JL	2011/04/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.068	0.044	0.038	0.042	< 0.005
JL	2011/04/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2011/04/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	2.7	1.9	4.5	4.5	< 0.5
JO	2011/04/25	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	68	36	80	80	< 4
AD	2011/04/26	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	4	5	< 2
JO	2011/04/21	Turbidity	NTU	APHA 2130-b	0.1	0.3	0.5	1.6	2.6	< 0.1
JL	2011/04/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.4	0.3	< 0.1

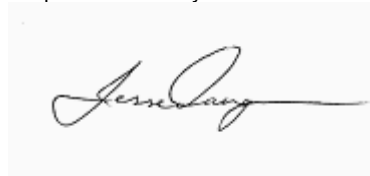
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
RC	2011/04/21	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	2
RC	2011/04/21	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.003
RC	2011/04/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02
JL	2011/04/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005
JL	2011/04/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003
JL	2011/04/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.5
JO	2011/04/25	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	< 4
AD	2011/04/26	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2
JO	2011/04/21	Turbidity	NTU	APHA 2130-b	0.1	< 0.1
JL	2011/04/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

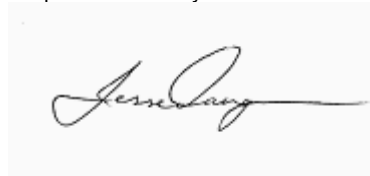
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.2	2.3	4.1	2.6	1.5
BM	2011/04/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	2.7	2.7	6.1	5.9	2.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

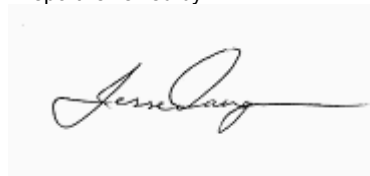
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	4.3	4.4	5.0	5.1	< 0.1
BM	2011/04/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	4.9	5.3	5.7	7.2	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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5667 - 70 Street
 Edmonton, Alberta
 Canada T6B 3P6
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 Fax: (780) 377-3600



ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
BM	2011/04/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1
BM	2011/04/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/26	Aluminum	mg/L (ppm)	APHA 3030 E/3125 B	0.003	0.011	0.012	< 0.003	0.074	0.014
BM	2011/04/26	Antimony	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Arsenic	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002
BM	2011/04/26	Barium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00882	0.00898	0.00563	0.00913	0.00755
BM	2011/04/26	Beryllium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Boron	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.001	< 0.001	< 0.001
BM	2011/04/26	Cadmium	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/04/26	Chromium	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
BM	2011/04/26	Cobalt	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005
BM	2011/04/26	Copper	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0002	0.0004	< 0.0001
BM	2011/04/26	Iron	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.172	0.172	0.0095	0.295	0.0242
BM	2011/04/26	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Lithium	mg/L (ppm)	APHA 3030 E/3125 B	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BM	2011/04/26	Manganese	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0265	0.0264	0.00342	0.0424	0.00151
BM	2011/04/26	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/04/26	Molybdenum	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00087	0.00086	0.00055	0.00070	0.00095
BM	2011/04/26	Nickel	mg/L (ppm)	APHA 3030 E/3125 B	0.00010	0.00015	0.00013	0.00024	0.00032	0.00013
BM	2011/04/26	Selenium	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/04/26	Silver	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Strontium	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.109	0.110	0.110	0.116	0.101
BM	2011/04/26	Thallium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Tin	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Titanium	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0005	0.0005	0.0002	0.0040	0.0005
BM	2011/04/26	Uranium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00033	0.00031	0.00010	0.00016	0.00031
BM	2011/04/26	Vanadium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Zinc	mg/L (ppm)	APHA 3030 E/3125 B	0.0010	0.0017	0.0019	0.0032	0.0020	0.0020
RC	2011/04/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	8.14	8.15	8.25	8.17	8.10

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/26	Aluminum	mg/L (ppm)	APHA 3030 E/3125 B	0.003	0.098	0.040	0.056	0.051	< 0.003
BM	2011/04/26	Antimony	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Arsenic	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	0.0002	< 0.0002
BM	2011/04/26	Barium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00917	0.00612	0.00926	0.00848	< 0.00005
BM	2011/04/26	Beryllium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Boron	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	< 0.001	0.001	0.001	0.002
BM	2011/04/26	Cadmium	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/04/26	Chromium	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
BM	2011/04/26	Cobalt	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	0.00005	< 0.00005
BM	2011/04/26	Copper	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0004	0.0003	0.0003	< 0.0001
BM	2011/04/26	Iron	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0684	0.158	0.323	0.241	< 0.0001
BM	2011/04/26	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Lithium	mg/L (ppm)	APHA 3030 E/3125 B	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BM	2011/04/26	Manganese	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00350	0.0107	0.0528	0.0372	< 0.00005
BM	2011/04/26	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/04/26	Molybdenum	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00039	0.00062	0.00070	0.00072	< 0.00005
BM	2011/04/26	Nickel	mg/L (ppm)	APHA 3030 E/3125 B	0.00010	0.00015	< 0.00010	0.00031	0.00029	< 0.00010
BM	2011/04/26	Selenium	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/04/26	Silver	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Strontium	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0957	0.0604	0.118	0.115	< 0.000005
BM	2011/04/26	Thallium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/26	Tin	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Titanium	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0017	0.0009	0.0028	0.0025	< 0.0002
BM	2011/04/26	Uranium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00022	0.00014	0.00018	0.00015	< 0.00005
BM	2011/04/26	Vanadium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/26	Zinc	mg/L (ppm)	APHA 3030 E/3125 B	0.0010	0.0016	0.0026	0.0012	0.0028	< 0.0010
RC	2011/04/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	8.12	7.79	8.22	8.18	6.24

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
BM	2011/04/26	Aluminum	mg/L (ppm)	APHA 3030 E/3125 B	0.003	< 0.003
BM	2011/04/26	Antimony	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Arsenic	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002
BM	2011/04/26	Barium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Beryllium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
BM	2011/04/26	Boron	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002
BM	2011/04/26	Cadmium	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015
BM	2011/04/26	Chromium	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005
BM	2011/04/26	Cobalt	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Copper	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
BM	2011/04/26	Iron	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
BM	2011/04/26	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Lithium	mg/L (ppm)	APHA 3030 E/3125 B	0.005	< 0.005
BM	2011/04/26	Manganese	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
BM	2011/04/26	Molybdenum	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Nickel	mg/L (ppm)	APHA 3030 E/3125 B	0.00010	< 0.00010
BM	2011/04/26	Selenium	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006
BM	2011/04/26	Silver	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Strontium	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005
BM	2011/04/26	Thallium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Tin	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
BM	2011/04/26	Titanium	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002
BM	2011/04/26	Uranium	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
BM	2011/04/26	Vanadium	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
BM	2011/04/26	Zinc	mg/L (ppm)	APHA 3030 E/3125 B	0.0010	< 0.0010
RC	2011/04/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	6.20

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Aluminum	mg/L (ppm)	APHA 3125 B	0.002	0.005	0.005	< 0.002	0.031	0.010
BM	2011/04/25	Antimony	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Arsenic	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002	< 0.0001
BM	2011/04/25	Barium	mg/L (ppm)	APHA 3125 B	0.00005	0.00829	0.00839	0.00531	0.00863	0.00731
BM	2011/04/25	Beryllium	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/25	Boron	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/04/25	Cadmium	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/04/25	Chromium	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/04/25	Cobalt	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00004	< 0.00002	0.00006	< 0.00002
BM	2011/04/25	Copper	mg/L (ppm)	APHA 3125 B	0.0001	0.0001	0.0001	0.0002	0.0003	< 0.0001
BM	2011/04/25	Iron	mg/L (ppm)	APHA 3125 B	0.0001	0.132	0.126	0.0055	0.246	0.0165
BM	2011/04/25	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Lithium	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/04/25	Manganese	mg/L (ppm)	APHA 3125 B	0.00005	0.0248	0.0236	0.00200	0.0393	0.00111
BM	2011/04/26	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/04/25	Molybdenum	mg/L (ppm)	APHA 3125 B	0.00005	0.00073	0.00075	0.00047	0.00060	0.00084
BM	2011/04/25	Nickel	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	0.00010	0.00018	0.00026	0.00007
BM	2011/04/25	Selenium	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/04/25	Silver	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Strontium	mg/L (ppm)	APHA 3125 B	0.000005	0.100	0.101	0.103	0.109	0.0933
BM	2011/04/25	Thallium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Tin	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/25	Titanium	mg/L (ppm)	APHA 3125 B	0.0002	0.0004	0.0003	0.0002	0.0016	0.0004
BM	2011/04/25	Uranium	mg/L (ppm)	APHA 3125 B	0.00005	0.00028	0.00028	0.00010	0.00015	0.00030
BM	2011/04/25	Vanadium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Zinc	mg/L (ppm)	APHA 3125 B	0.0005	0.0018	0.0015	0.0030	0.0020	0.0020
RC	2011/04/21	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	8.14	8.15	8.25	8.17	8.10

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

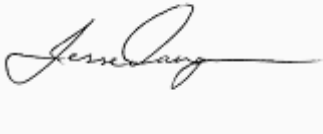
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Aluminum	mg/L (ppm)	APHA 3125 B	0.002	0.064	0.039	0.002	0.002	< 0.002
BM	2011/04/25	Antimony	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Arsenic	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001	< 0.0001
BM	2011/04/25	Barium	mg/L (ppm)	APHA 3125 B	0.00005	0.00883	0.00612	0.00890	0.00790	< 0.00005
BM	2011/04/25	Beryllium	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/25	Boron	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/04/25	Cadmium	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/04/25	Chromium	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/04/25	Cobalt	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00004	0.00004	< 0.00002
BM	2011/04/25	Copper	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0004	0.0002	0.0002	< 0.0001
BM	2011/04/25	Iron	mg/L (ppm)	APHA 3125 B	0.0001	0.0444	0.158	0.169	0.117	< 0.0001
BM	2011/04/25	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Lithium	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/04/25	Manganese	mg/L (ppm)	APHA 3125 B	0.00005	0.00116	0.0107	0.0450	0.0334	< 0.00005
BM	2011/04/26	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/04/25	Molybdenum	mg/L (ppm)	APHA 3125 B	0.00005	0.00035	0.00052	0.00064	0.00059	< 0.00005
BM	2011/04/25	Nickel	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	0.00009	0.00020	0.00023	< 0.00005
BM	2011/04/25	Selenium	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/04/25	Silver	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Strontium	mg/L (ppm)	APHA 3125 B	0.000005	0.0931	0.0580	0.116	0.107	< 0.000005
BM	2011/04/25	Thallium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Tin	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/04/25	Titanium	mg/L (ppm)	APHA 3125 B	0.0002	0.0014	0.0009	0.0003	0.0003	< 0.0002
BM	2011/04/25	Uranium	mg/L (ppm)	APHA 3125 B	0.00005	0.00022	0.00014	0.00017	0.00015	< 0.00005
BM	2011/04/25	Vanadium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/04/25	Zinc	mg/L (ppm)	APHA 3125 B	0.0005	0.0016	0.0026	0.0010	0.0028	< 0.0005
RC	2011/04/21	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	8.12	7.79	8.22	8.18	6.24

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
BM	2011/04/25	Aluminum	mg/L (ppm)	APHA 3125 B	0.002	< 0.002
BM	2011/04/25	Antimony	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Arsenic	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
BM	2011/04/25	Barium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Beryllium	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
BM	2011/04/25	Boron	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
BM	2011/04/25	Cadmium	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015
BM	2011/04/25	Chromium	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003
BM	2011/04/25	Cobalt	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002
BM	2011/04/25	Copper	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
BM	2011/04/25	Iron	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
BM	2011/04/25	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Lithium	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
BM	2011/04/25	Manganese	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/26	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
BM	2011/04/25	Molybdenum	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Nickel	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Selenium	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006
BM	2011/04/25	Silver	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Strontium	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005
BM	2011/04/25	Thallium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Tin	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
BM	2011/04/25	Titanium	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002
BM	2011/04/25	Uranium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Vanadium	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
BM	2011/04/25	Zinc	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005
RC	2011/04/21	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.20

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Calcium	mg/L (ppm)	APHA 3125 B	0.5	16.3	16.4	20.9	21.2	14.0
BM	2011/04/25	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	4.07	3.89	4.82	4.78	2.76
BM	2011/04/25	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
BM	2011/04/25	Potassium	mg/L (ppm)	APHA 3125 B	0.5	0.6	0.6	0.8	0.9	< 0.5
BM	2011/04/25	Silicon	mg/L (ppm)	APHA 3125 B	0.01	6.66	6.95	4.17	4.90	5.95
BM	2011/04/25	Sodium	mg/L (ppm)	APHA 3125 B	0.5	3.9	3.7	3.5	3.6	3.2
RC	2011/04/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	57.4	57.0	72.0	72.6	46.3

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

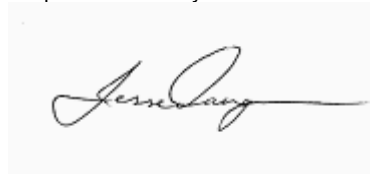
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/25	Calcium	mg/L (ppm)	APHA 3125 B	0.5	17.0	7.5	22.9	20.7	< 0.5
BM	2011/04/25	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	3.10	1.35	4.85	5.00	< 0.50
BM	2011/04/25	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
BM	2011/04/25	Potassium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.9	0.9	< 0.5
BM	2011/04/25	Silicon	mg/L (ppm)	APHA 3125 B	0.01	5.69	3.02	4.84	4.61	< 0.01
BM	2011/04/25	Sodium	mg/L (ppm)	APHA 3125 B	0.5	3.3	2.2	3.6	3.8	< 0.5
RC	2011/04/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	55.1	24.3	77.0	72.3	< 6.0

All Analytical results pertain to samples analyzed as received.

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

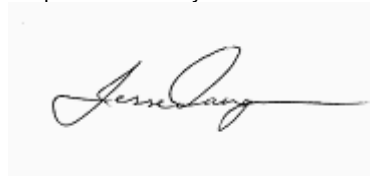
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
BM	2011/04/25	Calcium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
BM	2011/04/25	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	< 0.50
BM	2011/04/25	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01
BM	2011/04/25	Potassium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
BM	2011/04/25	Silicon	mg/L (ppm)	APHA 3125 B	0.01	< 0.01
BM	2011/04/25	Sodium	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
RC	2011/04/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

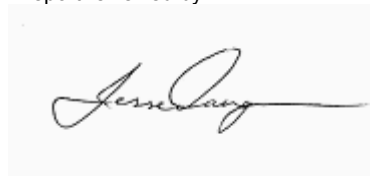
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/26	Calcium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	17.2	17.4	21.6	21.8	14.6
BM	2011/04/26	Magnesium	mg/L (ppm)	APHA 3030 E/3125 B	0.50	4.07	4.05	5.00	4.95	2.90
BM	2011/04/26	Phosphorus	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.02	0.03	< 0.02
BM	2011/04/26	Potassium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6	0.6	0.9	0.9	< 0.5
BM	2011/04/26	Silicon	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.66	6.95	4.42	5.40	6.36
BM	2011/04/26	Sodium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.9	3.9	3.7	3.8	3.4
RC	2011/04/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	59.7	60.1	74.6	74.7	48.4

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ANALYTICAL REPORT

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Date Received: 2011/04/21
Report Date: 2011/05/05

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

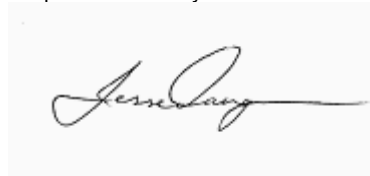
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
BM	2011/04/26	Calcium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	17.0	7.7	22.9	21.7	< 0.5
BM	2011/04/26	Magnesium	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.12	1.35	5.14	5.00	< 0.50
BM	2011/04/26	Phosphorus	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.02	0.03	< 0.02
BM	2011/04/26	Potassium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	1.0	0.9	< 0.5
BM	2011/04/26	Silicon	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.14	3.07	5.29	5.10	< 0.01
BM	2011/04/26	Sodium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.3	2.2	3.8	3.8	< 0.5
RC	2011/04/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	55.3	24.7	78.4	74.8	< 6.0

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Report reviewed by:



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Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

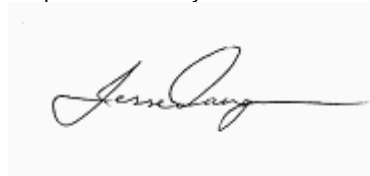
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
BM	2011/04/26	Calcium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
BM	2011/04/26	Magnesium	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50
BM	2011/04/26	Phosphorus	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02
BM	2011/04/26	Potassium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
BM	2011/04/26	Silicon	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01
BM	2011/04/26	Sodium	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
RC	2011/04/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

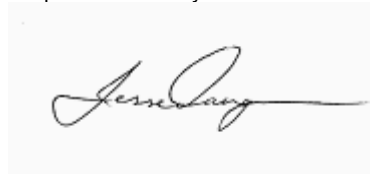
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4263	11-4263-D	11-4264	11-4265	11-4266
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-04-19 00:00	Lab Duplicate	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
JO	2011/04/29	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	---	0.04	< 0.02	< 0.02
JL	2011/04/21	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/04/26	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.008	0.013	0.016	0.009
JO	2011/04/28	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.76	0.71	0.58	0.67	0.10

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

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Date Received: 2011/04/21
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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

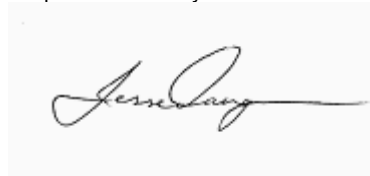
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4267	11-4268	11-4269	11-4270	11-4271
					Client ID:	WQ11	WQ12	WQ13	Field Dup-WQ9	Field Blank
					Sample Date:	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00	2011-04-19 00:00
					MDL					
JO	2011/04/29	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
JL	2011/04/21	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/04/26	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.008	0.014	0.016	< 0.001
JO	2011/04/28	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.54	0.41	0.58	< 0.08

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Date Received: 2011/04/21
Report Date: 2011/05/05

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

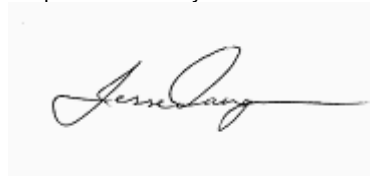
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-4272
					Client ID:	Trip Blank
					Sample Date:	2011-04-19 00:00
					MDL	
JO	2011/04/29	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02
JL	2011/04/21	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	< 0.003
BM	2011/04/26	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001
JO	2011/04/28	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/05/05

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
	2011/04/26	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	62	56-77	65.00	QC-ALK/F-39
RC	2011/04/21	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.75	2.539-2.939	2.79	CC-EC-0.02M-35
RC	2011/04/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-39
JL	2011/04/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.60	1.44-1.76	1.60	CC-Anion-110B
JL	2011/04/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.600	0.54-0.66	0.60	CC-Anion-110B
JL	2011/04/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	25.6	25.2-30.8	28.00	CC-Anion-110B
JO	2011/04/25	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	660	552-934	743.00	QCP-C2-SLD02006
AD	2011/04/26	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	28	22.2-31.7	27.00	QCP-C2-SLD02006
JO	2011/04/21	Turbidity	NTU	APHA 2130-b	0.1	16	14.53-19.49	17.01	D2-TURB01052
JL	2011/04/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	3.8	3.6-4.4	4.00	CC-Anion-110B

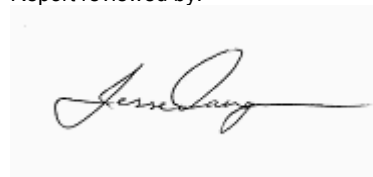
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/05/05

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

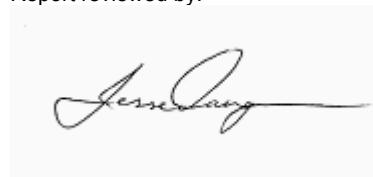
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/04/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.8	3.3-4.3	3.80	DMD-TOC-78-Low
BM	2011/04/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.8	3.3-4.3	3.80	DMD-TOC-78-Low

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
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Report Date: 2011/05/05

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/04/26	Aluminum	µg/L (ppb)	APHA 3125 B	2.000	52.5	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Antimony	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/26	Arsenic	µg/L (ppb)	APHA 3125 B	0.1000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/26	Barium	µg/L (ppb)	APHA 3125 B	0.05000	52.1	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Beryllium	µg/L (ppb)	APHA 3125 B	0.1000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Boron	µg/L (ppb)	APHA 3125 B	1.000	50.9	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Cadmium	µg/L (ppb)	APHA 3125 B	0.015000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Chromium	µg/L (ppb)	APHA 3125 B	0.3000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Cobalt	µg/L (ppb)	APHA 3125 B	0.02000	53.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Copper	µg/L (ppb)	APHA 3125 B	0.1000	52.0	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Iron	µg/L (ppb)	APHA 3125 B	0.1000	53.0	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/26	Lithium	µg/L (ppb)	APHA 3125 B	1.000	52.9	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/04/26	Manganese	µg/L (ppb)	APHA 3125 B	0.05000	52.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.173	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/04/26	Molybdenum	µg/L (ppb)	APHA 3125 B	0.05000	53.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Nickel	µg/L (ppb)	APHA 3125 B	0.05000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Selenium	µg/L (ppb)	APHA 3125 B	0.6000	52.3	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Silver	µg/L (ppb)	APHA 3125 B	0.05000	12.9	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/04/26	Strontium	µg/L (ppb)	APHA 3125 B	0.005000	52.8	45-55	50.00	MS-CCV-HIGH
BM	2011/04/26	Thallium	µg/L (ppb)	APHA 3125 B	0.05000	259	225-275	250.00	MS-CCV-HIGH
BM	2011/04/26	Tin	µg/L (ppb)	APHA 3125 B	0.1000	259	225-275	250.00	MS-CCV-HIGH
BM	2011/04/26	Titanium	µg/L (ppb)	APHA 3125 B	0.2000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Uranium	µg/L (ppb)	APHA 3125 B	0.05000	105	90-110	100.00	MS-CCV-HIGH
BM	2011/04/26	Vanadium	µg/L (ppb)	APHA 3125 B	0.0500	53.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Zinc	µg/L (ppb)	APHA 3125 B	0.5000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/04/21	pH @ 25°C BC-T	---	APHA 4500H	0.01	6.02	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/05/05

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/04/25	Aluminum	µg/L (ppb)	APHA 3125 B	2.000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Antimony	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/25	Arsenic	µg/L (ppb)	APHA 3125 B	0.1000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/25	Barium	µg/L (ppb)	APHA 3125 B	0.05000	51.8	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Beryllium	µg/L (ppb)	APHA 3125 B	0.1000	50.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Baron	µg/L (ppb)	APHA 3125 B	1.000	49.1	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Cadmium	µg/L (ppb)	APHA 3125 B	0.015000	51.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Chromium	µg/L (ppb)	APHA 3125 B	0.3000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Cobalt	µg/L (ppb)	APHA 3125 B	0.02000	53.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Copper	µg/L (ppb)	APHA 3125 B	0.1000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Iron	µg/L (ppb)	APHA 3125 B	0.1000	53.9	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/04/25	Lithium	µg/L (ppb)	APHA 3125 B	1.000	51.8	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/04/25	Manganese	µg/L (ppb)	APHA 3125 B	0.05000	53.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/26	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.173	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/04/25	Molybdenum	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Nickel	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Selenium	µg/L (ppb)	APHA 3125 B	0.6000	52.0	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Silver	µg/L (ppb)	APHA 3125 B	0.05000	12.8	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/04/25	Strontium	µg/L (ppb)	APHA 3125 B	0.005000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/04/25	Thallium	µg/L (ppb)	APHA 3125 B	0.05000	255	225-275	250.00	MS-CCV-HIGH
BM	2011/04/25	Tin	µg/L (ppb)	APHA 3125 B	0.1000	254	225-275	250.00	MS-CCV-HIGH
BM	2011/04/25	Titanium	µg/L (ppb)	APHA 3125 B	0.2000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Uranium	µg/L (ppb)	APHA 3125 B	0.05000	105	90-110	100.00	MS-CCV-HIGH
BM	2011/04/25	Vanadium	µg/L (ppb)	APHA 3125 B	0.05000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/04/25	Zinc	µg/L (ppb)	APHA 3125 B	0.5000	51.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/04/21	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.02	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/05/05

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60740

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/04/25	Calcium	mg/L (ppm)	APHA 3125 B	0.5	38.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/04/25	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	39.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/04/25	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.18	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/04/25	Potassium	mg/L (ppm)	APHA 3125 B	0.5	43.6	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/04/25	Silicon	mg/L (ppm)	APHA 3125 B	0.01	2.41	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/04/25	Sodium	mg/L (ppm)	APHA 3125 B	0.5	38.6	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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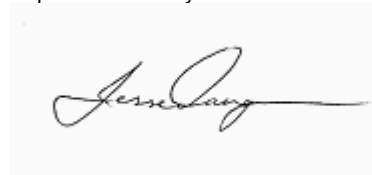
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/04/26	Calcium	mg/L (ppm)	APHA 3125 B	0.5	39.5	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/04/26	Magnesium	mg/L (ppm)	APHA 3125 B	0.50	39.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/04/26	Phosphorus	mg/L (ppm)	APHA 3125 B	0.02	5.15	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/04/26	Potassium	mg/L (ppm)	APHA 3125 B	0.5	43.9	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/04/26	Silicon	mg/L (ppm)	APHA 3125 B	0.01	2.46	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/04/26	Sodium	mg/L (ppm)	APHA 3125 B	0.5	39.5	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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File No.: EC-60740

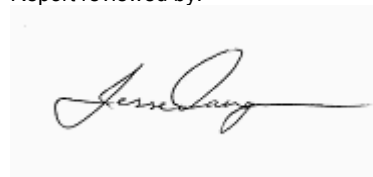
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/04/29	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.83	0.702-1.052	0.86	NH3SC-001
JL	2011/04/21	Phosphorus-Ortho-Dissolved-LL	mg/L (ppm)	APHA 4110	0.003	0.765	0.72-0.88	0.80	CC-Anion-110BL
BM	2011/04/26	Phosphorus-Total Dissolved-LL	mg/L (ppm)	APHA 3125 B	0.020	5.15	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/04/28	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-D	0.08	15.7	12.08 - 18.12	15.10	QC-Nut-B2-01111

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: BRUCE OTT
6000 4445 LOUGHEED HWY
BURNABY BC V5C 0E4

Date Received: 21-APR-11
Report Date: 10-MAY-11 12:42 (MT)
Version: FINAL

Client Phone: 604-473-5315

Certificate of Analysis

Lab Work Order #: L997208
Project P.O. #: NOT SUBMITTED
Job Reference: VE52095
Legal Site Desc:
C of C Numbers:

Comments: Please note, Thiocyanate analysis was not performed as requested on the Chain of Custody, as appropriate sample containers were not received.

Please find Cyanate results appended to the end of this report.

Erin Bolster
Account Manager

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

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID					
Grouping	Analyte				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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** 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
----------------------------	---------------------

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: L997208

Report Date: 10-MAY-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
6000 4445 LOUGHEED HWY
BURNABY BC V5C 0E4

Contact: BRUCE OTT

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
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Quality Control Report

Workorder: L997208

Report Date: 10-MAY-11

Page 2 of 2

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

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.

ANALYSIS REPORT

DATE: May 4/11
 PROJECT No: 403-1015

APPROVED BY: _____

CLIENT: ALS Environmental
 8081 Lougheed Highway
 Burnaby, B. C
 V5A 1W9

CONTACT: Andre Langlais



445-5600 Parkwood Way
 Richmond, B.C.
 V6V 2M2
 Tel. 604 273-3600
 Fax 604 273-3609

COMMENTS: Cyanate* analysis results for sample received April 21, 2011

Work Order #: L997208

Sample	pH (as received)	Initial Ammonia concentration mgN/L	After Hydrolyzation Ammonia concentration mgN/L	CNO mg/L	Log In
L997208-1	>12	0.017	0.051	<1	110421B-01
L997208-2	>12	0.021	0.098	<1	110421B-02
L997208-3	>12	0.019	0.091	<1	110421B-03
L997208-4	>12	0.027	0.069	<1	110421B-04
L997208-5	>12	0.029	0.060	<1	110421B-05
L997208-6	>12	0.019	0.043	<1	110421B-06
L997208-7	7.9	0.023	0.089	<1	110421B-07
L997208-8	5.6	0.029	0.058	<1	110421B-08
L997208-9	>12	0.018	0.049	<1	110421B-09
L997208-10	>12	0.038	0.122	<1	110421B-10

* Standard Method 4500CN-L. Cyanates . Ammonia analysis by 4500-NH3 F. Phenate method (with modifications)



AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG ~ CHEMISTRY
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 21-APR-11
Report Date: 04-MAY-11 14:57 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L997464
Project P.O. #: 845479
Job Reference: EC-60740
Legal Site Desc:
C of C Numbers:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L997464-1 WQ7~(11-4263) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-2 WQ8~(11-4264) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-3 WQ9~(11-4265) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-4 WQ10~(11-4266) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-5 WQ11~(11-4267) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-6 WQ12~(11-4268) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-7 WQ13~(11-4269) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-8 FIELD DUP WQ9~(11-4270) Sampled By: CLIENT on 19-APR-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-APR-11 29-APR-11	28-APR-11 29-APR-11	R2183034 R2183794
L997464-9 FIELD BLANK~(11-4271) Sampled By: CLIENT on 19-APR-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L997464

Report Date: 04-MAY-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: JESSE DANG ~ CHEMISTRY

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-HH-COL-VA Water								
Batch R2183034								
WG1271223-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			85		%		80-120	28-APR-11
WG1271223-5	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			82		%		80-120	28-APR-11
WG1271223-3	DUP	L997464-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-APR-11
WG1271223-6	DUP	L998810-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-APR-11
WG1271223-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	28-APR-11
WG1271223-4	MB							
Cyanide, Total			<0.0050		mg/L		0.005	28-APR-11
CN-WAD-MID-COL-VA Water								
Batch R2183794								
WG1271765-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			102		%		80-120	29-APR-11
WG1271765-5	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			115		%		80-120	29-APR-11
WG1271765-3	DUP	L997464-1						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-APR-11
WG1271765-6	DUP	L997645-1						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-APR-11
WG1271765-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	29-APR-11
WG1271765-4	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	29-APR-11

Quality Control Report

Workorder: L997464

Report Date: 04-MAY-11

Page 2 of 2

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

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

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

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

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



Report to:	Report Format / Distribution	Service Requested:
Company: AMEC Earth & Environmental, Chemistry Dept.	<input type="checkbox"/> Standard <input type="checkbox"/> Other	<input checked="" type="checkbox"/> Regular Service (Default)
Contact: Kristine Mills	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Fax	<input type="checkbox"/> Rush Service (2-3 Days)
Address: 5667-70 Street, Edmonton, AB T6B 3P6	Email 1: kristine.mills@amec.com	<input type="checkbox"/> Priority Service (1 Day or ASAP)
Phone: (780) 989-4580 Fax: (780) 377-3600	Email 2: charlene.rollheiser@amec.com	<input type="checkbox"/> Emergency Service (<1 Day / Wkend) - Contact ALS

Voice To: <input checked="" type="checkbox"/> Same as Report	Indicate Bottles: Filtered / Preserved (F/P) ----
Company: Same	Client / Project Information:
Contact:	Job #:
Address:	PO/AFE: EC-60740
Sample:	Legal Site Description:
Phone: Fax:	Quote #:

Lab Work Order # (lab use only)	ALS Contact: Maureen Olinek	Sampler (Initials):											Cyanide (Total)	Cyanide (WAD)	Hazardous?	Highly Contaminated?	Number of Containers		
Sample #	Sample Identification (This description will appear on the report)	Date dd-mm-yy	Time hh:mm	Sample Type (Select from drop-down list)															
	WQ7(11-4263)	19-Apr-11		water	x	x													X
	WQ8 (11-4264)	19-Apr-11		water	X	x													X
	WQ9 (11-4265)	19-Apr-11		Water	X	x													X
	WQ10 (11-4266)	19-Apr-11		Water	X	x													X
	WQ11 (11-4267)	19-Apr-11		Water	X	x													X
	WQ12 (11-4268)	19-Apr-11		Water	X	x													X
	WQ13 (11-4269)	19-Apr-11		Water	X	x													X
	Field Dup-WQ9 (11-4270)	19-Apr-11		Water	X	x													X
	Field Blank (11-4271)	19-Apr-11		Water	X	x													X
	Trip Blank (11-4272)	19-Apr-11		Water	X	x													X

Guidelines / Regulations	Special Instructions / Hazardous Details
---------------------------------	---

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 adjacent worksheet.

Relinquished By: Jeffrey Connor	Date & Time: 21-Apr-11	Received By: HH	Date & Time: 24-APR-11 14:00	Temperature: 16.2	Sample Condition (lab use only):
Relinquished By:	Date & Time:	Received By:	Date & Time:		Samples Received in Good Condition? Y / N (if no provided details)



AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG ~ CHEMISTRY
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 19-MAY-11
Report Date: 30-MAY-11 14:20 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1007174
Project P.O. #: 845490
Job Reference: EC-60904
Legal Site Desc:
C of C Numbers:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1007174-1 11~5498 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0175		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-2 11~5499 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0134		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-3 11~5550 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0102		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-4 11~5501 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0180		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-5 11~5502 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0126		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-6 11~5503 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0148		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-7 11~5504 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0051		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193823
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-8 11~5405 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0098		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-9 11~5506 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1007174-9 11~5506 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0154		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-10 11~5507 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0190		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-11 11~5508 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0115		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-12 11~5509 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0102		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-13 11~5510 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0161		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	26-MAY-11	26-MAY-11	R2194424
L1007174-14 11~5511 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-MAY-11	27-MAY-11	R2195057
L1007174-15 11~5512 Sampled By: CLIENT on 17-MAY-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-MAY-11	25-MAY-11	R2193893
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-MAY-11	27-MAY-11	R2195057

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*

< - Less than.

D.L. - The reporting limit.

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.

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Quality Control Report

Workorder: L1007174

Report Date: 30-MAY-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: JESSE DANG ~ CHEMISTRY

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-HH-COL-VA		Water						
Batch	R2193823							
WG1284433-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			102		%		80-120	25-MAY-11
WG1284433-3	DUP	L1007174-7						
Cyanide, Total		0.0051	0.0054		mg/L	5.7	20	25-MAY-11
Batch	R2193893							
WG1284599-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			104		%		80-120	25-MAY-11
WG1284599-5	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			103		%		80-120	25-MAY-11
WG1284599-3	DUP	L1007174-8						
Cyanide, Total		0.0098	0.0097		mg/L	0.92	20	25-MAY-11
WG1284599-6	DUP	L1007182-2						
Cyanide, Total		0.0221	0.0246		mg/L	11	20	25-MAY-11
WG1284599-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-MAY-11
WG1284599-4	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-MAY-11
CN-WAD-MID-COL-VA		Water						
Batch	R2194424							
WG1284975-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			97		%		80-120	26-MAY-11
WG1284975-5	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			102		%		80-120	26-MAY-11
WG1284975-3	DUP	L1007174-4						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-MAY-11
WG1284975-6	DUP	L1007174-5						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-MAY-11
WG1284975-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	26-MAY-11
WG1284975-4	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	26-MAY-11
Batch	R2195057							
WG1285718-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			103		%		80-120	27-MAY-11
WG1285718-3	DUP	L1007182-5						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	27-MAY-11
WG1285718-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	27-MAY-11

Quality Control Report

Workorder: L1007174

Report Date: 30-MAY-11

Page 2 of 2

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
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.

BON DE COMMANDE
PURCHASE ORDER

À ALS		845490		
ADRESSE ADDRESS		CE NUMÉRO DOIT APPARAÎTRE SUR TOUT COLIS, FACTURE, ETC. THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.		
EXPÉDIER À SHIP TO		N° DEM. OU SERV. REQ. NO. OR DEPT. 7220		
ADRESSE ADDRESS		DATE May 14 2011		
		POUR FOR EC-6090314		
QUANTITÉ QUANTITY	DESCRIPTION	PRIX PRICE	UNITÉ UNIT	MONTANT AMOUNT
1	Sample for			
2				
3	Total fecal Coliform			
4	(11-5197) Kit - 1-2010518			
5				
15	Samples for			
7				
8	Cyanid (total and WAD)			
9				
10	See attached			
DATE REQUISE - DATE REQUIRED May 27 2011		VEUILLEZ ENVOYER PLEASE SEND		COPIE(S) DE VOTRE FACTURE. COPY(IES) OF YOUR INVOICE.
CONDITIONS TERMS		ACHETEUR - PURCHASING AGENT		
Please list both IDs on results				

VEUILLEZ NOUS AVISER IMMÉDIATEMENT S'IL EST IMPOSSIBLE D'EXPÉDIER LA COMMANDE COMPLÈTE À LA DATE SPÉCIFIÉE.
PLEASE NOTIFY US IMMEDIATELY IF YOU ARE UNABLE TO SHIP COMPLETE ORDER BY DATE SPECIFIED.

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
RC	2011/05/26	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	3	3	15	10	7
RC	2011/05/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.03	0.06	0.06	0.05
RC	2011/05/26	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.007	0.007	0.012	0.009	0.010
RC	2011/05/26	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/05/26	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.5	1.5	2.1	5.0	1.5
JO	2011/06/01	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	64	56	80	76	72
SM	2011/05/26	Turbidity	NTU	APHA 2130-b	0.1	1.0	1.0	1.6	1.1	1.8
RC	2011/05/26	Chloride-D	mg/L (ppm)	APHA 4110	0.1	1.2	1.2	0.3	0.5	0.2
RC	2011/05/26	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.026	0.026	0.043	0.042	0.027
JO	2011/06/01	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	< 2	< 2	5


All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

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Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
RC	2011/05/26	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	8	13	69	47	8
RC	2011/05/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.07	0.08	0.07	0.05
RC	2011/05/26	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.011	0.006	0.021	0.007	0.011
RC	2011/05/26	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/05/26	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	2.1	2.6	4.4	4.2	1.9
JO	2011/06/01	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	64	92	120	96	76
SM	2011/05/26	Turbidity	NTU	APHA 2130-b	0.1	2.6	22	1.6	3.8	4.1
RC	2011/05/26	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.5	0.4	0.4	0.5	0.4
RC	2011/05/26	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.030	0.043	0.146	0.103	0.030
JO	2011/06/01	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	3	38	5	4	4

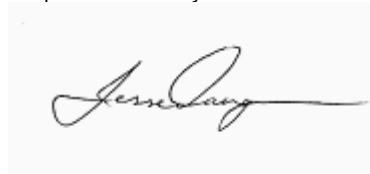
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
RC	2011/05/26	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	8	9	49	69	< 1
RC	2011/05/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.05	0.07	0.08	0.02
RC	2011/05/26	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.011	0.008	0.008	0.018	< 0.005
RC	2011/05/26	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/05/26	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.9	2.0	4.1	4.8	1.2
JO	2011/06/01	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	72	68	100	104	< 4
SM	2011/05/26	Turbidity	NTU	APHA 2130-b	0.1	3.4	1.6	3.3	1.8	< 0.1
RC	2011/05/26	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.3	0.4	0.5	0.1
RC	2011/05/26	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.033	0.032	0.107	0.141	0.005
JO	2011/06/01	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	9	< 2	4	5	< 2

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
RC	2011/05/26	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	32
RC	2011/05/26	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02	0.07
RC	2011/05/26	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
RC	2011/05/26	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2011/05/26	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.2	2.7
JO	2011/06/01	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	< 4	180
SM	2011/05/26	Turbidity	NTU	APHA 2130-b	0.1	< 0.1	< 0.1
RC	2011/05/26	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.4
RC	2011/05/26	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.004	0.075
JO	2011/06/01	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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5667 - 70 Street
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/27	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	21.4	21.6	19.2	18.6	16.5
BM	2011/05/27	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	19.5	19.1	15.1	16.0	14.1

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Note: Carbon (Dissolved Organic) samples were filtered and preserved in laboratory.

Report reviewed by:

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Burnaby, BC V5C 0E4

Date Received: 2011/05/26
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Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/27	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	16.4	22.7	10.9	15.2	17.4
BM	2011/05/27	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	13.5	16.6	7.0	11.8	15.0

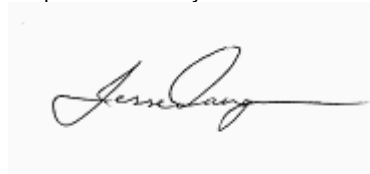
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Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/27	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	25.2	16.3	13.9	11.2	< 0.1
BM	2011/05/27	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	23.6	13.4	11.8	7.3	0.1

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AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Date Received: 2011/05/26
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Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
BM	2011/05/27	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	20.6
BM	2011/05/27	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-b	0.1	< 0.1	18.3

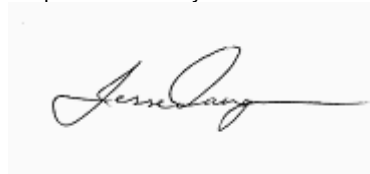
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.364	0.356	0.320	0.239	0.327
BM	2011/05/31	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	0.00011	< 0.00005
BM	2011/05/31	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0004	0.0004	0.0012	0.0003
BM	2011/05/31	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00527	0.00530	0.00418	0.00280	0.00355
BM	2011/05/31	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.002	0.001	0.001
BM	2011/05/31	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000047	0.000045	0.000027	0.000064	0.000017
BM	2011/05/31	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0003	0.0003	0.0008	< 0.0003	0.0004
BM	2011/05/31	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00006	0.00006	0.00009	0.00003	0.00007
BM	2011/05/31	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0007	0.0006	0.0008	0.0007	0.0006
BM	2011/05/31	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.226	0.227	0.270	0.153	0.225
BM	2011/05/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	0.00008	0.00005
BM	2011/05/31	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/31	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0183	0.0184	0.00621	0.0137	0.00527
BM	2011/06/01	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	0.000015	0.000014	0.000010	0.000011	0.000008
BM	2011/05/31	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00022	< 0.00005	0.00012
BM	2011/05/31	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00046	0.00046	0.00037	0.00039	0.00032
BM	2011/05/31	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/31	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0217	0.0216	0.0287	0.0302	0.0186
BM	2011/05/31	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0034	0.0031	0.0070	0.0030	0.0059
BM	2011/05/31	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00018	0.00017	0.00017	0.00006	0.00010
BM	2011/05/31	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0012	< 0.0001	0.0002
BM	2011/05/31	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0068	0.0065	0.0036	0.0534	0.0022
BM	2011/05/31	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

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MDL - Method Detection Limit

Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

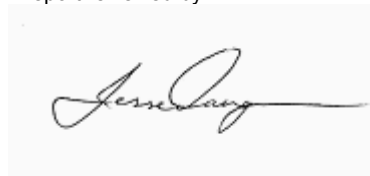
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.354	1.04	0.039	0.186	0.463
BM	2011/05/31	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0009	0.0004	0.0005	0.0005
BM	2011/05/31	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00713	0.0137	0.00571	0.00771	0.00737
BM	2011/05/31	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.002	0.003	0.002	0.001
BM	2011/05/31	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000034	0.000040	0.000024	0.000016	0.000017
BM	2011/05/31	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0003	0.0014	< 0.0003	0.0003	0.0004
BM	2011/05/31	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00006	0.00044	0.00003	0.00008	0.00009
BM	2011/05/31	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0014	0.0003	0.0006	0.0006
BM	2011/05/31	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.235	1.18	0.0541	0.266	0.313
BM	2011/05/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00019	0.00042	< 0.00005	< 0.00005	0.00015
BM	2011/05/31	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/31	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0116	0.0501	0.00630	0.0119	0.0153
BM	2011/06/01	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	0.000010	0.000010	< 0.000008	< 0.000008	0.000010
BM	2011/05/31	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00019	0.00026	0.00046	0.00047	0.00012
BM	2011/05/31	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00051	0.00138	0.00025	0.00047	0.00045
BM	2011/05/31	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/31	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0270	0.0357	0.0920	0.0725	0.0265
BM	2011/05/31	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0055	0.0364	0.0012	0.0059	0.0085
BM	2011/05/31	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00025	0.00028	0.00009	0.00010	0.00018
BM	2011/05/31	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0001	0.0025	< 0.0001	0.0005	0.0003
BM	2011/05/31	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0042	0.0057	0.0046	0.0032	0.0026
BM	2011/05/31	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

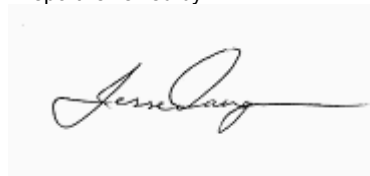
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.713	0.273	0.155	0.053	< 0.002
BM	2011/05/31	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0001	0.0001	0.0005	0.0004	< 0.0001
BM	2011/05/31	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00812	0.00636	0.00772	0.00591	< 0.00005
BM	2011/05/31	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002	0.001	0.002	0.002	0.003
BM	2011/05/31	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000025	0.000017	0.000022	0.000022	< 0.000015
BM	2011/05/31	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0006	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/05/31	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00011	0.00005	0.00008	0.00003	< 0.00002
BM	2011/05/31	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0010	0.0005	0.0006	0.0002	< 0.0001
BM	2011/05/31	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.339	0.182	0.232	0.0693	0.0002
BM	2011/05/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/31	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00816	0.00619	0.0119	0.00750	< 0.00005
BM	2011/06/01	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	0.000014	0.000014	< 0.000008	< 0.000008	< 0.000008
BM	2011/05/31	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00023	0.00048	0.00044	< 0.00005
BM	2011/05/31	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00041	0.00020	0.00045	0.00028	< 0.00005
BM	2011/05/31	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/31	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0312	0.0326	0.0751	0.0933	< 0.000005
BM	2011/05/31	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0100	0.0044	0.0050	0.0016	< 0.0002
BM	2011/05/31	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00023	0.00010	0.00009	< 0.00005
BM	2011/05/31	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	< 0.0001	0.0004	< 0.0001	< 0.0001
BM	2011/05/31	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0018	0.0018	0.0032	0.0023	< 0.0005
BM	2011/05/31	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

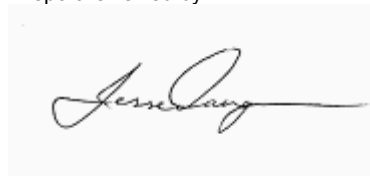
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
BM	2011/05/31	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	0.119
BM	2011/05/31	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0004
BM	2011/05/31	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00920
BM	2011/05/31	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.003
BM	2011/05/31	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/05/31	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/05/31	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00006
BM	2011/05/31	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0008
BM	2011/05/31	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.422
BM	2011/05/31	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/05/31	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.0208
BM	2011/06/01	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/05/31	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00044
BM	2011/05/31	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00049
BM	2011/05/31	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/05/31	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	0.0531
BM	2011/05/31	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/31	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/05/31	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	0.0032
BM	2011/05/31	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00007
BM	2011/05/31	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0003
BM	2011/05/31	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0007	0.0036
BM	2011/05/31	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.364	0.329	0.219	0.213	0.256
BM	2011/05/30	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00007	< 0.00005
BM	2011/05/30	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0004	0.0011	0.0002
BM	2011/05/30	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00487	0.00515	0.00339	0.00250	0.00289
BM	2011/05/30	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	0.001	0.001	0.001
BM	2011/05/30	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	0.000034	0.000037	< 0.000015	0.000060	< 0.000015
BM	2011/05/30	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0004	0.0003	0.0007	< 0.0003	0.0003
BM	2011/05/30	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00005	0.00005	0.00006	0.00003	0.00004
BM	2011/05/30	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0007	0.0006	0.0008	0.0007	0.0006
BM	2011/05/30	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.176	0.171	0.166	0.114	0.149
BM	2011/05/30	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/30	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0137	0.0132	0.00282	0.00794	0.00274
BM	2011/06/01	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	0.000012	0.000012	0.000010	< 0.000008	0.000008
BM	2011/05/30	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00014	< 0.00005	< 0.00005
BM	2011/05/30	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00040	0.00039	0.00027	0.00035	0.00021
BM	2011/05/30	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/30	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0207	0.0212	0.0276	0.0301	0.0178
BM	2011/05/30	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0028	0.0025	0.0041	0.0023	0.0027
BM	2011/05/30	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00016	0.00017	0.00014	< 0.00005	0.00008
BM	2011/05/30	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00102	< 0.00005	< 0.00005
BM	2011/05/30	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0068	0.0065	0.0030	0.0534	0.0015
RC	2011/05/26	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.17	6.17	7.26	6.89	6.91

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.218	0.205	0.008	0.057	0.256
BM	2011/05/30	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0003	0.0004	0.0004	0.0003
BM	2011/05/30	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00581	0.00571	0.00528	0.00709	0.00556
BM	2011/05/30	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	0.003	0.002	0.001
BM	2011/05/30	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	0.000018	0.000016	< 0.000015	0.000016	0.000017
BM	2011/05/30	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	0.0004	< 0.0003	< 0.0003	0.0003
BM	2011/05/30	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00007	< 0.00002	0.00003	0.00004
BM	2011/05/30	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0009	0.0003	0.0006	0.0006
BM	2011/05/30	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.114	0.169	0.0143	0.0927	0.128
BM	2011/05/30	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/30	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00430	0.0102	0.00098	0.00466	0.00338
BM	2011/06/01	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	0.000010
BM	2011/05/30	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00014	0.00015	0.00039	0.00042	0.00007
BM	2011/05/30	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00040	0.00044	0.00019	0.00030	0.00030
BM	2011/05/30	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/30	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0263	0.0330	0.0919	0.0725	0.0262
BM	2011/05/30	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0027	0.0027	0.0003	0.0013	0.0024
BM	2011/05/30	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00022	0.00015	0.00008	0.00010	0.00014
BM	2011/05/30	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00024	< 0.00005	0.00008	< 0.00005
BM	2011/05/30	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0042	0.0057	0.0046	0.0032	0.0024
RC	2011/05/26	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.97	7.25	8.15	7.83	7.00

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.490	0.179	0.047	0.008	< 0.002
BM	2011/05/30	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0004	0.0004	< 0.0001
BM	2011/05/30	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00642	0.00555	0.00703	0.00536	< 0.00005
BM	2011/05/30	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.002	0.001	0.002	0.002	0.004
BM	2011/05/30	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	0.000025	< 0.000015	0.000018	< 0.000015	< 0.000015
BM	2011/05/30	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0005	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/05/30	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00006	0.00003	0.00003	< 0.00002	< 0.00002
BM	2011/05/30	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0010	0.0005	0.0006	0.0002	< 0.0001
BM	2011/05/30	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.208	0.105	0.0811	0.0137	< 0.0001
BM	2011/05/30	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/05/30	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00320	0.00203	0.00505	0.00099	< 0.00005
BM	2011/06/01	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	0.000014	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/05/30	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00021	0.00048	0.00042	< 0.00005
BM	2011/05/30	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00030	0.00012	0.00028	0.00018	< 0.00005
BM	2011/05/30	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/05/30	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0312	0.0326	0.0751	0.0919	< 0.000005
BM	2011/05/30	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0054	0.0023	0.0011	0.0003	< 0.0002
BM	2011/05/30	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00015	0.00022	0.00010	0.00008	< 0.00005
BM	2011/05/30	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00022	< 0.00005	0.00009	< 0.00005	< 0.00005
BM	2011/05/30	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0018	0.0016	0.0032	< 0.0005	< 0.0005
RC	2011/05/26	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.89	7.13	7.88	8.08	6.06

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
BM	2011/05/30	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	0.062
BM	2011/05/30	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0003
BM	2011/05/30	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00879
BM	2011/05/30	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.003	0.003
BM	2011/05/30	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	0.000018
BM	2011/05/30	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	0.0003
BM	2011/05/30	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00005
BM	2011/05/30	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0001	0.0008
BM	2011/05/30	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.275
BM	2011/05/30	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/05/30	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.0174
BM	2011/06/01	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/05/30	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00042
BM	2011/05/30	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00037
BM	2011/05/30	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/05/30	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	0.0530
BM	2011/05/30	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/05/30	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/05/30	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0014
BM	2011/05/30	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00007
BM	2011/05/30	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00010
BM	2011/05/30	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0036
RC	2011/05/26	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.82	7.49

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.4	2.4	4.3	5.2	2.7
BM	2011/05/30	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.52	0.50	1.03	0.86	0.76
BM	2011/05/30	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	0.01	0.02	< 0.01	< 0.01
BM	2011/05/30	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/05/30	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.41	3.36	4.73	4.11	3.72
BM	2011/05/30	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.2	1.2	1.6	1.1	1.3
RC	2011/05/26	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	8.1	8.1	15.0	16.6	9.9

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	3.5	5.3	19.1	14.3	3.5
BM	2011/05/30	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.56	1.19	4.33	2.97	0.69
BM	2011/05/30	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	0.01	< 0.01	0.01	0.01
BM	2011/05/30	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.5	0.7	0.8	< 0.5
BM	2011/05/30	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.92	4.30	3.66	4.04	3.94
BM	2011/05/30	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.2	1.6	3.2	2.4	1.3
RC	2011/05/26	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	11.1	18.1	65.4	47.9	11.6

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



Jesse Dang, B.Sc.
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 Laboratory Services



Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

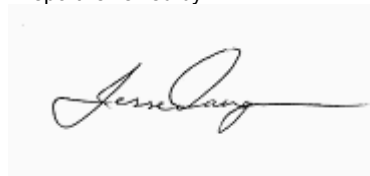
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/30	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	4.5	4.2	14.7	19.1	< 0.5
BM	2011/05/30	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.86	0.68	3.13	4.42	< 0.50
BM	2011/05/30	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	< 0.01	0.01	< 0.01	< 0.01
BM	2011/05/30	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.8	0.7	< 0.5
BM	2011/05/30	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.41	3.12	4.08	3.53	< 0.01
BM	2011/05/30	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.4	1.2	2.5	3.2	< 0.5
RC	2011/05/26	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	14.7	13.2	49.5	65.8	< 6.0

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Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

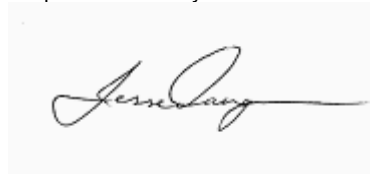
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
BM	2011/05/30	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	10.6
BM	2011/05/30	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	2.23
BM	2011/05/30	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	0.02
BM	2011/05/30	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.8
BM	2011/05/30	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	4.72
BM	2011/05/30	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	2.2
RC	2011/05/26	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	35.6

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.7	2.7	4.8	5.7	3.1
BM	2011/05/31	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.54	0.54	1.11	0.90	0.83
BM	2011/05/31	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.04	< 0.02	< 0.02
BM	2011/05/31	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/05/31	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	3.64	3.58	5.50	4.11	4.08
BM	2011/05/31	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.3	1.3	1.7	1.2	1.6
RC	2011/05/26	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	8.9	8.9	16.6	18.0	11.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.9	6.0	20.5	14.7	3.8
BM	2011/05/31	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.60	1.44	4.61	3.20	0.74
BM	2011/05/31	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.05	< 0.02	0.02	< 0.02
BM	2011/05/31	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.7	0.8	0.9	< 0.5
BM	2011/05/31	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.34	5.78	3.80	4.59	4.42
BM	2011/05/31	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.3	1.8	3.4	2.6	1.4
RC	2011/05/26	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	12.1	20.8	70.2	50.0	12.5

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
BM	2011/05/31	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	4.9	4.5	15.4	20.6	< 0.5
BM	2011/05/31	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.94	0.74	3.35	4.62	< 0.50
BM	2011/05/31	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	< 0.02	0.02	< 0.02	< 0.02
BM	2011/05/31	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.9	0.8	< 0.5
BM	2011/05/31	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.98	3.50	4.42	3.87	< 0.01
BM	2011/05/31	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.6	1.3	2.7	3.4	< 0.5
RC	2011/05/26	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	16.1	14.3	52.2	70.5	< 6.0

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
BM	2011/05/31	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	11.2
BM	2011/05/31	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	2.34
BM	2011/05/31	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.02
BM	2011/05/31	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.9
BM	2011/05/31	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	5.03
BM	2011/05/31	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	2.4
RC	2011/05/26	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	37.7

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

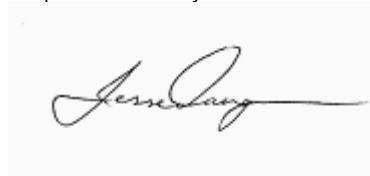
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5858	11-5858-D	11-5859	11-5860	11-5861
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-05-24 00:00	Lab Duplicate	2011-05-25 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
JO	2011/05/30	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/05/26	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.011	< 0.003	< 0.003
BM	2011/05/31	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.014	0.015	0.024	0.010	0.010
JO	2011/05/30	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.34	0.36	0.31	0.21	< 0.08

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

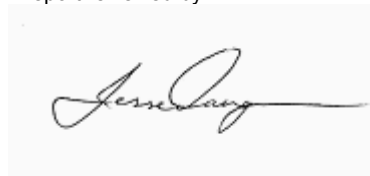
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5862	11-5863	11-5864	11-5865	11-5866
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
JO	2011/05/30	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/05/26	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/05/31	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.014	0.004	0.012	0.011
JO	2011/05/30	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	0.18	0.28	0.38

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

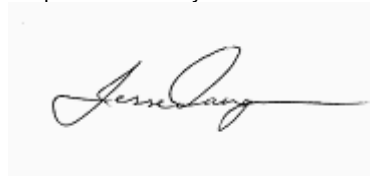
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5867	11-5868	11-5869	11-5870	11-5871
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-05-25 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-24 00:00	2011-05-25 00:00
					MDL					
JO	2011/05/30	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/05/26	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.004	< 0.003	< 0.003
BM	2011/05/31	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.017	0.007	0.012	0.004	< 0.001
JO	2011/05/30	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.42	0.40	0.33	0.28	< 0.08

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/05/26
Report Date: 2011/06/09

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

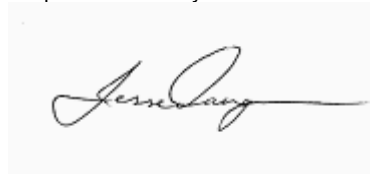
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-5872	11-5873
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-05-27 00:00	2011-05-24 00:00
					MDL		
JO	2011/05/30	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.03	< 0.02
RC	2011/05/26	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
BM	2011/05/31	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	0.016
JO	2011/05/30	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.21

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/05/27	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK/F-40
RC	2011/05/27	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-40
RC	2011/05/26	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.51	1.44-1.76	1.60	CC-Anion-111B
RC	2011/05/26	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.591	0.54-0.66	0.60	CC-Anion-111B
RC	2011/05/26	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	25.8	25.2-30.8	28.00	CC-Anion-111B
JO	2011/06/01	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	740	552-934	743.00	QCP-C2-SLD02006
SM	2011/05/26	Turbidity	NTU	APHA 2130-b	0.1	17	14.53-19.49	17.01	D2-TURB01052
RC	2011/05/26	Chloride-D	mg/L (ppm)	APHA 4110	0.1	3.9	3.6-4.4	4.00	CC-Anion-111B
RC	2011/05/27	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.78	2.539-2.939	2.79	CC-EC-0.02M-35
JO	2011/06/01	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	23	22.2-31.7	27.00	QCP-C2-SLD02006

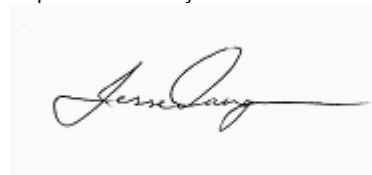
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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

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Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/05/27	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	36.3	33.1-42.6	37.90	DMD-TOC-79-Mid
BM	2011/05/27	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	36.3	33.1-42.6	37.90	DMD-TOC-79-Mid

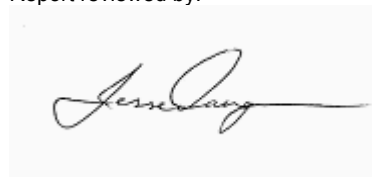
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Note: Carbon (Dissolved Organic) samples were filtered and preserved in laboratory.

Report reviewed by:



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Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

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Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/05/31	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/31	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/31	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	51.1	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	52.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	53.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	52.2	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	53.2	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/31	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	53.0	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/05/31	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/01	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.161	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/05/31	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	54.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	49.7	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	13.2	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/05/31	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/05/31	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	249	225-275	250.00	MS-CCV-HIGH
BM	2011/05/31	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	246	225-275	250.00	MS-CCV-HIGH
BM	2011/05/31	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90-110	100.00	MS-CCV-HIGH
BM	2011/05/31	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/31	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	51.5	45.0-55.0	50.00	MS-CCV-HIGH

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/05/30	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	50.4	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/30	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/30	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.2	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	48.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	47.4	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	49.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.0	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.0	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/05/30	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	49.6	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/05/30	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/01	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.161	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/05/30	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.5	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	13.1	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/05/30	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	50.4	45-55	50.00	MS-CCV-HIGH
BM	2011/05/30	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
BM	2011/05/30	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	241	225-275	250.00	MS-CCV-HIGH
BM	2011/05/30	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90-110	100.00	MS-CCV-HIGH
BM	2011/05/30	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/05/30	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/05/26	pH @ 25°C BC-D	---	APHA 4500H	0.01	5.94	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

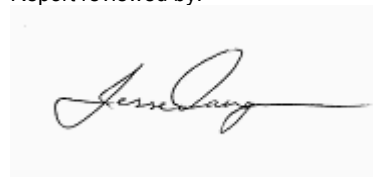
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/05/30	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	38.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/05/30	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	38.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/05/30	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.08	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/05/30	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	41.7	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/05/30	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.38	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/05/30	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	38.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
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ANALYTICAL REPORT

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Burnaby, BC V5C 0E4

Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/05/31	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	39.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/05/31	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/05/31	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.81	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/05/31	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	43.3	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/05/31	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.41	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/05/31	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	38.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Report reviewed by:

Jesse Dang, B.Sc.
 Manager
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Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

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Burnaby, BC V5C 0E4

Report Date: 2011/06/09

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-60941

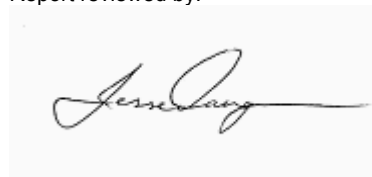
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/05/30	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.93	0.702-1.052	0.86	NH3SC-001
RC	2011/05/26	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.724	0.72-0.88	0.80	CC-Anion-111BL
BM	2011/05/31	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.81	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/05/30	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	8.77	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
RC	2011/06/08	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	3	3	15	7	7
BM	2011/06/10	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.7	11.3	10.9	11.5	11.6
BM	2011/06/10	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	11.9	11.8	11.7	12.5	12.8
RC	2011/06/08	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.03	0.05	0.06	0.04
RC	2011/06/08	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.006	0.006	0.025	0.014	0.028
RC	2011/06/08	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/06/08	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.6	1.5	1.6	3.8	1.4
SM	2011/06/09	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	52	48	56	52	48
SM	2011/06/08	Turbidity	NTU	APHA 2130-b	0.1	1.1	1.1	0.7	0.5	1.7
RC	2011/06/08	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.4	0.5	0.2
RC	2011/06/08	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.017	0.016	0.041	0.032	0.025
SM	2011/06/08	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	3	< 2	4

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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
RC	2011/06/08	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	9	12	65	49	7
BM	2011/06/10	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	8.3	11.0	8.4	10.1	10.7
BM	2011/06/10	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.0	12.4	9.0	11.0	11.3
RC	2011/06/08	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.05	0.08	0.08	0.04
RC	2011/06/08	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.021	0.016	0.023	0.038	0.036
RC	2011/06/08	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.004	< 0.003	< 0.003
RC	2011/06/08	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.5	1.7	4.5	4.4	1.7
SM	2011/06/09	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	12	48	88	120	12
SM	2011/06/08	Turbidity	NTU	APHA 2130-b	0.1	0.8	9.8	1.4	2.1	1.7
RC	2011/06/08	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2	0.4	0.4	0.3
RC	2011/06/08	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.027	0.034	0.140	0.110	0.026
SM	2011/06/08	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	2	41	4	3	8

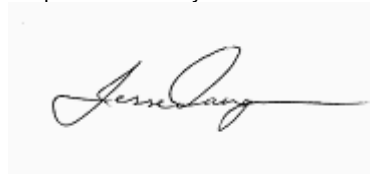
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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
RC	2011/06/08	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	8	10	49	3	< 1
BM	2011/06/10	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	18.0	9.0	10.4	11.8	0.1
BM	2011/06/10	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	19.4	9.7	11.1	12.5	< 0.1
RC	2011/06/08	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.08	0.07	0.04	0.03
RC	2011/06/08	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.014	0.029	0.018	0.056	< 0.005
RC	2011/06/08	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/06/08	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.5	4.7	3.5	2.1	1.2
SM	2011/06/09	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	16	24	104	32	< 4
SM	2011/06/08	Turbidity	NTU	APHA 2130-b	0.1	2.4	1.0	4.9	1.3	0.1
RC	2011/06/08	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.3	0.3	0.3	0.1
RC	2011/06/08	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.029	0.041	0.107	0.023	0.005
SM	2011/06/08	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	17	2	40	5	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
RC	2011/06/08	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	43
BM	2011/06/10	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.1	13.6
BM	2011/06/10	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	14.5
RC	2011/06/08	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.07
RC	2011/06/08	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	0.020
RC	2011/06/08	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2011/06/08	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.7	2.6
SM	2011/06/09	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	< 4	44
SM	2011/06/08	Turbidity	NTU	APHA 2130-b	0.1	0.1	1.3
RC	2011/06/08	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.4
RC	2011/06/08	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.007	0.096
SM	2011/06/08	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2	7

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/08	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.302	0.303	0.146	0.177	0.258
BM	2011/06/08	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00007	0.00011	< 0.00005
BM	2011/06/08	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0004	0.0005	0.0013	0.0004
BM	2011/06/08	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00319	0.00323	0.00655	0.00203	0.00295
BM	2011/06/08	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	0.001	< 0.001
BM	2011/06/08	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000027	0.000030	< 0.000015	0.000048	< 0.000015
BM	2011/06/08	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0003	0.0003	0.0006	< 0.0003	< 0.0003
BM	2011/06/08	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00005	0.00005	0.00005	< 0.00002	0.00005
BM	2011/06/08	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0005	0.0006	0.0008	0.0006
BM	2011/06/08	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.152	0.152	0.135	0.0765	0.144
BM	2011/06/08	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/08	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0113	0.0114	0.00358	0.00403	0.00532
BM	2011/06/13	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/08	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00009	0.00008	0.00026	0.00005	0.00011
BM	2011/06/08	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00028	0.00028	0.00023	0.00029	0.00020
BM	2011/06/08	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/08	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0147	0.0148	0.0329	0.0230	0.0184
BM	2011/06/08	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0041	0.0043	0.0030	0.0012	0.0032
BM	2011/06/08	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00018	0.00014	0.00005	0.00011
BM	2011/06/08	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0010	< 0.0001	0.0003
BM	2011/06/08	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0047	0.0048	0.0098	0.0477	0.0019
BM	2011/06/08	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/08	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.180	0.676	0.060	0.119	0.334
BM	2011/06/08	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0007	0.0007	0.0004	0.0005	0.0004
BM	2011/06/08	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00450	0.00927	0.00588	0.00664	0.00518
BM	2011/06/08	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
BM	2011/06/08	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000030	0.000022	< 0.000015	0.000021	0.000019
BM	2011/06/08	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0009	< 0.0003	< 0.0003	0.0003
BM	2011/06/08	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00004	0.00027	0.00003	0.00005	0.00007
BM	2011/06/08	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0011	0.0005	0.0006	0.0006
BM	2011/06/08	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.102	0.670	0.0662	0.146	0.223
BM	2011/06/08	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00010	0.00025	< 0.00005	< 0.00005	0.00008
BM	2011/06/08	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/08	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00629	0.0313	0.00323	0.0113	0.0123
BM	2011/06/13	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/08	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00030	0.00024	0.00049	0.00051	0.00016
BM	2011/06/08	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00033	0.00087	0.00025	0.00033	0.00030
BM	2011/06/08	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/08	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0243	0.0296	0.0917	0.0773	0.0230
BM	2011/06/08	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0022	0.0236	0.0019	0.0033	0.0060
BM	2011/06/08	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00028	0.00009	0.00011	0.00019
BM	2011/06/08	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0001	0.0017	0.0002	0.0004	0.0004
BM	2011/06/08	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0018	0.0038	0.0047	0.0012	0.0076
BM	2011/06/08	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
BM	2011/06/08	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.833	0.155	0.117	0.304	< 0.002
BM	2011/06/08	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0005	0.0004	< 0.0001
BM	2011/06/08	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00858	0.00479	0.00691	0.00311	< 0.00005
BM	2011/06/08	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	0.001	0.001
BM	2011/06/08	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000022	< 0.000015	0.000027	0.000038	< 0.000015
BM	2011/06/08	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0005	< 0.0003	< 0.0003	0.0003	< 0.0003
BM	2011/06/08	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00015	0.00003	0.00005	0.00005	< 0.00002
BM	2011/06/08	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0013	0.0004	0.0006	0.0005	0.0001
BM	2011/06/08	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.431	0.104	0.148	0.149	< 0.0001
BM	2011/06/08	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00010	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/08	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0205	0.00538	0.0126	0.0111	< 0.00005
BM	2011/06/13	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/08	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00028	0.00049	0.00008	< 0.00005
BM	2011/06/08	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00040	0.00010	0.00033	0.00028	< 0.00005
BM	2011/06/08	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/08	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0285	0.0310	0.0763	0.0149	< 0.000005
BM	2011/06/08	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0119	0.0023	0.0038	0.0037	< 0.0002
BM	2011/06/08	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00022	0.00023	0.00011	0.00017	< 0.00005
BM	2011/06/08	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0009	0.0001	0.0004	0.0002	< 0.0001
BM	2011/06/08	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0037	0.0045	0.0038	0.0085	< 0.0005
BM	2011/06/08	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
BM	2011/06/08	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	0.045
BM	2011/06/08	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0003
BM	2011/06/08	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00907
BM	2011/06/08	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.002
BM	2011/06/08	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	0.000038
BM	2011/06/08	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/06/08	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00003
BM	2011/06/08	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0008
BM	2011/06/08	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.164
BM	2011/06/08	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/06/08	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00867
BM	2011/06/13	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/06/08	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00049
BM	2011/06/08	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00033
BM	2011/06/08	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/06/08	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	0.0730
BM	2011/06/08	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/08	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/08	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	0.0012
BM	2011/06/08	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00006
BM	2011/06/08	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0002
BM	2011/06/08	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	0.0079
BM	2011/06/08	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/09	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.241	0.241	0.108	0.164	0.200
BM	2011/06/09	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00010	< 0.00005
BM	2011/06/09	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0003	0.0004	0.0012	0.0003
BM	2011/06/09	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00280	0.00284	0.00318	0.00200	0.00264
BM	2011/06/09	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	0.001	< 0.001
BM	2011/06/09	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	0.000027	0.000025	< 0.000015	0.000041	< 0.000015
BM	2011/06/09	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0006	< 0.0003	< 0.0003
BM	2011/06/09	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00004	0.00004	< 0.00002	0.00004
BM	2011/06/09	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0005	0.0006	0.0008	0.0006
BM	2011/06/09	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.105	0.106	0.111	0.0750	0.0985
BM	2011/06/09	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/09	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00633	0.00628	0.00209	0.00310	0.00299
BM	2011/06/13	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/09	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00022	< 0.00005	< 0.00005
BM	2011/06/09	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00028	0.00028	0.00023	0.00029	0.00020
BM	2011/06/09	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/09	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0145	0.0142	0.0326	0.0228	0.0184
BM	2011/06/09	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0018	0.0018	0.0014	0.0010	0.0012
BM	2011/06/09	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00015	0.00016	0.00012	< 0.00005	0.00008
BM	2011/06/09	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00011	0.00085	< 0.00005	0.00016
BM	2011/06/09	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0044	0.0040	0.0098	0.0477	0.0013
RC	2011/06/08	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.37	6.40	7.25	6.84	6.90

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

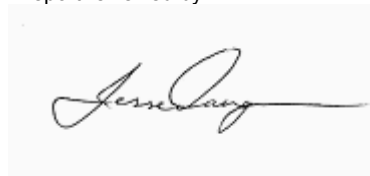
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/09	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.126	0.160	0.018	0.047	0.195
BM	2011/06/09	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0003	0.0004	0.0005	0.0003
BM	2011/06/09	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00406	0.00412	0.00566	0.00610	0.00402
BM	2011/06/09	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
BM	2011/06/09	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	0.000022	< 0.000015	0.000021	< 0.000015
BM	2011/06/09	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/09	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00006	0.00003	0.00003	0.00003
BM	2011/06/09	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0007	0.0005	0.0006	0.0006
BM	2011/06/09	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0624	0.117	0.0276	0.0276	0.101
BM	2011/06/09	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/09	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00250	0.00719	0.00115	0.00787	0.00216
BM	2011/06/13	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/09	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00023	0.00015	0.00042	0.00043	0.00009
BM	2011/06/09	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00030	0.00035	0.00025	0.00029	0.00028
BM	2011/06/09	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/09	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0238	0.0273	0.0901	0.0737	0.0222
BM	2011/06/09	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0012	0.0018	0.0004	0.0009	0.0015
BM	2011/06/09	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00020	0.00016	0.00008	0.00009	0.00015
BM	2011/06/09	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00032	0.00009	0.00025	0.00011
BM	2011/06/09	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0016	0.0016	0.0047	0.0012	0.0076
RC	2011/06/08	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.03	7.19	7.96	7.82	6.96

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
BM	2011/06/09	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.402	0.117	0.045	0.242	< 0.002
BM	2011/06/09	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0001	0.0004	0.0003	< 0.0001
BM	2011/06/09	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00509	0.00450	0.00637	0.00284	< 0.00005
BM	2011/06/09	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	0.001	0.002
BM	2011/06/09	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	0.000027	0.000015	< 0.000015
BM	2011/06/09	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0004	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/09	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00005	0.00002	0.00003	0.00003	< 0.00002
BM	2011/06/09	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0013	0.0004	0.0006	0.0005	< 0.0001
BM	2011/06/09	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.163	0.0721	0.0757	0.108	< 0.0001
BM	2011/06/09	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/09	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00179	0.00199	0.00895	0.00636	< 0.00005
BM	2011/06/13	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/09	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00025	0.00042	< 0.00005	< 0.00005
BM	2011/06/09	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00025	0.00010	0.00030	0.00028	< 0.00005
BM	2011/06/09	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/09	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0268	0.0306	0.0743	0.0144	< 0.000005
BM	2011/06/09	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0035	0.0012	0.0009	0.0017	< 0.0002
BM	2011/06/09	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00015	0.00020	0.00009	0.00015	< 0.00005
BM	2011/06/09	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00034	< 0.00005	0.00023	0.00011	< 0.00005
BM	2011/06/09	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0037	0.0045	0.0038	0.0085	< 0.0005
RC	2011/06/08	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.93	7.17	7.77	6.37	5.86

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

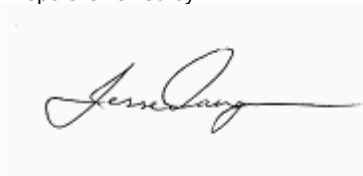
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
BM	2011/06/09	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	0.027
BM	2011/06/09	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0003
BM	2011/06/09	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00882
BM	2011/06/09	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.002	0.002
BM	2011/06/09	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	0.000038
BM	2011/06/09	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/06/09	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00003
BM	2011/06/09	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0008
BM	2011/06/09	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.116
BM	2011/06/09	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/06/09	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00445
BM	2011/06/13	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/06/09	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00044
BM	2011/06/09	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00033
BM	2011/06/09	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/06/09	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	0.0708
BM	2011/06/09	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/09	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/09	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0005
BM	2011/06/09	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00005
BM	2011/06/09	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00016
BM	2011/06/09	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0079
RC	2011/06/08	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.78	7.66

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/09	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	1.6	1.6	4.9	4.0	2.5
BM	2011/06/09	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	1.11	0.61	0.63
BM	2011/06/09	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
BM	2011/06/09	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/06/09	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.17	3.27	5.48	3.70	3.79
BM	2011/06/09	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.0	1.1	1.8	1.0	1.4
BM	2011/06/09	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	16.9	12.4	8.8

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Report reviewed by:



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 Manager
 Laboratory Services



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 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/09	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	3.1	4.2	18.1	14.3	2.9
BM	2011/06/09	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	0.89	4.34	3.30	0.53
BM	2011/06/09	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/06/09	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	0.7	< 0.5
BM	2011/06/09	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.12	4.11	3.96	4.11	3.79
BM	2011/06/09	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.3	1.5	3.2	2.6	1.2
BM	2011/06/09	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	9.8	14.1	63.2	49.3	9.4

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Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
BM	2011/06/09	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	3.9	4.0	14.5	1.6	< 0.5
BM	2011/06/09	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.70	0.65	3.32	< 0.50	< 0.50
BM	2011/06/09	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/06/09	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5
BM	2011/06/09	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.49	3.00	4.24	3.26	< 0.01
BM	2011/06/09	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.4	1.3	2.6	1.0	< 0.5
BM	2011/06/09	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	12.5	12.7	49.9	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

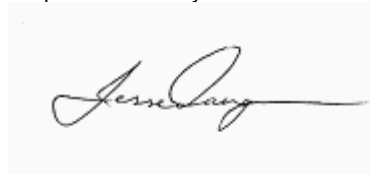
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
BM	2011/06/09	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	13.5
BM	2011/06/09	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	2.81
BM	2011/06/09	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/06/09	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.6
BM	2011/06/09	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	5.42
BM	2011/06/09	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	2.4
BM	2011/06/09	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	45.3

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/08	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.6	1.6	4.9	4.0	2.5
BM	2011/06/08	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50	1.11	0.61	0.64
BM	2011/06/08	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02
BM	2011/06/08	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/06/08	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	3.45	3.39	5.48	3.74	3.92
BM	2011/06/08	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.0	1.0	1.8	1.0	1.4
BM	2011/06/08	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	16.8	12.5	8.8

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



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ANALYTICAL REPORT

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Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

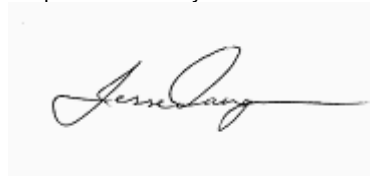
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
BM	2011/06/08	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.1	4.4	18.4	14.7	2.9
BM	2011/06/08	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.51	1.00	4.51	3.44	0.54
BM	2011/06/08	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
BM	2011/06/08	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.8	0.7	< 0.5
BM	2011/06/08	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.20	4.95	4.03	4.32	4.03
BM	2011/06/08	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.3	1.5	3.2	2.7	1.2
BM	2011/06/08	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	9.9	15.0	64.4	50.8	9.5

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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Charlene Rollheiser
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ANALYTICAL REPORT

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Date Received: 2011/06/08
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Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

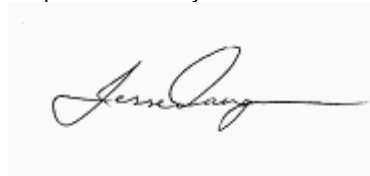
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
BM	2011/06/08	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	4.0	4.0	14.5	1.6	< 0.5
BM	2011/06/08	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.75	0.65	3.40	< 0.50	< 0.50
BM	2011/06/08	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/06/08	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	< 0.5	< 0.5
BM	2011/06/08	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.98	3.02	4.24	3.39	< 0.01
BM	2011/06/08	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.4	1.3	2.6	1.0	< 0.5
BM	2011/06/08	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	13.0	12.6	50.2	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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 Laboratory Services



Charlene Rollheiser
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AMEC Earth & Environmental
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Date Received: 2011/06/08
Report Date: 2011/06/17

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
BM	2011/06/08	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	13.5
BM	2011/06/08	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	2.90
BM	2011/06/08	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/06/08	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.6
BM	2011/06/08	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	5.42
BM	2011/06/08	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	2.5
BM	2011/06/08	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	45.7

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/08
Report Date: 2011/06/17

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

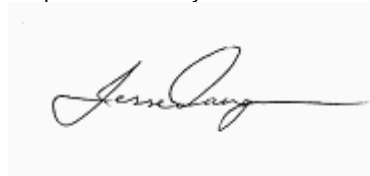
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6380	11-6380-D	11-6381	11-6382	11-6383
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-06 00:00	Lab Duplicate	2011-06-07 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
JO	2011/06/08	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	0.02	< 0.02
RC	2011/06/08	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.011	< 0.003	< 0.003
BM	2011/06/08	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.010	0.009	0.016	0.006	0.006
SM	2011/06/08	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.46	0.45	0.54	0.80	0.89

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
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Date Received: 2011/06/08
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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6384	11-6385	11-6386	11-6387	11-6388
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-07 00:00
					MDL					
JO	2011/06/08	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/06/08	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.012	< 0.003	< 0.003
BM	2011/06/08	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.007	0.004	0.007	0.007
SM	2011/06/08	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.32	0.39	0.40	0.45	0.35

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MDL - Method Detection Limit

Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
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Attention: Ott, Bruce

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Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6389	11-6390	11-6391	11-6392	11-6393
					Client ID:	WQ11	WQ12	WQ13	Field Dup	Field Blank
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00	2011-06-06 00:00
					MDL					
JO	2011/06/08	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/06/08	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.004	< 0.003	< 0.003
BM	2011/06/08	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.004	0.007	0.009	< 0.001
SM	2011/06/08	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.32	0.31	0.34	0.61	< 0.08

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



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Nutrient Analysis - Water

Attention: Ott, Bruce

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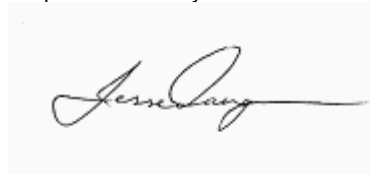
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6394	11-6395
					Client ID:	Trip Blank	WQ14
					Sample Date:	2011-06-06 00:00	2011-06-06 00:00
					MDL		
JO	2011/06/08	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02
RC	2011/06/08	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
BM	2011/06/08	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	0.008
SM	2011/06/08	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.32

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/17

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/06/08	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK-F-40
BM	2011/06/10	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.8	33.1-42.6	37.90	DMD-TOC-79-Mid
BM	2011/06/10	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.8	33.1-42.6	37.90	DMD-TOC-79-Mid
RC	2011/06/08	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK-F-40
RC	2011/06/08	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.58	1.44-1.76	1.60	CC-Anion-111B
RC	2011/06/08	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.617	0.54-0.66	0.60	CC-Anion-111B
RC	2011/06/08	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.7	25.2-30.8	28.00	CC-Anion-111B
SM	2011/06/09	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	696	552-934	743.00	QCP-C2-SLD02006
SM	2011/06/08	Turbidity	NTU	APHA 2130-b	0.1	17	14.53-19.49	17.01	D2-TURB01052
RC	2011/06/08	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.1	3.6-4.4	4.00	CC-Anion-111B
RC	2011/06/08	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.75	2.539-2.939	2.79	CC-EC-0.02M-35
SM	2011/06/08	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	23	22.2-31.7	27.00	QCP-C2-SLD02006

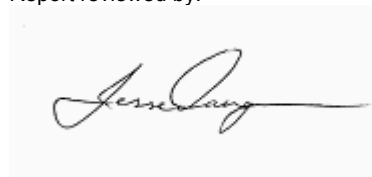
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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 Laboratory Services



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ANALYTICAL REPORT

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Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/08	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/08	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/08	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	51.5	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	53.5	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	51.6	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/08	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	48.5	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/06/08	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/13	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.173	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/06/08	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.8	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	13.1	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/06/08	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/06/08	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	262	225-275	250.00	MS-CCV-HIGH
BM	2011/06/08	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	253	225-275	250.00	MS-CCV-HIGH
BM	2011/06/08	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	52.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	106	90-110	100.00	MS-CCV-HIGH
BM	2011/06/08	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/08	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	52.4	45.0-55.0	50.00	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/17

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/09	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/09	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/09	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.1	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	49.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	49.9	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	50.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.5	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/09	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	47.3	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/06/09	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	51.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/13	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.173	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/06/09	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.7	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.9	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/06/09	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	51.8	45-55	50.00	MS-CCV-HIGH
BM	2011/06/09	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	248	225-275	250.00	MS-CCV-HIGH
BM	2011/06/09	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	253	225-275	250.00	MS-CCV-HIGH
BM	2011/06/09	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	99.2	90-110	100.00	MS-CCV-HIGH
BM	2011/06/09	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/09	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	51.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/06/08	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.03	5.94-6.06	6.00	CC-pH-154

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 Laboratory Services

Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/17

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61018

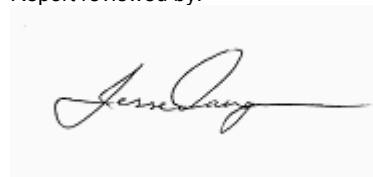
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/09	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	39.2	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/09	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	39.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/09	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.10	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/06/09	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	43.3	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/06/09	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.39	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/06/09	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	39.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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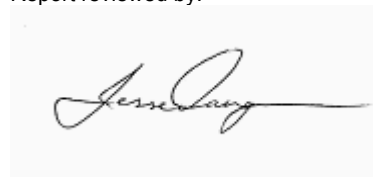
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/08	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	38.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/08	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.2	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/08	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.92	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/06/08	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	43.8	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/06/08	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.41	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/06/08	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	38.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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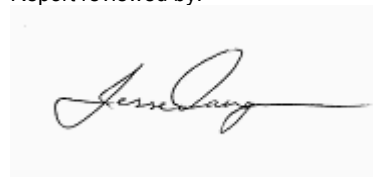
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/06/08	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.79	0.702-1.052	0.86	NH3SC-001
RC	2011/06/08	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.797	0.72-0.88	0.80	CC-Anion-111BL
BM	2011/06/08	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.92	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
SM	2011/06/08	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	7.14	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG ~ CHEMISTRY
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 08-JUN-11
Report Date: 17-JUN-11 14:41 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1014653
Project P.O. #: 244360
Job Reference: EC-61018
Legal Site Desc:
C of C Numbers:

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1014653-1 WQ1~(11-6380) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0096		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-2 WQ3~(11-6381) Sampled By: CLIENT on 07-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0082		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-3 WQ4~(11-6382) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0085		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-4 WQ5~(11-6383) Sampled By: CLIENT on 07-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0092		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-5 WQ6~(11-6384) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0063		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-6 WQ7~(11-6385) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0097		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	11-JUN-11	11-JUN-11	R2202527
L1014653-7 WQ8~(11-6386) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0055		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-8 WQ9~(11-6387) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0078		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-9 WQ10~(11-6388) Sampled By: CLIENT on 07-JUN-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1014653-9 WQ10~(11-6388) Sampled By: CLIENT on 07-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0080		0.0050	mg/L	15-JUN-11	15-JUN-11	R2204586
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-10 WQ11~(11-6389) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0138		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-11 WQ12~(11-6390) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0089		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-12 WQ13~(11-6391) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0064		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-13 FIELD DUP~(11-6392) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0119		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-14 FIELD BLANK~(11-6393) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-15 TRIP BLANK~(11-6394) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262
L1014653-16 WQ14~(11-6395) Sampled By: CLIENT on 06-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	0.0098		0.0050	mg/L	16-JUN-11	16-JUN-11	R2205239
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	13-JUN-11	13-JUN-11	R2203262

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1014653

Report Date: 17-JUN-11

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: JESSE DANG ~ CHEMISTRY

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-HH-COL-VA Water								
Batch R2204586								
WG1296382-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			103		%		80-120	15-JUN-11
WG1296382-3	DUP	L1014653-2						
Cyanide, Total		0.0082	0.0079		mg/L	3.8	20	15-JUN-11
WG1296382-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	15-JUN-11
Batch R2205239								
WG1297160-2	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			87		%		80-120	16-JUN-11
WG1297160-5	CRM	VA-HH-TCN-CONTROL						
Cyanide, Total			84		%		80-120	16-JUN-11
WG1297160-3	DUP	L1014815-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	16-JUN-11
WG1297160-6	DUP	L1015561-5						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	16-JUN-11
WG1297160-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	16-JUN-11
WG1297160-4	MB							
Cyanide, Total			<0.0050		mg/L		0.005	16-JUN-11
CN-WAD-MID-COL-VA Water								
Batch R2202527								
WG1294014-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			97		%		80-120	11-JUN-11
WG1294014-3	DUP	L1014431-5						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	11-JUN-11
WG1294014-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	11-JUN-11
Batch R2203262								
WG1294870-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			101		%		80-120	13-JUN-11
WG1294870-5	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			109		%		80-120	13-JUN-11
WG1294870-3	DUP	L1014653-15						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	13-JUN-11
WG1294870-6	DUP	L1014712-2						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	13-JUN-11
WG1294870-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	13-JUN-11



Quality Control Report

Workorder: L1014653

Report Date: 17-JUN-11

Page 2 of 3

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: JESSE DANG ~ CHEMISTRY

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-MID-COL-VA	Water							
Batch	R2203262							
WG1294870-4	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	13-JUN-11

Quality Control Report

Workorder: L1014653

Report Date: 17-JUN-11

Page 3 of 3

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

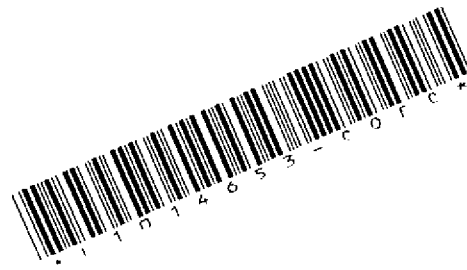
All test results reported with this submission were conducted within ALS recommended hold times.

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.

FileNbr	SampleName	LabNbr	DateSampled	Description
EC-61018	WQ1	11-6380-	2011/06/06	Water
EC-61018	WQ3	11-6381-	2011/06/07	Water
EC-61018	WQ4	11-6382-	2011/06/06	Water
EC-61018	WQ5	11-6383-	2011/06/07	Water
EC-61018	WQ6	11-6384-	2011/06/06	Water
EC-61018	WQ7	11-6385-	2011/06/06	Water
EC-61018	WQ8	11-6386-	2011/06/06	Water
EC-61018	WQ9	11-6387-	2011/06/06	Water
EC-61018	WQ10	11-6388-	2011/06/07	Water
EC-61018	WQ11	11-6389-	2011/06/06	Water
EC-61018	WQ12	11-6390-	2011/06/06	Water
EC-61018	WQ13	11-6391-	2011/06/06	Water
EC-61018	Field Dup	11-6392-	2011/06/06	Water
EC-61018	Field Blank	11-6393-	2011/06/06	Water
EC-61018	Trip Blank	11-6394-	2011/06/06	Water
EC-61018	WQ14	11-6395-	2011/06/06	Water




BON DE COMMANDE
PURCHASE ORDER

A TO ALS

ADRESSE ADDRESS

EXPÉDIER À SHIP TO AMEC

ADRESSE ADDRESS



* 1 1 0 1 4 6 5 3 - C O T C *

244360

CE NUMERO DOIT APPARAÎTRE SUR TOUT COLIS, FACTURE, ETC.

THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.

N° DEM. OU SERV. REQ. NO. OR DEPT. 2220

DATE June 8

POUR FOR Ec-61018

QUANTITÉ QUANTITY	DESCRIPTION	PRIX PRICE	UNITÉ UNIT	MONTANT AMOUNT
1	16			
2	Water samples for			
3	Synide total in water			
4	8			
5	Synide weak acid digestion			
6	see attached			
7				
8				
9				
10				

DATE REQUISE - DATE REQUIRED June 15 VIA

VEUILLEZ ENVOYER PLEASE SEND

COPIE(S) DE VOTRE FACTURE COPY(IES) OF YOUR INVOICE.

CONDITIONS TERMS Please list with ID on results pl

ACHETEUR - PURCHASING AGENT

VEUILLEZ NOUS AVISER IMMÉDIATEMENT S'IL EST IMPOSSIBLE D'EXPÉDIER LA COMMANDE COMPLÈTE À LA DATE SPÉCIFIÉE.
PLEASE NOTIFY US IMMEDIATELY IF YOU ARE UNABLE TO SHIP COMPLETE ORDER BY DATE SPECIFIED.

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
RC	2011/06/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	4	3	22	8	8
BM	2011/06/20	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.7	9.6	8.8	10.1	10.8
BM	2011/06/20	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.7	9.7	8.8	10.5	11.1
RC	2011/06/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.03	0.05	0.05	0.05
RC	2011/06/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	0.006	0.007
RC	2011/06/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/06/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.1	1.1	1.3	3.9	1.4
SM	2011/06/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	64	68	56	36	< 4
JO	2011/06/15	Turbidity	NTU	APHA 2130-b	0.1	0.6	0.6	1.0	0.5	0.9
RC	2011/06/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	< 0.1	0.2	0.2	0.1
RC	2011/06/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.016	0.016	0.049	0.034	0.026
JO	2011/06/15	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	3	< 2	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
RC	2011/06/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	10	15	63	52	9
BM	2011/06/20	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	7.4	9.2	9.8	9.9	9.1
BM	2011/06/20	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	7.6	9.4	10.0	10.1	9.2
RC	2011/06/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.05	0.07	0.07	0.03
RC	2011/06/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.007	0.006	0.007	0.006	0.006
RC	2011/06/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/06/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.7	1.9	4.0	3.8	1.3
SM	2011/06/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	12	< 4	96	64	36
JO	2011/06/15	Turbidity	NTU	APHA 2130-b	0.1	0.7	5.6	3.5	1.8	1.1
RC	2011/06/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.3	0.3	0.2
RC	2011/06/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.029	0.040	0.134	0.112	0.026
JO	2011/06/15	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	9	6	4	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
RC	2011/06/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	11	14	52	54	62
BM	2011/06/20	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	16.3	8.8	10.0	10.5	9.9
BM	2011/06/20	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	16.7	9.0	10.0	10.5	10.0
RC	2011/06/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.03	0.06	0.06	0.07
RC	2011/06/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/06/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/06/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.1	1.3	3.5	2.5	4.1
SM	2011/06/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	56	32	76	180	88
JO	2011/06/15	Turbidity	NTU	APHA 2130-b	0.1	1.2	1.0	1.6	1.1	3.3
RC	2011/06/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.1	0.2	0.3	0.3
RC	2011/06/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.033	0.035	0.113	0.114	0.135
JO	2011/06/15	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	4	< 2	5

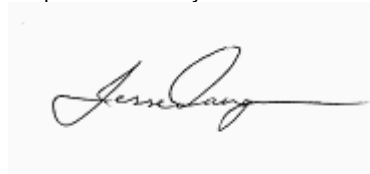
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
RC	2011/06/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1
BM	2011/06/20	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.2	< 0.1
BM	2011/06/20	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	< 0.1
RC	2011/06/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	< 0.02	< 0.02
RC	2011/06/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
RC	2011/06/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2011/06/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.8	0.8
SM	2011/06/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4
JO	2011/06/15	Turbidity	NTU	APHA 2130-b	0.1	< 0.1	< 0.1
RC	2011/06/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	< 0.1	0.1
RC	2011/06/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.003	0.003
JO	2011/06/15	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.234	0.231	0.116	0.147	0.226
BM	2011/06/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00007	0.00014	< 0.00005
BM	2011/06/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0004	0.0006	0.0013	0.0004
BM	2011/06/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00240	0.00244	0.00356	0.00199	0.00279
BM	2011/06/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.001	< 0.001	< 0.001
BM	2011/06/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/20	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	0.0006	< 0.0003	< 0.0003
BM	2011/06/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00004	0.00004	0.00006	< 0.00002	0.00005
BM	2011/06/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0005	0.0006	0.0006	0.0006
BM	2011/06/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.108	0.108	0.123	0.0558	0.123
BM	2011/06/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00467	0.00469	0.00427	0.00326	0.00522
BM	2011/06/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00009	0.00032	< 0.00005	0.00009
BM	2011/06/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00028	0.00022	0.00029	0.00019
BM	2011/06/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0139	0.0138	0.0420	0.0249	0.0198
BM	2011/06/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0019	0.0019	0.0023	0.0009	0.0024
BM	2011/06/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00019	0.00020	0.00015	0.00005	0.00010
BM	2011/06/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0010	< 0.0001	0.0003
BM	2011/06/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0028	0.0028	0.0013	0.0412	0.0014
BM	2011/06/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Note: Sample 11-6760 (WQ11) was re-analyzed and the mercury detection verified.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.143	0.284	0.066	0.087	0.216
BM	2011/06/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00006	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0008	0.0005	0.0005	0.0006	0.0004
BM	2011/06/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00431	0.00582	0.00623	0.00722	0.00408
BM	2011/06/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.002	0.002	< 0.001
BM	2011/06/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/20	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0005	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00012	0.00007	0.00007	0.00004
BM	2011/06/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0008	0.0008	0.0006	0.0007	0.0007
BM	2011/06/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.102	0.320	0.128	0.152	0.127
BM	2011/06/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00006	0.00010	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00641	0.0178	0.0208	0.0154	0.00595
BM	2011/06/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00029	0.00027	0.00050	0.00049	0.00017
BM	2011/06/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00029	0.00044	0.00031	0.00032	0.00025
BM	2011/06/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0258	0.0329	0.0885	0.0775	0.0241
BM	2011/06/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0018	0.0073	0.0021	0.0027	0.0025
BM	2011/06/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00020	0.00010	0.00011	0.00020
BM	2011/06/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0008	0.0003	0.0005	0.0003
BM	2011/06/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0017	0.0024	0.0012	0.0012	0.0023
BM	2011/06/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Note: Sample 11-6760 (WQ11) was re-analyzed and the mercury detection verified.

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
BM	2011/06/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.426	0.128	0.084	0.025	0.070
BM	2011/06/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0003	0.0006	0.0003	0.0005
BM	2011/06/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00570	0.00509	0.00686	0.00936	0.00637
BM	2011/06/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	< 0.001	0.002	0.002	0.002
BM	2011/06/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/20	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0004	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00006	0.00003	0.00005	0.00003	0.00006
BM	2011/06/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0013	0.0006	0.0007	0.0006	0.0006
BM	2011/06/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.191	0.141	0.147	0.154	0.123
BM	2011/06/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00319	0.00827	0.0166	0.00791	0.0194
BM	2011/06/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	0.000024	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00038	0.00049	0.00049	0.00049
BM	2011/06/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00026	0.00011	0.00031	0.00029	0.00030
BM	2011/06/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0315	0.0372	0.0780	0.0830	0.0899
BM	2011/06/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0040	0.0020	0.0024	0.0007	0.0024
BM	2011/06/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00019	0.00025	0.00010	0.00006	0.00009
BM	2011/06/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0002	0.0004	0.0002	0.0004
BM	2011/06/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0019	0.0019	0.0015	0.0014	0.0011
BM	2011/06/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Note: Sample 11-6760 (WQ11) was re-analyzed and the mercury detection verified.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
BM	2011/06/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002
BM	2011/06/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.003
BM	2011/06/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/06/20	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/06/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/06/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/06/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/06/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/06/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/06/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/06/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
BM	2011/06/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---


All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Note: Sample 11-6760 (WQ11) was re-analyzed and the mercury detection verified.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.216	0.215	0.084	0.140	0.187
BM	2011/06/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00006	0.00013	< 0.00005
BM	2011/06/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0003	0.0005	0.0012	0.0003
BM	2011/06/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00229	0.00224	0.00334	0.00195	0.00256
BM	2011/06/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	0.001	< 0.001	< 0.001
BM	2011/06/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0005	< 0.0003	< 0.0003
BM	2011/06/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00003	0.00004	< 0.00002	0.00004
BM	2011/06/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0005	0.0006	0.0006	0.0006
BM	2011/06/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0815	0.0816	0.0805	0.0476	0.0863
BM	2011/06/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00281	0.00266	0.00269	0.00134	0.00300
BM	2011/06/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00008	0.00028	< 0.00005	0.00008
BM	2011/06/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00027	0.00028	0.00022	0.00029	0.00019
BM	2011/06/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0134	0.0135	0.0405	0.0245	0.0195
BM	2011/06/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0013	0.0014	0.0013	0.0008	0.0012
BM	2011/06/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00016	0.00016	0.00011	< 0.00005	0.00008
BM	2011/06/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	0.00013	0.00088	< 0.00005	0.00022
BM	2011/06/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0028	0.0028	0.0013	0.0412	0.0014
RC	2011/06/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.23	6.31	7.34	6.83	6.95

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.106	0.114	0.018	0.031	0.159
BM	2011/06/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00006	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0007	0.0004	0.0004	0.0005	0.0003
BM	2011/06/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00391	0.00421	0.00577	0.00722	0.00371
BM	2011/06/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.002	0.001	< 0.001
BM	2011/06/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00002	0.00004	0.00004	0.00003	0.00003
BM	2011/06/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0008	0.0006	0.0007	0.0007
BM	2011/06/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0544	0.0903	0.0468	0.0709	0.0775
BM	2011/06/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00244	0.00733	0.0122	0.0105	0.00174
BM	2011/06/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00028	0.00024	0.00049	0.00049	0.00017
BM	2011/06/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00029	0.00031	0.00031	0.00031	0.00025
BM	2011/06/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0249	0.0314	0.0871	0.0761	0.0236
BM	2011/06/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0009	0.0011	0.0005	0.0012	0.0012
BM	2011/06/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00022	0.00016	0.00008	0.00010	0.00018
BM	2011/06/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00036	0.00022	0.00028	0.00014
BM	2011/06/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0017	0.0014	0.0012	0.0012	0.0019
RC	2011/06/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.09	7.27	7.81	7.74	6.98

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
BM	2011/06/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.344	0.094	0.030	0.015	0.018
BM	2011/06/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0001	0.0002	0.0004	0.0003	0.0004
BM	2011/06/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00505	0.00473	0.00648	0.00908	0.00586
BM	2011/06/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	< 0.001	0.001	0.002	0.001
BM	2011/06/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/06/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0004	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/06/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00005	0.00002	0.00003	0.00003	0.00004
BM	2011/06/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0013	0.0006	0.0007	0.0006	0.0006
BM	2011/06/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.137	0.0935	0.0726	0.103	0.0438
BM	2011/06/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/06/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00167	0.00294	0.0122	0.00516	0.0107
BM	2011/06/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/06/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	0.00036	0.00047	0.00047	0.00046
BM	2011/06/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00026	0.00011	0.00031	0.00029	0.00030
BM	2011/06/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/06/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0315	0.0372	0.0758	0.0807	0.0871
BM	2011/06/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0034	0.0010	0.0005	0.0004	0.0005
BM	2011/06/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00023	0.00010	0.00006	0.00008
BM	2011/06/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00041	0.00006	0.00026	0.00015	0.00018
BM	2011/06/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0019	0.0019	0.0015	0.0014	0.0011
RC	2011/06/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.06	7.26	7.75	7.68	7.82

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
BM	2011/06/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
BM	2011/06/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.003	0.003
BM	2011/06/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/06/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/06/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/06/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	< 0.0001
BM	2011/06/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	< 0.0001
BM	2011/06/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/06/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/06/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/06/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.000017	< 0.000005
BM	2011/06/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/06/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/06/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/06/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0006
RC	2011/06/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.90	5.73

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	1.5	1.5	5.9	4.2	2.6
BM	2011/06/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	1.39	0.68	0.69
BM	2011/06/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
BM	2011/06/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/06/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.58	3.58	6.06	4.08	3.88
BM	2011/06/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.1	1.1	2.1	1.1	1.5
BM	2011/06/16	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	20.4	13.4	9.4

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Report reviewed by:



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 Manager
 Laboratory Services



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 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	3.3	4.8	17.7	14.7	3.1
BM	2011/06/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.52	1.01	4.12	3.33	0.56
BM	2011/06/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/06/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	0.6	< 0.5
BM	2011/06/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.35	4.29	3.62	3.98	4.02
BM	2011/06/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.4	1.6	3.0	2.6	1.3
BM	2011/06/16	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	10.3	16.1	61.0	50.5	10.1

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Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
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Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
BM	2011/06/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	4.6	4.6	14.7	15.6	17.7
BM	2011/06/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.84	0.74	3.37	3.21	4.17
BM	2011/06/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
BM	2011/06/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.6	0.5	0.7
BM	2011/06/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.85	3.17	4.11	5.45	3.70
BM	2011/06/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.5	1.3	2.6	2.6	3.0
BM	2011/06/16	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	14.9	14.6	50.6	52.2	61.5

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

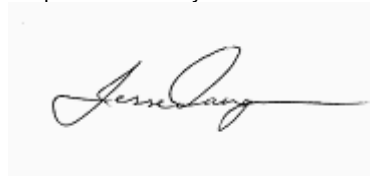
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
BM	2011/06/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/06/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
BM	2011/06/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/06/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/06/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/06/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/06/16	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

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Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.5	1.5	6.1	4.3	2.7
BM	2011/06/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50	1.42	0.70	0.71
BM	2011/06/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02
BM	2011/06/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/06/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	3.72	3.69	6.20	4.21	4.04
BM	2011/06/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.1	1.1	2.1	1.1	1.5
BM	2011/06/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	21.0	13.7	9.6

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
BM	2011/06/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.4	4.9	18.1	15.0	3.1
BM	2011/06/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.56	1.10	4.39	3.54	0.60
BM	2011/06/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02
BM	2011/06/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.8	0.7	< 0.5
BM	2011/06/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.51	4.78	3.97	4.23	4.23
BM	2011/06/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.5	1.6	3.2	2.7	1.3
BM	2011/06/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	10.7	16.8	63.1	52.0	10.3

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



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 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
BM	2011/06/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	4.6	4.7	15.0	15.8	18.2
BM	2011/06/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.89	0.78	3.54	3.34	4.42
BM	2011/06/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02
BM	2011/06/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	0.5	0.8
BM	2011/06/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.11	3.28	4.38	5.71	4.01
BM	2011/06/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.6	1.4	2.7	2.7	3.2
BM	2011/06/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	15.2	15.0	52.1	53.1	63.7

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
BM	2011/06/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/06/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
BM	2011/06/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/06/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/06/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
BM	2011/06/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/06/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

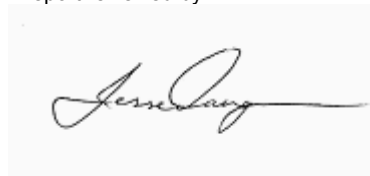
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6751	11-6751-D	11-6752	11-6753	11-6754
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-06-13 00:00	Lab Duplicate	2011-06-14 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
JO	2011/06/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	0.67	< 0.02	< 0.02
RC	2011/06/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.010	< 0.003	< 0.003
BM	2011/06/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.010	0.017	0.006	0.007
SM	2011/06/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.24	0.25	1.75	0.66	0.46

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
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 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6755	11-6756	11-6757	11-6758	11-6759
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-14 00:00
					MDL					
JO	2011/06/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.02
RC	2011/06/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/06/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.007	0.008	0.011	0.009	0.008
SM	2011/06/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.31	0.30	0.75	0.51	0.42

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Report reviewed by:



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ANALYTICAL REPORT

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Date Received: 2011/06/15
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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

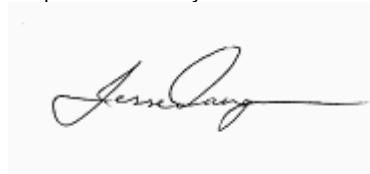
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6760	11-6761	11-6762	11-6763	11-6764
					Client ID:	WQ11	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00	2011-06-13 00:00
					MDL					
JO	2011/06/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	0.02	< 0.02	< 0.02	0.02
RC	2011/06/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.005	< 0.003	< 0.003
BM	2011/06/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.007	0.009	0.008	0.011
SM	2011/06/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.32	0.33	0.58	0.59	1.03

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
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 Burnaby, BC V5C 0E4

Date Received: 2011/06/15
Report Date: 2011/06/30

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

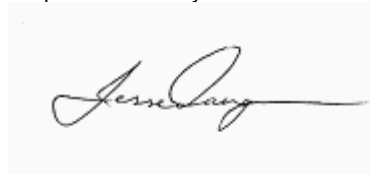
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-6765	11-6766
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-06-13 00:00	N/P
					MDL		
JO	2011/06/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	0.02
RC	2011/06/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
BM	2011/06/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
SM	2011/06/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/06/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK/F-40
BM	2011/06/20	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	36.3	33.1-42.6	37.90	DMD-TOC-80-Mid
BM	2011/06/20	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.6	33.1-42.6	37.90	DMD-TOC-80-Mid
RC	2011/06/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.50	0.44-0.58	0.50	QC-ALK/F-40
RC	2011/06/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.68	1.44-1.76	1.60	CC-Anion-111B
RC	2011/06/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.646	0.54-0.66	0.60	CC-Anion-111B
RC	2011/06/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.5	25.2-30.8	28.00	CC-Anion-111B
SM	2011/06/15	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	676	552-934	743.00	QCP-C2-SLD02006
JO	2011/06/15	Turbidity	NTU	APHA 2130-b	0.1	17	14.53-19.49	17.01	D2-TURB01052
RC	2011/06/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.0	3.6-4.4	4.00	CC-Anion-111B
RC	2011/06/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.75	2.539-2.939	2.79	CC-EC-0.02M-35
JO	2011/06/15	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	27	22.2-31.7	27.00	QCP-C2-SLD02006

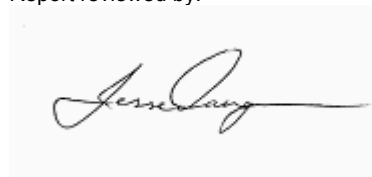
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
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Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/20	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	52.1	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/20	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	100	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/20	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.1	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	50.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	51.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	53.2	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/20	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	48.8	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/06/20	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.174	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/06/20	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.7	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	13.4	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/06/20	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/06/20	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	266	225-275	250.00	MS-CCV-HIGH
BM	2011/06/20	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	253	225-275	250.00	MS-CCV-HIGH
BM	2011/06/20	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	106	90-110	100.00	MS-CCV-HIGH
BM	2011/06/20	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.4	45.0-55.0	50.00	MS-CCV-HIGH

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MDL - Method Detection Limit

Note: Sample 11-6760 (WQ11) was re-analyzed and the mercury detection verified.

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/16	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/16	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/16	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	48.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	49.3	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.2	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	98.0	90.0-110	100.00	MS-CCV-HIGH
BM	2011/06/16	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	47.6	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/06/16	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/20	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.174	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/06/16	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.7	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/06/16	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	50.6	45-55	50.00	MS-CCV-HIGH
BM	2011/06/16	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	243	225-275	250.00	MS-CCV-HIGH
BM	2011/06/16	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	252	225-275	250.00	MS-CCV-HIGH
BM	2011/06/16	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	51.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	95.8	90-110	100.00	MS-CCV-HIGH
BM	2011/06/16	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/06/16	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/06/15	pH @ 25°C BC-D	---	APHA 4500H	0.01	5.95	5.94-6.06	6.00	CC-pH-154

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

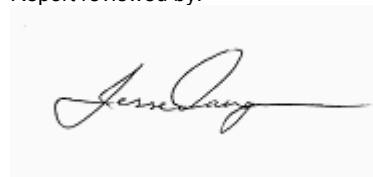
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	38.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	39.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	4.93	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/06/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	42.5	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/06/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.44	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/06/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	38.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

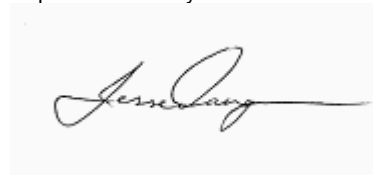
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/06/20	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	39.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/20	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/06/20	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.89	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/06/20	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	43.1	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/06/20	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.38	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/06/20	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	37.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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Charlene Rollheiser
Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/06/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61071

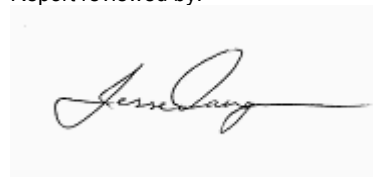
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/06/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.83	0.702-1.052	0.86	NH3SC-001
RC	2011/06/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.829	0.72-0.88	0.80	CC-Anion-111BL
BM	2011/06/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.81	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
SM	2011/06/16	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	11.2	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE MILLS
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 15-JUN-11
Report Date: 27-JUN-11 12:39 (MT)
Version: FINAL

Client Phone: 780-989-4580

Certificate of Analysis

Lab Work Order #: L1018027
Project P.O. #: 244369
Job Reference: EC-61071
Legal Site Desc:
C of C Numbers:

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1018027-1 WQ1 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208205
L1018027-2 WQ3 Sampled By: CLIENT on 14-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208205
L1018027-3 WQ4 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208205
L1018027-4 WQ5 Sampled By: CLIENT on 14-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208205
L1018027-5 WQ6 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208205
L1018027-6 WQ7 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208264
L1018027-7 WQ8 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208264
L1018027-8 WQ9 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-JUN-11 22-JUN-11	22-JUN-11 22-JUN-11	R2208166 R2208264
L1018027-9 WQ10 Sampled By: CLIENT on 14-JUN-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1018027-9 WQ10 Sampled By: CLIENT on 14-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208166
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-10 WQ11 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-11 WQ12 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-12 WQ13 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-13 WQ14 Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-14 FIELD DUP Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	22-JUN-11	22-JUN-11	R2208264
L1018027-15 FIELD BLANK Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	20-JUN-11	20-JUN-11	R2206863
L1018027-16 TRIP BLANK Sampled By: CLIENT on 13-JUN-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-JUN-11	25-JUN-11	R2209740
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	20-JUN-11	20-JUN-11	R2206863

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1018027

Report Date: 27-JUN-11

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA		Water						
Batch R2208166								
WG1300193-2	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			100		%		80-120	22-JUN-11
WG1300193-3	DUP	L1018027-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-JUN-11
WG1300193-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	22-JUN-11
Batch R2209740								
WG1302285-2	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			91		%		80-120	25-JUN-11
WG1302285-3	DUP	L1018027-16						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-JUN-11
WG1302285-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-JUN-11
CN-WAD-MID-COL-VA		Water						
Batch R2206863								
WG1298964-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			111		%		80-120	20-JUN-11
WG1298964-5	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			120		%		80-120	20-JUN-11
WG1298964-3	DUP	L1016836-6						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-JUN-11
WG1298964-6	DUP	L1017520-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-JUN-11
WG1298964-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	20-JUN-11
WG1298964-4	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	20-JUN-11
Batch R2208205								
WG1300361-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			93		%		80-120	22-JUN-11
WG1300361-3	DUP	L1018027-2						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-JUN-11
WG1300361-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	22-JUN-11
Batch R2208264								
WG1300503-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			95		%		80-120	22-JUN-11
WG1300503-4	CRM	VA-WAD-CONTROL						



Quality Control Report

Workorder: L1018027

Report Date: 27-JUN-11

Page 2 of 3

Client: AMEC EARTH & ENVIRONMENTAL
 5667 - 70 STREET
 EDMONTON AB T6B 3P6

Contact: KRISTINE MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-MID-COL-VA								
	Water							
Batch	R2208264							
WG1300503-4	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			89		%		80-120	22-JUN-11
WG1300503-3	DUP	L1018027-6						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-JUN-11
WG1300503-5	DUP	L1018932-3						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-JUN-11
WG1300503-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	22-JUN-11

Quality Control Report

Workorder: L1018027

Report Date: 27-JUN-11

Page 3 of 3

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

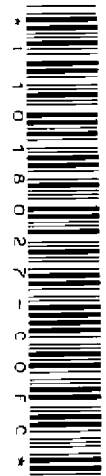
All test results reported with this submission were conducted within ALS recommended hold times.

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.

FileNbr	SampleName	LabNbr	DateSampled	Description
EC-61071	WQ1	11-6751-	2011/06/13	Water
EC-61071	WQ3	11-6752-	2011/06/14	Water
EC-61071	WQ4	11-6753-	2011/06/13	Water
EC-61071	WQ5	11-6754-	2011/06/14	Water
EC-61071	WQ6	11-6755-	2011/06/13	Water
EC-61071	WQ7	11-6756-	2011/06/13	Water
EC-61071	WQ8	11-6757-	2011/06/13	Water
EC-61071	WQ9	11-6758-	2011/06/13	Water
EC-61071	WQ10	11-6759-	2011/06/14	Water
EC-61071	WQ11	11-6760-	2011/06/13	Water
EC-61071	WQ12	11-6761-	2011/06/13	Water
EC-61071	WQ13	11-6762-	2011/06/13	Water
EC-61071	WQ14	11-6763-	2011/06/13	Water
EC-61071	Field Dup	11-6764-	2011/06/13	Water
EC-61071	Field Blank	11-6765-	2011/06/13	Water
EC-61071	Trip Blank	11-6766-		Water



BON DE COMMANDE
PURCHASE ORDER

A TO **ALS**
 ADRESSE ADDRESS
 EXPÉDIER À SHIP TO **AMEC**
 ADRESSE ADDRESS



244369

CE NUMÉRO DOIT APPARAÎTRE SUR TOUT COLIS, FACTURE, ETC.
 THIS NUMBER MUST APPEAR ON ALL INVOICES, PACKAGES, ETC.

N° DEM. OU SERV. REQ. NO. OR DEPT. **2220**
 DATE **June 15**
 POUR FOR **EC-61071**

QUANTITÉ QUANTITY	DESCRIPTION	PRIX PRICE	UNITÉ UNIT	MONTANT AMOUNT
1	16			
2				
3	Cyanide (Wad & Total)			
4	(see attached)			
5	Note: please analyze CN-F &			
6				
7	CN-WAD using H ₂ SO ₄			
8				
9	method			
10				

DATE REQUISE - DATE REQUIRED **June 22/11** VIA
 VÉUILLEZ ENVOYER PLEASE SEND COPIE(S) DE VOTRE FACTURE COPY(IES) OF YOUR INVOICE.
 CONDITIONS TERMS **Please list both IP on results** ACHETEUR - PURCHASING AGENT **JC**

VÉUILLEZ NOUS AVISER IMMÉDIATEMENT S'IL EST IMPOSSIBLE D'EXPÉDIER LA COMMANDE COMPLETE À LA DATE SPÉCIFIÉE.
 PLEASE NOTIFY US IMMEDIATELY IF YOU ARE UNABLE TO SHIP COMPLETE ORDER BY DATE SPECIFIED.

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
RC	2011/07/20	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	6	29	12	12	12
RC	2011/07/20	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.06	0.06	0.05	0.04
RC	2011/07/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.014	0.018	0.009	0.009	< 0.005
RC	2011/07/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/07/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.7	1.0	3.3	< 0.5	0.9
JO	2011/07/25	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	76	72	40	60	64
JO	2011/07/22	Turbidity	NTU	APHA 2130-b	0.1	0.6	1.0	0.5	0.4	0.9
RC	2011/07/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.4	0.2	0.3	0.4
RC	2011/07/20	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.025	0.062	0.039	0.033	0.032
JO	2011/07/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	< 2	< 2	< 2

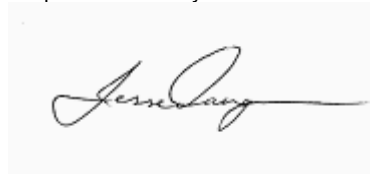
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
RC	2011/07/20	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	27	61	50	13	14
RC	2011/07/20	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.07	0.06	0.04	0.05
RC	2011/07/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	0.010	0.005
RC	2011/07/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/07/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.7	3.4	3.1	0.8	< 0.5
JO	2011/07/25	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	96	96	96	60	84
JO	2011/07/22	Turbidity	NTU	APHA 2130-b	0.1	2.2	1.3	0.6	0.5	1.1
RC	2011/07/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.5	0.5	0.3	0.3
RC	2011/07/20	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.056	0.132	0.108	0.034	0.037
JO	2011/07/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	9	23	5	< 2	< 2

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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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 Laboratory Services



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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
RC	2011/07/20	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	15	15	50	62	61
RC	2011/07/20	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.04	0.06	0.07	0.07
RC	2011/07/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/07/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/07/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.5	0.5	2.9	1.5	1.7
JO	2011/07/25	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	52	---	108	128	104
JO	2011/07/22	Turbidity	NTU	APHA 2130-b	0.1	0.8	---	1.5	1.9	1.3
RC	2011/07/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.4	0.4	0.5
RC	2011/07/20	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.036	0.035	0.110	0.126	0.126
JO	2011/07/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	4	29	3

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2011/07/20	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1
RC	2011/07/20	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02	0.03
RC	2011/07/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
RC	2011/07/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2011/07/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	< 0.5	< 0.5
JO	2011/07/25	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4
JO	2011/07/22	Turbidity	NTU	APHA 2130-b	0.1	< 0.1	< 0.1
RC	2011/07/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2
RC	2011/07/20	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.002	0.002
JO	2011/07/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2

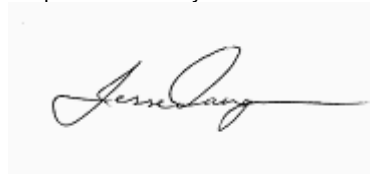
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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
MDL										
BM	2011/07/25	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.232	0.104	0.175	0.189	0.161
BM	2011/07/25	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00006	0.00014	< 0.00005	0.00006
BM	2011/07/25	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0007	0.0013	0.0005	0.0008
BM	2011/07/25	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00293	0.00460	0.00260	0.00365	0.00599
BM	2011/07/25	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/25	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000040	< 0.000015	< 0.000015
BM	2011/07/25	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0007	< 0.0003	< 0.0003	< 0.0003
BM	2011/07/25	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	< 0.00002	0.00003	< 0.00002
BM	2011/07/25	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0086	0.0004	0.0006	0.0005	0.0005
BM	2011/07/25	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.110	0.147	0.0811	0.142	0.112
BM	2011/07/25	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00035	< 0.00005	< 0.00005	0.00006	< 0.00005
BM	2011/07/25	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/25	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00525	0.00560	0.00498	0.00595	0.00635
BM	2011/07/27	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/07/25	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00037	< 0.00005	0.00010	0.00035
BM	2011/07/25	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00035	0.00014	0.00027	0.00026	0.00033
BM	2011/07/25	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/25	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0182	0.0530	0.0315	0.0286	0.0347
BM	2011/07/25	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0019	0.0023	0.0020	0.0020	0.0019
BM	2011/07/25	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00012	< 0.00005	0.00008	0.00026
BM	2011/07/25	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0012	0.0002	0.0004	0.0003
BM	2011/07/25	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0055	0.0013	0.0400	0.0013	0.0017
BM	2011/07/25	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/25	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.266	0.090	0.087	0.214	0.533
BM	2011/07/25	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	< 0.00005
BM	2011/07/25	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0005	0.0007	0.0005	0.0002
BM	2011/07/25	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00767	0.00770	0.00838	0.00572	0.00762
BM	2011/07/25	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.001	< 0.001	0.001
BM	2011/07/25	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/07/25	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0005	< 0.0003	< 0.0003	0.0003	0.0005
BM	2011/07/25	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00009	0.00005	0.00005	0.00003	0.00005
BM	2011/07/25	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0004	0.0006	0.0006	0.0009
BM	2011/07/25	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.284	0.170	0.213	0.132	0.237
BM	2011/07/25	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00006	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/25	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0169	0.0159	0.0204	0.00598	0.00455
BM	2011/07/27	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	0.000014
BM	2011/07/25	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00029	0.00050	0.00058	0.00022	0.00008
BM	2011/07/25	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00041	0.00028	0.00033	0.00026	0.00029
BM	2011/07/25	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/25	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0505	0.0915	0.0815	0.0347	0.0396
BM	2011/07/25	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0073	0.0039	0.0029	0.0026	0.0055
BM	2011/07/25	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00016	0.00009	0.00010	0.00017	0.00021
BM	2011/07/25	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0009	0.0006	0.0007	0.0004	0.0007
BM	2011/07/25	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0038	0.0012	0.0010	0.0019	0.0015
BM	2011/07/25	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/25	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.166	0.167	0.081	0.742	0.064
BM	2011/07/25	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0006	0.0011	0.0005
BM	2011/07/25	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00674	0.00654	0.00862	0.0235	0.0113
BM	2011/07/25	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	0.002	0.002
BM	2011/07/25	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	0.000018	< 0.000015
BM	2011/07/25	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	0.0012	< 0.0003
BM	2011/07/25	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00000	0.00002	0.00004	0.00027	0.00003
BM	2011/07/25	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0025	0.0026	0.0006	0.0017	0.0005
BM	2011/07/25	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.136	0.136	0.212	1.80	0.318
BM	2011/07/25	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00014	0.00012	< 0.00005	0.00019	< 0.00005
BM	2011/07/25	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/25	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00905	0.00895	0.0209	0.155	0.0192
BM	2011/07/27	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/07/25	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00037	0.00033	0.00053	0.00058	0.00049
BM	2011/07/25	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00011	0.00014	0.00032	0.00110	0.00028
BM	2011/07/25	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/25	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0420	0.0421	0.0834	0.106	0.100
BM	2011/07/25	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0027	0.0028	0.0030	0.0168	0.0018
BM	2011/07/25	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00023	0.00023	0.00009	0.00017	0.00007
BM	2011/07/25	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0003	0.0006	0.0024	0.0005
BM	2011/07/25	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0022	0.0048	0.0011	0.0023	< 0.0005
BM	2011/07/25	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/07/25	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002
BM	2011/07/25	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.005	0.005
BM	2011/07/25	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/07/25	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/07/25	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/07/25	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/07/25	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/27	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/07/25	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/07/25	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/07/25	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/07/25	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/25	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/25	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
BM	2011/07/25	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
MDL										
BM	2011/07/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.203	0.062	0.123	0.155	0.112
BM	2011/07/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00006	0.00014	< 0.00005	0.00006
BM	2011/07/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0006	0.0013	0.0004	0.0006
BM	2011/07/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00275	0.00398	0.00223	0.00307	0.00498
BM	2011/07/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	0.000040	< 0.000015	< 0.000015
BM	2011/07/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	0.0005	< 0.0003	< 0.0003	< 0.0003
BM	2011/07/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	< 0.00002	0.00004	0.00002
BM	2011/07/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0005	0.0005	0.0005
BM	2011/07/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0883	0.0879	0.0524	0.114	0.0694
BM	2011/07/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005
BM	2011/07/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00321	0.00302	0.00160	0.00387	0.00299
BM	2011/07/27	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/07/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00034	< 0.00005	0.00009	0.00029
BM	2011/07/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00035	0.00014	0.00027	0.00026	0.00033
BM	2011/07/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0177	0.0510	0.0291	0.0265	0.0309
BM	2011/07/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0013	0.0012	0.0013	0.0012	0.0011
BM	2011/07/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00011	< 0.00005	0.00008	0.00022
BM	2011/07/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00021	0.00099	0.00009	0.00028	0.00014
BM	2011/07/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0044	0.0013	0.0400	0.0013	0.0017
RC	2011/07/20	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.49	7.34	6.94	7.08	7.11

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.099	0.010	0.029	0.151	0.437
BM	2011/07/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	< 0.00005
BM	2011/07/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0005	0.0006	0.0004	0.0002
BM	2011/07/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00565	0.00585	0.00754	0.00487	0.00642
BM	2011/07/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	0.001	< 0.001	0.001
BM	2011/07/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/07/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.0004
BM	2011/07/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00002	0.00004	0.00003	0.00005
BM	2011/07/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0004	0.0006	0.0005	0.0009
BM	2011/07/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.108	0.0373	0.120	0.0817	0.182
BM	2011/07/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00901	0.00637	0.0133	0.00245	0.00250
BM	2011/07/27	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	0.000012
BM	2011/07/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00027	0.00045	0.00055	0.00019	0.00008
BM	2011/07/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00041	0.00028	0.00033	0.00026	0.00029
BM	2011/07/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0477	0.0844	0.0810	0.0320	0.0390
BM	2011/07/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0010	0.0003	0.0007	0.0014	0.0048
BM	2011/07/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00015	0.00008	0.00010	0.00017	0.00021
BM	2011/07/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00044	0.00026	0.00039	0.00024	0.00056
BM	2011/07/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0038	0.0012	0.0010	0.0019	0.0015
RC	2011/07/20	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.41	7.81	7.67	7.19	7.09

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

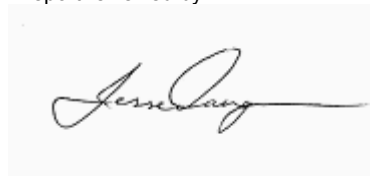
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.120	0.118	0.026	0.016	0.015
BM	2011/07/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	< 0.00005
BM	2011/07/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	0.0002	0.0006	0.0004	0.0004
BM	2011/07/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00589	0.00574	0.00719	0.00964	0.00966
BM	2011/07/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	0.002	0.002
BM	2011/07/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/07/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/07/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00003	0.00003	0.00002
BM	2011/07/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0005	0.0004	0.0004
BM	2011/07/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0882	0.0886	0.121	0.160	0.156
BM	2011/07/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/07/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00344	0.00344	0.0138	0.00780	0.00777
BM	2011/07/27	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/07/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00032	0.00029	0.00052	0.00047	0.00049
BM	2011/07/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00014	0.00032	0.00030	0.00028
BM	2011/07/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/07/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0404	0.0399	0.0780	0.0931	0.0933
BM	2011/07/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0012	0.0013	0.0006	0.0005	0.0005
BM	2011/07/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00023	0.00022	0.00009	0.00006	0.00007
BM	2011/07/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00017	0.00036	0.00022	0.00022
BM	2011/07/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0022	0.0048	0.0011	0.0013	< 0.0005
RC	2011/07/20	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.18	7.19	7.69	7.75	7.73

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/07/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
BM	2011/07/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.005	0.005
BM	2011/07/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/07/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/07/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/07/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/07/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	< 0.00005
BM	2011/07/27	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/07/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00006	< 0.00005
BM	2011/07/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/07/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/07/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/07/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/07/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/07/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0014	0.0012
RC	2011/07/20	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.91	5.83

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.0	7.5	5.1	3.9	4.1
BM	2011/07/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	1.67	0.78	0.97	0.62
BM	2011/07/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01
BM	2011/07/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/07/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.52	6.26	4.46	4.42	4.60
BM	2011/07/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.4	2.4	1.4	1.8	1.6
BM	2011/07/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	6.4	25.5	15.9	13.7	12.7

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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 Laboratory Services



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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

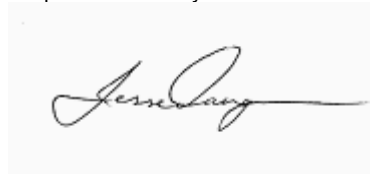
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	7.4	17.3	15.4	4.3	5.5
BM	2011/07/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	1.64	4.02	3.18	0.77	1.01
BM	2011/07/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/07/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.7	0.6	< 0.5	< 0.5
BM	2011/07/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.10	3.45	4.26	4.57	5.57
BM	2011/07/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.1	3.0	2.6	1.6	1.9
BM	2011/07/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	25.2	59.7	51.4	13.9	18.0

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

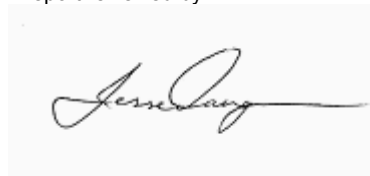
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	5.0	5.0	14.9	18.1	18.1
BM	2011/07/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.77	0.76	3.21	3.45	3.44
BM	2011/07/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/07/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5
BM	2011/07/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.48	3.55	4.45	5.91	5.90
BM	2011/07/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.5	1.5	2.6	2.8	2.8
BM	2011/07/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	15.7	15.6	50.3	59.3	59.4

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



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 Manager
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 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

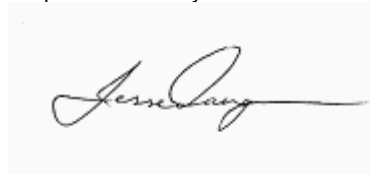
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/07/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/07/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
BM	2011/07/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/07/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/07/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/07/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/07/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

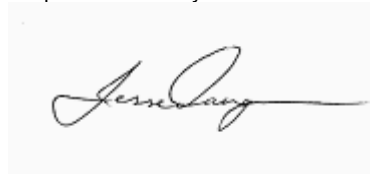
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/25	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.0	7.8	5.4	4.0	4.4
BM	2011/07/25	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	1.67	0.85	1.01	0.66
BM	2011/07/25	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.02	< 0.02	< 0.02	< 0.02
BM	2011/07/25	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/07/25	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.20	7.73	5.56	5.30	5.49
BM	2011/07/25	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.5	2.5	1.5	1.9	1.7
BM	2011/07/25	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	6.5	26.3	16.9	14.2	13.8

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/25	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	7.8	18.2	15.4	4.5	5.7
BM	2011/07/25	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.72	4.36	3.38	0.84	1.06
BM	2011/07/25	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
BM	2011/07/25	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.8	0.7	< 0.5	< 0.5
BM	2011/07/25	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.25	4.19	5.15	5.35	6.60
BM	2011/07/25	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.3	3.2	2.7	1.8	1.9
BM	2011/07/25	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	26.6	63.3	52.4	14.8	18.5

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
BM	2011/07/25	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	5.3	5.3	15.7	20.2	19.2
BM	2011/07/25	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.82	0.82	3.48	3.89	3.76
BM	2011/07/25	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	0.07	< 0.02
BM	2011/07/25	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	0.5	< 0.5
BM	2011/07/25	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	3.93	3.65	5.38	8.27	7.10
BM	2011/07/25	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.6	1.6	2.8	3.1	3.1
BM	2011/07/25	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	16.5	16.5	53.5	66.5	63.5

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

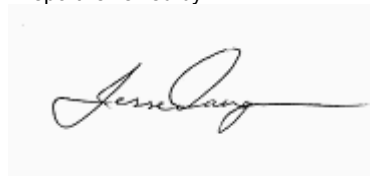
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
BM	2011/07/25	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/07/25	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
BM	2011/07/25	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/07/25	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/07/25	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
BM	2011/07/25	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/07/25	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/07/20
Report Date: 2011/08/04

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

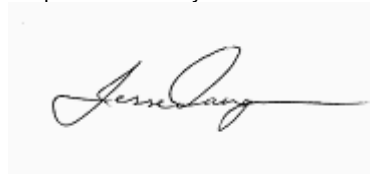
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9188	11-9189	11-9190	11-9191	11-9192
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
JL	2011/07/26	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.02	0.02	0.03	0.02	0.03
BM	2011/07/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.4	7.3	9.9	11.3	8.1
BM	2011/07/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.4	7.4	9.9	11.4	8.1
RC	2011/07/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.005	0.011	< 0.003	< 0.003	0.004
BM	2011/07/25	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.005	0.020	0.003	0.005	0.005
JO	2011/07/25	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.10	< 0.08	< 0.08	< 0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
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Date Received: 2011/07/20
Report Date: 2011/08/04

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9193	11-9194	11-9195	11-9196	11-9197
					Client ID:	WQ7	WQ8	WQ9	WQ10	WQ11
					Sample Date:	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00	2011-07-19 00:00	2011-07-18 00:00
					MDL					
JL	2011/07/26	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.02	0.04	0.02	< 0.02	0.02
BM	2011/07/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.9	9.1	10.7	9.7	19.2
BM	2011/07/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.9	9.6	10.7	10.0	19.2
RC	2011/07/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/07/25	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.007	0.008	0.005	0.007
JO	2011/07/25	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.08	< 0.08	0.15	< 0.08	0.09

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Report reviewed by:



Jesse Dang, B.Sc.
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 Laboratory Services



Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Earth & Environmental
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Date Received: 2011/07/20
Report Date: 2011/08/04

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

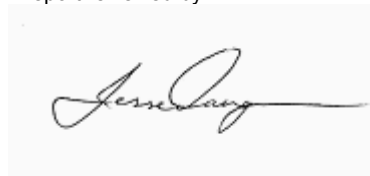
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9198	11-9198-D	11-9199	11-9200	11-9201
					Client ID:	WQ12	WQ12	WQ13	WQ14	Field Dup
					Sample Date:	2011-07-18 00:00	Lab Duplicate	2011-07-18 00:00	2011-07-18 00:00	2011-07-18 00:00
					MDL					
JL	2011/07/26	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.02	---	0.03	0.02	< 0.02
BM	2011/07/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.0	10.2	10.7	12.3	13.6
BM	2011/07/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.4	10.3	10.9	12.6	13.6
RC	2011/07/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/07/25	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.004	0.004	0.008	0.008	0.009
JO	2011/07/25	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	---	< 0.08	< 0.08	0.12

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Report reviewed by:



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Date Received: 2011/07/20
Report Date: 2011/08/04

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

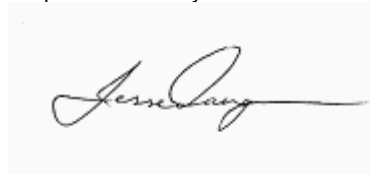
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-9202	11-9203
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
JL	2011/07/26	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G		0.02	0.04
BM	2011/07/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B		0.1	0.2
BM	2011/07/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B		0.1	0.2
RC	2011/07/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110		0.003	< 0.003
BM	2011/07/25	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B		0.001	< 0.001
JO	2011/07/25	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d		0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/07/20	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	59	56-77	65.00	QC-ALK/F-41
RC	2011/07/20	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-41
RC	2011/07/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.75	1.44-1.76	1.60	CC-Anion-111B
RC	2011/07/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.651	0.54-0.66	0.60	CC-Anion-111B
RC	2011/07/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	28.2	25.2-30.8	28.00	CC-Anion-111B
JO	2011/07/25	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	692	552-934	743.00	QCP-C2-SLD02006
JO	2011/07/22	Turbidity	NTU	APHA 2130-b	0.1	18	14.53-19.49	17.01	D2-TURB01052
RC	2011/07/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.3	3.6-4.4	4.00	CC-Anion-111B
RC	2011/07/20	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.74	2.539-2.939	2.79	CC-EC-0.02M-36
JO	2011/07/20	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	30	22.2-31.7	27.00	QCP-C2-SLD02006

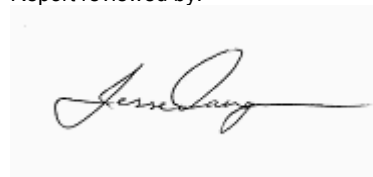
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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/07/25	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	52.9	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	98.7	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/25	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/25	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	51.6	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	53.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	53.3	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	52.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.6	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	52.7	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	97.9	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/25	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	52.1	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/07/25	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	52.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/27	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.179	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/07/25	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	53.6	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	13.1	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/07/25	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	52.1	45-55	50.00	MS-CCV-HIGH
BM	2011/07/25	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	245	225-275	250.00	MS-CCV-HIGH
BM	2011/07/25	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	258	225-275	250.00	MS-CCV-HIGH
BM	2011/07/25	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	97.3	90-110	100.00	MS-CCV-HIGH
BM	2011/07/25	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/25	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	52.0	45.0-55.0	50.00	MS-CCV-HIGH

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MDL - Method Detection Limit

Report reviewed by:



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ANALYTICAL REPORT

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Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/07/22	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/22	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/22	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	52.9	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	52.0	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.7	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
BM	2011/07/22	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	51.5	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/07/22	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/27	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.179	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/07/22	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	52.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	48.8	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.9	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/07/22	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	50.7	45-55	50.00	MS-CCV-HIGH
BM	2011/07/22	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	247	225-275	250.00	MS-CCV-HIGH
BM	2011/07/22	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	248	225-275	250.00	MS-CCV-HIGH
BM	2011/07/22	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
BM	2011/07/22	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/07/22	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/07/20	pH @ 25°C BC-D	---	APHA 4500H	0.01	5.97	5.94-6.06	6.00	CC-pH-156

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

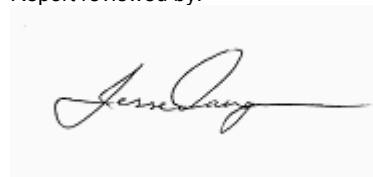
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/07/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	38.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/07/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	38.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/07/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.12	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/07/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	43.8	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/07/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.31	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/07/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	38.6	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

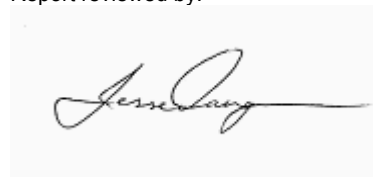
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/07/25	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	38.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/07/25	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/07/25	Phosphorus-T	mg/L (ppm)	APHA 3120 B	0.02	4.89	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/07/25	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	43.8	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/07/25	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.42	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/07/25	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	38.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/04

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61343

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JL	2011/07/26	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.83	0.702-1.052	0.86	NH3SC-001
BM	2011/07/25	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.8	33.1-42.6	37.90	DMD-TOC-80-Mid
BM	2011/07/25	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.7	33.1-42.6	37.90	DMD-TOC-80-Mid
RC	2011/07/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.856	0.72-0.88	0.80	CC-Anion-111BL
BM	2011/07/25	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.89	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/07/25	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	7.66	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: Bruce Ott
600 - 4445 Lougheed Hwy
Burnaby BC V5C 0E4

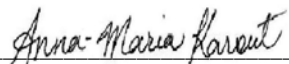
Date Received: 20-JUL-11
Report Date: 17-AUG-11 17:07 (MT)
Version: FINAL REV. 3

Client Phone: 604-473-5315

Certificate of Analysis

Lab Work Order #: L1033697
Project P.O. #: NOT SUBMITTED
Job Reference: VE52095
C of C Numbers:
Legal Site Desc:

Comments: Please see attached report from SGS Canada Inc. for Cyanate analysis.
Note the following samples have been re-analyzed and the data for Thiocyanate has been modified.
Samples: WQ6, WQ8, WQ TRIP BLANK and WQ DUPLICATE
17-AUG-11: Detection Limit has been modified.



Anna-Maria Karout
Account Manager

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1033697-1	L1033697-2	L1033697-3	L1033697-4	L1033697-5
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	18-JUL-11	19-JUL-11	18-JUL-11	19-JUL-11	18-JUL-11
		Sampled Time					
		Client ID	WQ1	WQ3	WQ4	WQ5	WQ6
Grouping	Analyte						
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)		0.62	<0.50	0.55	0.67	<0.50

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1033697-6	L1033697-7	L1033697-8	L1033697-9	L1033697-10
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	18-JUL-11	18-JUL-11	18-JUL-11	18-JUL-11	18-JUL-11
		Sampled Time					
		Client ID	WQ7	WQ8	WQ9	WQ11	WQ12
Grouping	Analyte						
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)		0.67	<0.50	0.62	1.22	0.65

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1033697-11	L1033697-12	L1033697-13	L1033697-14	L1033697-15
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date	18-JUL-11	18-JUL-11	18-JUL-11		
		Sampled Time					
		Client ID	WQ13	WQ14	WQ FIELD BLANK	WQ TRIP BLANK	WQ DUPLICATE
Grouping	Analyte						
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)	0.61	0.70	<0.50	<0.50	<0.50	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide and weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method. Cyanate is determined by the cyanate hydrolysis method using an ammonia selective electrode. Thiocyanate is determined by the ferric nitrate colourimetric method.

** 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

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: L1033697

Report Date: 17-AUG-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
 # 600 - 4445 Lougheed Hwy
 Burnaby BC V5C 0E4

Contact: Bruce Ott

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-SCN-VA		Water						
Batch R2222367								
WG1316649-2 CRM		VA-SCN-LOW-CONTROL						
Thiocyanate (SCN)			101		%		85-115	21-JUL-11
WG1316649-5 CRM		VA-SCN-HIGH-CONTROL						
Thiocyanate (SCN)			104		%		85-115	21-JUL-11
WG1316649-3 DUP		L1033697-13						
Thiocyanate (SCN)		<0.50	<0.50	RPD-NA	mg/L	N/A	20	21-JUL-11
WG1316649-6 DUP		L1033697-15						
Thiocyanate (SCN)		<0.50	9.16		mg/L	1.6	20	21-JUL-11
WG1316649-1 MB								
Thiocyanate (SCN)			<0.50		mg/L		0.5	21-JUL-11
WG1316649-4 MB								
Thiocyanate (SCN)			<0.50		mg/L		0.5	21-JUL-11
Batch R2224032								
WG1318488-2 CRM		VA-SCN-LOW-CONTROL						
Thiocyanate (SCN)			101		%		85-115	25-JUL-11
WG1318488-3 CRM		VA-SCN-HIGH-CONTROL						
Thiocyanate (SCN)			103		%		85-115	25-JUL-11
WG1318488-1 MB								
Thiocyanate (SCN)			<0.50		mg/L		0.5	25-JUL-11

Quality Control Report

Workorder: L1033697

Report Date: 17-AUG-11

Page 2 of 2

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
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.



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - KOL 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Wednesday, August 03, 2011

ALS Laboratory (Burnaby)

Attn : Selam Worku

8081 Lougheed Hwy, Suite 100
Burnaby, BC
V5A 1W9,

Phone: 604-253-4111
Fax:

Date Rec. : 22 July 2011
LR Report: CA11232-JUL11
Reference: Project: L1033697

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Cyanate mg/L
1: Analysis Start Date		---	26-Jul-11
2: Analysis Start Time		---	08:36
3: Analysis Approval Date		---	28-Jul-11
4: Analysis Approval Time		---	11:51
20: QC - Blank		---	< 0.1
21: QC - STD % Recovery		---	103%
22: QC - DUP % Recovery		---	100%
5: L1033697-1 WQ1	18-Jul-11	20.0	< 0.1
6: L1033697-2 WQ3	19-Jul-11	20.0	< 0.1
7: L1033697-3 WQ4	18-Jul-11	20.0	< 0.1
8: L1033697-4 WQ5	19-Jul-11	20.0	< 0.1
9: L1033697-5 WQ6	18-Jul-11	20.0	< 0.1
10: L1033697-6 WQ7	18-Jul-11	20.0	< 0.1
11: L1033697-7 WQ8	18-Jul-11	20.0	< 0.1
12: L1033697-8 WQ9	18-Jul-11	20.0	< 0.1
13: L1033697-9 WQ11	18-Jul-11	20.0	< 0.1
14: L1033697-10 WQ12	18-Jul-11	20.0	< 0.1
15: L1033697-11 WQ13	18-Jul-11	20.0	< 0.1
16: L1033697-12 WQ14	18-Jul-11	20.0	< 0.1
17: L1033697-13 WQ Field Blank	18-Jul-11	20.0	< 0.1
18: L1033697-14 WQ Trip Blank	18-Jul-11	20.0	< 0.1
19: L1033697-15 WQ Duplicate	18-Jul-11	20.0	< 0.1

Kimberley Didsbury
Project Specialist
Environmental Services, Analytical



AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE MILLS
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 20-JUL-11
Report Date: 02-AUG-11 16:55 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1033953
Project P.O. #: 244395
Job Reference: EC-61343
Legal Site Desc:
C of C Numbers:

Comments: ADDITIONAL 02-AUG-11 09:14

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1033953-1 WQ1~11-9188 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-2 WQ3~11-9189 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-3 WQ4~11-9190 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-4 WQ5~11-9191 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-5 WQ6~11-9192 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-6 WQ7~11-9193 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-7 WQ8~11-9194 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-8 WQ9~11-9195 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-9 WQ10~11-9196 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1033953-9 WQ10~11-9196 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0096 <0.0050		0.0096 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-10 WQ11~11-9197 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0066 <0.0050		0.0066 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-11 WQ12~11-9198 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0076 <0.0050		0.0076 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-12 WQ13~11-9199 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-13 WQ14~11-9200 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-14 FIELD DUP~11-9201 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0060 <0.0050		0.0060 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-15 FIELD BLANK~11-9202 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306
L1033953-16 TRIP BLANK~11-9203 Sampled By: CLIENT on 18-JUL-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	02-AUG-11 23-JUL-11	02-AUG-11 23-JUL-11	R2227932 R2223306

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L1033953

Report Date: 02-AUG-11

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA		Water						
Batch	R2227932							
WG1322765-2	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			119		%		80-120	02-AUG-11
WG1322765-5	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			111		%		80-120	02-AUG-11
WG1322765-3	DUP	L1033953-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	02-AUG-11
WG1322765-6	DUP	L1033953-7						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	02-AUG-11
WG1322765-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	02-AUG-11
WG1322765-4	MB							
Cyanide, Total			<0.0050		mg/L		0.005	02-AUG-11
CN-WAD-MID-COL-VA		Water						
Batch	R2223306							
WG1317808-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			109		%		80-120	23-JUL-11
WG1317808-5	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			107		%		80-120	23-JUL-11
WG1317808-3	DUP	L1033953-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	23-JUL-11
WG1317808-6	DUP	L1035091-4						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	23-JUL-11
WG1317808-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	23-JUL-11
WG1317808-4	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	23-JUL-11

Quality Control Report

Workorder: L1033953

Report Date: 02-AUG-11

Page 2 of 3

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1033953

Report Date: 02-AUG-11

Page 3 of 3

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Total Cyanide by H2SO4 Distillation							
	1	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	2	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	3	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	4	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	5	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	6	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	7	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	8	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	9	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	10	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	11	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	12	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	13	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	14	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	15	18-JUL-11	02-AUG-11 11:20	14	15	days	EHT
	16	18-JUL-11	02-AUG-11 11:20	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 L1033953 were received on 20-JUL-11 14:36.

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.

FileNbr	SampleName	LabNbr	DateSampled	Description
EC-61343	WQ01	11-9188-	2011/07/18	Water
EC-61343	WQ03	11-9189-	2011/07/19	Water
EC-61343	WQ04	11-9190-	2011/07/18	Water
EC-61343	WQ05	11-9191-	2011/07/19	Water
EC-61343	WQ06	11-9192-	2011/07/18	Water
EC-61343	WQ07	11-9193-	2011/07/18	Water
EC-61343	WQ08	11-9194-	2011/07/18	Water
EC-61343	WQ09	11-9195-	2011/07/18	Water
EC-61343	WQ10	11-9196-	2011/07/19	Water
EC-61343	WQ11	11-9197-	2011/07/18	Water
EC-61343	WQ12	11-9198-	2011/07/18	Water
EC-61343	WQ13	11-9199-	2011/07/18	Water
EC-61343	WQ14	11-9200-	2011/07/18	Water
EC-61343	Field Dup	11-9201-	2011/07/18	Water
EC-61343	Field Blank	11-9202-		Water
EC-61343	Trip Blank	11-9203-		Water

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
RC	2011/08/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	7	7	38	17	18
RC	2011/08/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02	0.02	0.05	0.04	0.03
RC	2011/08/18	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/08/18	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/08/18	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.7	0.7	0.8	2.4	< 0.5
JO	2011/08/17	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	16	12	40	28	28
RC	2011/08/17	Turbidity	NTU	APHA 2130-b	0.1	2.0	2.2	1.8	1.6	1.0
RC	2011/08/18	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	0.1	0.2	0.1	< 0.1
RC	2011/08/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.020	0.019	0.078	0.044	0.040
JO	2011/08/17	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	3	5	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
RC	2011/08/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	16	40	65	62	26
RC	2011/08/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.04	0.06	0.06	0.03
RC	2011/08/18	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	0.012	0.014	< 0.005
RC	2011/08/18	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/08/18	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.9	1.2	3.4	3.1	1.2
JO	2011/08/17	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	24	44	68	72	32
RC	2011/08/17	Turbidity	NTU	APHA 2130-b	0.1	1.2	1.9	1.4	1.6	1.0
RC	2011/08/18	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.1	0.3	0.3	0.2
RC	2011/08/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.037	0.079	0.135	0.128	0.055
JO	2011/08/17	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	6	2	2	2

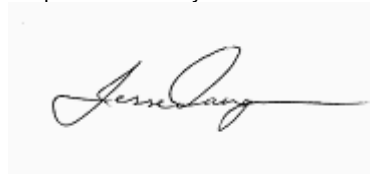
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
RC	2011/08/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	29	18	63	89	16
RC	2011/08/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.02	0.06	0.06	0.03
RC	2011/08/18	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.006	< 0.005	0.012	0.021	< 0.005
RC	2011/08/18	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/08/18	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.5	< 0.5	3.0	2.0	0.8
JO	2011/08/17	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	36	24	72	88	24
RC	2011/08/17	Turbidity	NTU	APHA 2130-b	0.1	1.4	1.3	1.5	3.0	0.9
RC	2011/08/18	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.1	0.2	0.3	0.2
RC	2011/08/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.060	0.042	0.130	0.175	0.038
JO	2011/08/17	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	2	4	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
RC	2011/08/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	---	< 1
RC	2011/08/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	---	< 0.02
RC	2011/08/18	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	---	< 0.005
RC	2011/08/18	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	---	< 0.003
		Sulphate-D	mg/L (ppm)	APHA 4110	0.5	---	< 0.5
JO	2011/08/17	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	---	< 4
RC	2011/08/17	Turbidity	NTU	APHA 2130-b	0.1	---	0.5
		Chloride-D	mg/L (ppm)	APHA 4110	0.1	---	< 0.1
		Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	---	0.001
JO	2011/08/17	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	---	< 2

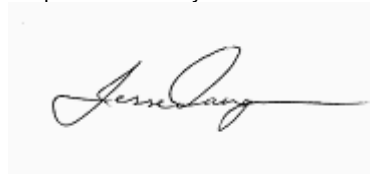
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	6.7	6.8	5.6	6.4	7.4
BM	2011/08/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	6.7	6.8	5.6	6.8	7.4

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

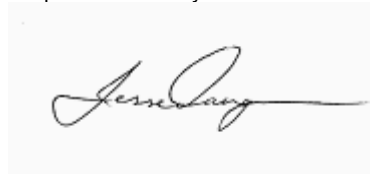
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.1	5.8	9.3	8.8	5.8
BM	2011/08/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.9	5.8	9.3	9.1	5.8

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

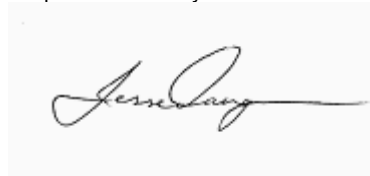
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
BM	2011/08/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	12.5	7.3	8.9	8.3	5.1
BM	2011/08/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	12.5	7.3	9.8	8.3	5.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
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Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

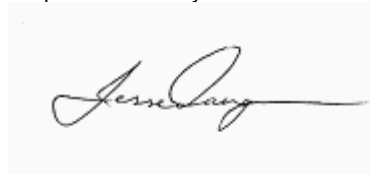
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
BM	2011/08/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	< 0.1
BM	2011/08/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

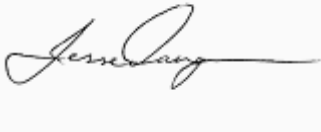
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.177	0.173	0.123	0.313	0.087
BM	2011/08/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00010	< 0.00005
BM	2011/08/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0006	0.0010	0.0020	0.0004
BM	2011/08/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00287	0.00273	0.00529	0.00376	0.00331
BM	2011/08/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001
BM	2011/08/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	0.0004	< 0.0003	< 0.0003
BM	2011/08/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	0.00007	0.00008	0.00003
BM	2011/08/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0003	0.0002	0.0004	0.0004
BM	2011/08/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.143	0.140	0.235	0.205	0.132
BM	2011/08/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00008	0.00005	0.00025	< 0.00005
BM	2011/08/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0102	0.0101	0.0152	0.0330	0.00563
BM	2011/08/22	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00016	0.00015	0.00054	0.00010	0.00019
BM	2011/08/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00019	0.00020	0.00016	0.00034	0.00014
BM	2011/08/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0193	0.0191	0.0693	0.0367	0.0355
BM	2011/08/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0022	0.0018	0.0037	0.0059	0.0013
BM	2011/08/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00011	0.00012	0.00018	0.00008	0.00006
BM	2011/08/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0015	0.0003	0.0003
BM	2011/08/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0024	0.0024	0.0009	0.0404	0.0009
BM	2011/08/19	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.070	0.121	0.010	0.031	0.165
BM	2011/08/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0008	0.0006	0.0005	0.0006	0.0004
BM	2011/08/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00501	0.00707	0.00577	0.00678	0.00594
BM	2011/08/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	0.002	< 0.001
BM	2011/08/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/08/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00006	0.00002	0.00004	0.00003
BM	2011/08/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0004	0.0009	0.0004	0.0004
BM	2011/08/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.108	0.227	0.0416	0.161	0.0960
BM	2011/08/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00769	0.0190	0.00578	0.0201	0.00619
BM	2011/08/22	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00043	0.00054	0.00054	0.00061	0.00043
BM	2011/08/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00028	0.00028	0.00029	0.00016
BM	2011/08/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0388	0.0695	0.0924	0.0918	0.0535
BM	2011/08/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0013	0.0023	0.0004	0.0012	0.0019
BM	2011/08/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00015	0.00012	0.00009	0.00009	0.00015
BM	2011/08/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0001	0.0006	0.0003	0.0004	0.0003
BM	2011/08/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0010	0.0007	0.0035	0.0008	0.0061
BM	2011/08/19	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
BM	2011/08/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.548	0.146	0.044	0.049	0.070
BM	2011/08/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0006	0.0005	0.0008
BM	2011/08/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00765	0.00586	0.00719	0.0130	0.00510
BM	2011/08/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.002	0.002	0.003
BM	2011/08/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/19	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/08/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00005	0.00003	0.00004	0.00005	0.00003
BM	2011/08/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0003	0.0005	0.0002	0.0002
BM	2011/08/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.163	0.137	0.169	0.572	0.108
BM	2011/08/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00005
BM	2011/08/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00317	0.00849	0.0248	0.0445	0.00766
BM	2011/08/22	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00015	0.00046	0.00059	0.00060	0.00047
BM	2011/08/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00010	0.00027	0.00025	0.00017
BM	2011/08/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0587	0.0472	0.0918	0.130	0.0386
BM	2011/08/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0037	0.0021	0.0009	0.0016	0.0010
BM	2011/08/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00015	0.00020	0.00009	0.00015	0.00014
BM	2011/08/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0002	0.0003	0.0003	0.0001
BM	2011/08/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0013	0.0006	0.0039	0.0007	0.0016
BM	2011/08/19	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
BM	2011/08/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002
BM	2011/08/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.006
BM	2011/08/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/08/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/08/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/08/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/08/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/22	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/08/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/08/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/08/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/08/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
BM	2011/08/19	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011-08/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.128	0.129	0.032	0.059	0.075
BM	2011/08/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00010	< 0.00005
BM	2011/08/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0008	0.0011	0.0004
BM	2011/08/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00223	0.00223	0.00435	0.00191	0.00317
BM	2011/08/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0004	< 0.0003	< 0.0003
BM	2011/08/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00002	< 0.00002	0.00003
BM	2011/08/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0003	0.0002	0.0004	0.0004
BM	2011/08/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0845	0.0852	0.0665	0.0247	0.0974
BM	2011/08/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00613	0.00614	0.00391	0.00500	0.00462
BM	2011/08/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00012	0.00047	0.00006	0.00015
BM	2011/08/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00017	0.00008	0.00019	0.00014
BM	2011/08/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0183	0.0182	0.0652	0.0349	0.0342
BM	2011/08/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0010	0.0010	0.0007	0.0005	0.0009
BM	2011/08/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	0.00010	0.00012	< 0.00005	0.00006
BM	2011/08/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	0.00012	0.00107	< 0.00005	0.00022
BM	2011/08/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0024	0.0024	0.0009	0.0304	0.0009
RC	2011/08/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.78	6.85	7.64	7.32	7.36

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.048	0.027	0.008	0.010	0.057
BM	2011/08/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0007	0.0005	0.0004	0.0006	0.0004
BM	2011/08/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00465	0.00651	0.00566	0.00630	0.00554
BM	2011/08/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/08/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00002	0.00003	0.00002
BM	2011/08/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0004	0.0009	0.0004	0.0004
BM	2011/08/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0669	0.111	0.0245	0.0982	0.0473
BM	2011/08/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00542	0.0144	0.00333	0.0144	0.00275
BM	2011/08/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00039	0.00047	0.00048	0.00053	0.00042
BM	2011/08/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00019	0.00023	0.00025	0.00018
BM	2011/08/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0371	0.0662	0.0901	0.0870	0.0513
BM	2011/08/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0007	0.0005	< 0.0002	0.0003	0.0006
BM	2011/08/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00014	0.00011	0.00009	0.00009	0.00014
BM	2011/08/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00009	0.00040	0.00020	0.00030	0.00021
BM	2011/08/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0010	0.0007	0.0035	0.0008	0.0061
RC	2011/08/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.32	7.66	7.93	7.92	7.53

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
BM	2011/08/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.204	0.062	0.009	0.005	0.046
BM	2011/08/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0001	0.0002	0.0006	0.0004	0.0007
BM	2011/08/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00694	0.00520	0.00668	0.0118	0.00461
BM	2011/08/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/08/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/08/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00003	0.00003	0.00003	0.00002
BM	2011/08/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0003	0.0005	0.0002	0.0002
BM	2011/08/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0907	0.0795	0.109	0.289	0.0652
BM	2011/08/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/08/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00163	0.00607	0.0186	0.0187	0.00534
BM	2011/08/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/08/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00042	0.00054	0.00058	0.00042
BM	2011/08/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00018	0.00007	0.00026	0.00022	0.00015
BM	2011/08/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/08/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0561	0.0448	0.0903	0.127	0.0378
BM	2011/08/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0026	0.0010	0.0003	0.0003	0.0005
BM	2011/08/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00014	0.00020	0.00009	0.00015	0.00013
BM	2011/08/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00036	0.00012	0.00028	0.00014	0.00008
BM	2011/08/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0013	0.0006	0.0039	0.0007	0.0006
RC	2011/08/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.49	7.41	7.88	8.01	7.31

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
BM	2011/08/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
BM	2011/08/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.004	0.004
BM	2011/08/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/08/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/08/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/08/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/08/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/08/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/08/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	0.000006
BM	2011/08/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/08/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/08/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/08/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005
RC	2011/08/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	---	5.58

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

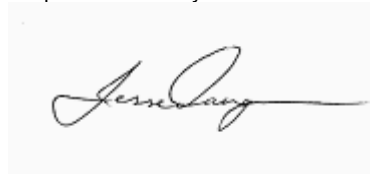
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.0	2.0	9.3	6.0	4.5
BM	2011/08/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	2.27	0.98	1.33
BM	2011/08/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
BM	2011/08/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/08/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.02	5.27	7.57	5.28	4.98
BM	2011/08/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.7	1.7	3.0	1.6	2.1
BM	2011/08/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	6.6	6.6	32.5	19.0	16.8

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	4.5	9.8	17.8	16.7	6.7
BM	2011/08/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.77	2.34	4.33	3.99	1.42
BM	2011/08/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/08/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	0.7	< 0.5
BM	2011/08/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.20	6.02	3.38	4.06	5.55
BM	2011/08/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.9	2.7	3.2	3.0	2.3
BM	2011/08/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	14.4	34.1	62.2	58.0	22.6

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
BM	2011/08/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	8.1	5.5	17.0	24.7	4.5
BM	2011/08/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	1.67	0.94	4.04	5.02	0.77
BM	2011/08/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/08/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	0.5	< 0.5
BM	2011/08/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.17	3.73	4.07	6.23	5.14
BM	2011/08/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.3	1.7	3.0	3.6	1.9
BM	2011/08/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	27.1	17.5	59.2	82.4	14.4

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ANALYTICAL REPORT

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 Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

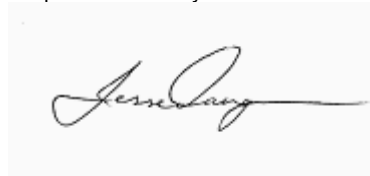
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
BM	2011/08/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/08/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
BM	2011/08/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/08/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/08/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/08/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/08/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.2	2.2	10.4	6.5	5.0
BM	2011/08/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50	2.45	1.06	1.39
BM	2011/08/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.04	< 0.02	< 0.02
BM	2011/08/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/08/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.47	5.43	7.83	5.50	5.11
BM	2011/08/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.8	1.8	3.2	1.7	2.2
BM	2011/08/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	7.3	7.2	36.2	20.6	18.2

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ANALYTICAL REPORT

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Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

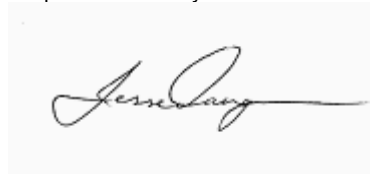
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
BM	2011/08/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	5.1	10.8	19.5	18.5	7.5
BM	2011/08/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.80	2.49	4.62	4.19	1.43
BM	2011/08/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/08/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.8	0.7	< 0.5
BM	2011/08/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.20	6.02	3.38	4.06	5.55
BM	2011/08/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.0	2.8	3.3	3.1	2.3
BM	2011/08/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	15.9	37.3	67.7	63.5	24.5

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ANALYTICAL REPORT

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Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

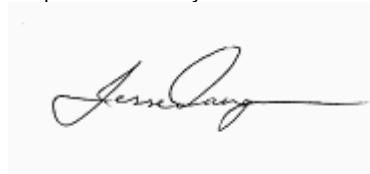
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
BM	2011/08/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	9.1	6.0	18.0	25.6	4.8
BM	2011/08/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.78	0.99	4.15	5.21	0.80
BM	2011/08/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/08/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	0.6	< 0.5
BM	2011/08/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.40	3.73	4.13	6.64	5.32
BM	2011/08/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.4	1.8	3.1	3.7	2.0
BM	2011/08/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	30.0	19.1	61.9	85.3	15.2

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Date Received: 2011/08/17
Report Date: 2011/08/30

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

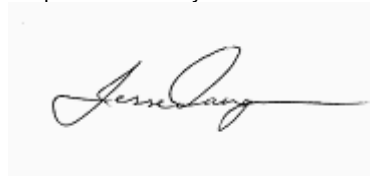
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
BM	2011/08/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/08/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
BM	2011/08/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/08/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/08/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
BM	2011/08/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/08/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

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 Laboratory Services



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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

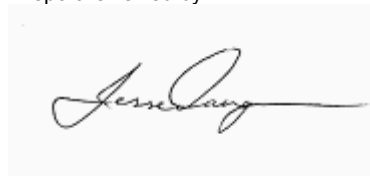
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10866	11-10866-D	11-10867	11-10868	11-10869
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-08-15 00:00	Lab Duplicate	2011-08-16 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
JO	2011/08/22	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02
RC	2011/08/18	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.027	0.004	< 0.003
BM	2011/08/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.004	0.005	0.029	0.004	0.004
JO	2011/08/17	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.09	0.08	< 0.08	< 0.08	0.09

All Analytical results pertain to samples analyzed as received.

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 Laboratory Services



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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10870	11-10871	11-10872	11-10873	11-10874
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-16 00:00
					MDL					
JO	2011/08/22	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	0.03	0.02	< 0.02	< 0.02
RC	2011/08/18	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.004	0.013	< 0.003	0.006	0.007
BM	2011/08/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.005	0.011	0.005	0.007	0.006
JO	2011/08/17	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	0.16	< 0.08	0.21

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Date Received: 2011/08/17
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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

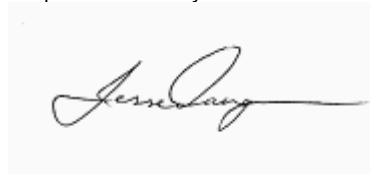
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10875	11-10876	11-10877	11-10878	11-10879
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00	2011-08-15 00:00
					MDL					
JO	2011/08/22	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	0.02	< 0.02	< 0.02
RC	2011/08/18	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.006	0.004	0.008	0.006	0.004
BM	2011/08/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.004	0.007	0.010	0.005
JO	2011/08/17	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.09

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

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Burnaby, BC V5C 0E4

Date Received: 2011/08/17
Report Date: 2011/08/30

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

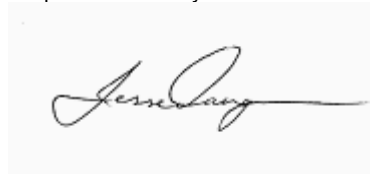
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-10880	11-10881
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-08-15 00:00	2011-08-15 00:00
					MDL		
JO	2011/08/22	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02
RC	2011/08/18	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	---	< 0.003
BM	2011/08/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
JO	2011/08/17	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Earth & Environmental
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Burnaby, BC V5C 0E4

Report Date: 2011/08/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/08/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	58	56-77	65.00	QC-ALK/F-41
RC	2011/08/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-41
RC	2011/08/18	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.61	1.44-1.76	1.60	CC-Anion-112B
RC	2011/08/18	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.636	0.54-0.66	0.60	CC-Anion-112B
RC	2011/08/18	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	27.4	25.2-30.8	28.00	CC-Anion-112B
JO	2011/08/17	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	660	552-934	743.00	QCP-C2-SLD02006
RC	2011/08/17	Turbidity	NTU	APHA 2130-b	0.1	11	8.5-11.5	10.00	QC-Turb-1
RC	2011/08/18	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.0	3.6-4.4	4.00	CC-Anion-112B
RC	2011/08/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.74	2.539-2.939	2.79	CC-EC-0.02M-36
JO	2011/08/17	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	29	22.2-31.7	27.00	QCP-C2-SLD02006

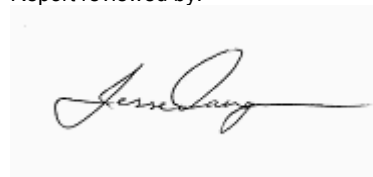
All Analytical results pertain to samples analyzed as received.

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

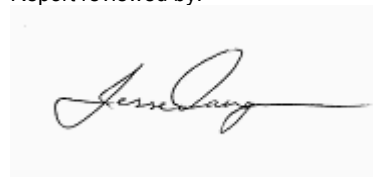
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/08/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-82-Low
BM	2011/08/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-82-Low

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Report reviewed by:



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Manager
Laboratory Services



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Quality Control Standard

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Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/08/19	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	51.8	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/19	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	104	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/19	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	49.6	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	51.9	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Chromium-T	µg/L (ppb)	APHA 3125 B	0.3000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	50.6	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	52.8	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	98.6	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/19	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	48.1	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/08/19	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/22	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.175	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/08/19	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	51.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	53.0	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.9	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/08/19	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	52.5	45-55	50.00	MS-CCV-HIGH
BM	2011/08/19	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	244	225-275	250.00	MS-CCV-HIGH
BM	2011/08/19	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	260	225-275	250.00	MS-CCV-HIGH
BM	2011/08/19	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	96.5	90-110	100.00	MS-CCV-HIGH
BM	2011/08/19	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/19	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	51.5	45.0-55.0	50.00	MS-CCV-HIGH

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/08/18	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	106	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/18	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/18	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	51.8	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.0	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.8	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/08/18	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	49.3	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/08/18	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	52.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/22	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.175	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/08/18	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	52.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.9	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/08/18	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	52.7	45-55	50.00	MS-CCV-HIGH
BM	2011/08/18	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
BM	2011/08/18	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	252	225-275	250.00	MS-CCV-HIGH
BM	2011/08/18	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90-110	100.00	MS-CCV-HIGH
BM	2011/08/18	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/08/18	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/08/18	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.00	5.94-6.06	6.00	CC-pH-155

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Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Earth & Environmental
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/08/30

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61543

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
	2011/08/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	38.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/08/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	39.5	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/08/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.07	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/08/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	43.7	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/08/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.44	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/08/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	38.6	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/08/19	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	38.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/08/19	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.5	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/08/19	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.90	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/08/19	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	41.4	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/08/19	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.39	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/08/19	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	39.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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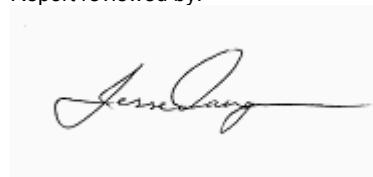
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/08/22	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.91	0.702-1.052	0.86	NH3SC-001
RC	2011/08/18	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.794	0.72-0.88	0.80	CC-Anion-112BL
BM	2011/08/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.90	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/08/17	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	10.0	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 17-AUG-11
Report Date: 29-AUG-11 13:57 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1046189

Project P.O. #: 305813
Job Reference: EC-61543
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1046189-1 WQ1~11-10866- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-2 WQ3~11-10867- Sampled By: CLIENT on 16-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-3 WQ4~11-10868- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-4 WQ5~11-10869- Sampled By: CLIENT on 16-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-5 WQ6~11-10870- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-6 WQ7~11-10871- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-7 WQ8~11-10872- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-8 WQ9~11-10873- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-9 WQ10~11-10874- Sampled By: CLIENT on 16-AUG-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1046189-9 WQ10~11-10874- Sampled By: CLIENT on 16-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-10 WQ11~11-10875- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-11 WQ12~11-10876- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-12 WQ13~11-10877- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-13 WQ14~11-10878- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-14 WQDUPLICATE~11-10879- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	26-AUG-11	26-AUG-11	R2241636
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-15 FIELD BLANK~11-10880- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748
L1046189-16 TRIP BLANK~11-10881- Sampled By: CLIENT on 15-AUG-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	25-AUG-11	25-AUG-11	R2240946
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	23-AUG-11	23-AUG-11	R2238748

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1046189

Report Date: 29-AUG-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA		Water						
Batch	R2240946							
WG1337274-2	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			105		%		80-120	25-AUG-11
WG1337274-3	DUP	L1046189-13						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-AUG-11
WG1337274-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-AUG-11
Batch	R2241636							
WG1338084-2	CRM	VA-SA-TCN-CONTROL						
Cyanide, Total			94		%		80-120	26-AUG-11
WG1338084-3	DUP	L1046189-8						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	26-AUG-11
WG1338084-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	26-AUG-11
CN-WAD-MID-COL-VA		Water						
Batch	R2238748							
WG1335035-2	CRM	VA-WAD-CONTROL						
Cyanide, Weak Acid Diss			106		%		80-120	23-AUG-11
WG1335035-3	DUP	L1046189-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	23-AUG-11
WG1335035-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	23-AUG-11

Quality Control Report

Workorder: L1046189

Report Date: 29-AUG-11

Page 2 of 2

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

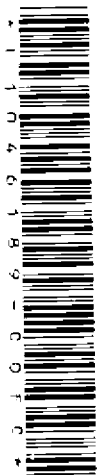
All test results reported with this submission were conducted within ALS recommended hold times.

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.

FileNbr	SampleName	LabNbr	DateSampled	Description
EC-61543	WQ1	11-10866-	2011/08/15	Water
EC-61543	WQ3	11-10867-	2011/08/16	Water
EC-61543	WQ4	11-10868-	2011/08/15	Water
EC-61543	WQ5	11-10869-	2011/08/16	Water
EC-61543	WQ6	11-10870-	2011/08/15	Water
EC-61543	WQ7	11-10871-	2011/08/15	Water
EC-61543	WQ8	11-10872-	2011/08/15	Water
EC-61543	WQ9	11-10873-	2011/08/15	Water
EC-61543	WQ10	11-10874-	2011/08/16	Water
EC-61543	WQ11	11-10875-	2011/08/15	Water
EC-61543	WQ12	11-10876-	2011/08/15	Water
EC-61543	WQ13	11-10877-	2011/08/15	Water
EC-61543	WQ14	11-10878-	2011/08/15	Water
EC-61543	WQ Duplicate	11-10879-	2011/08/15	Water
EC-61543	Field Blank	11-10880-	2011/08/15	Water
EC-61543	Trip Blank	11-10881-	2011/08/15	Water



ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
RC	2011/09/24	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	8	8	48	28	33
RC	2011/09/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02	0.02	0.06	0.04	0.04
RC	2011/09/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.005
RC	2011/09/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/09/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.6	0.6	1.0	1.4	< 0.5
JO	2011/09/23	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	20	16	76	56	72
RC	2011/09/25	Turbidity	NTU	APHA 2130-b	0.1	1.4	1.3	2.0	3.9	1.4
RC	2011/09/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	0.1	0.2	0.2	0.2
RC	2011/09/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.023	0.023	0.094	0.061	0.068
JO	2011/09/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	4	17	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
RC	2011/09/24	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	23	53	67	64	43
RC	2011/09/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.05	0.06	0.06	0.04
RC	2011/09/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	0.006	< 0.005
RC	2011/09/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/09/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.8	1.8	3.3	3.2	2.0
JO	2011/09/23	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	20	152	124	132	68
RC	2011/09/25	Turbidity	NTU	APHA 2130-b	0.1	1.1	1.0	1.8	2.1	0.6
RC	2011/09/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.2	0.3	0.2
RC	2011/09/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.048	0.108	0.140	0.134	0.090
JO	2011/09/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	4	< 2	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
RC	2011/09/24	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	53	24	68	99	54
RC	2011/09/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.03	0.06	0.07	0.05
RC	2011/09/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/09/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/09/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.3	< 0.5	2.8	2.4	1.9
JO	2011/09/23	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	104	76	160	128	104
RC	2011/09/25	Turbidity	NTU	APHA 2130-b	0.1	0.7	1.1	2.1	1.7	0.9
RC	2011/09/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2	0.3	0.4	0.2
RC	2011/09/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.109	0.049	0.140	0.194	0.110
JO	2011/09/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	2	< 2	< 2

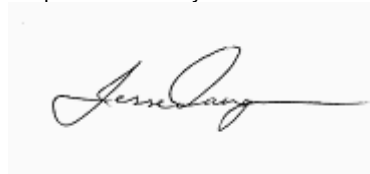
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
RC	2011/09/24	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1	24	32	11
RC	2011/09/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	< 0.02	< 0.02	0.16	0.11	0.17
RC	2011/09/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/09/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/09/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	< 0.5	< 0.5	48.3	17.6	28.1
JO	2011/09/23	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4	136	84	80
RC	2011/09/25	Turbidity	NTU	APHA 2130-b	0.1	0.4	0.4	58	32	150
RC	2011/09/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	< 0.1	0.2	0.2	0.2
RC	2011/09/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.001	0.001	0.164	0.111	0.099
JO	2011/09/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	9	6	10

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.098	0.097	0.101	0.092	0.056
BM	2011/09/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00009	< 0.00005
BM	2011/09/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0005	0.0011	0.0012	0.0003
BM	2011/09/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00229	0.00231	0.00554	0.00222	0.00487
BM	2011/09/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000017	0.000042	< 0.000015
BM	2011/09/23	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0003	0.0019	< 0.0003	0.0003
BM	2011/09/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	0.00005	0.00002	< 0.00002
BM	2011/09/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0003	0.0002	0.0003	0.0003
BM	2011/09/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.128	0.126	0.167	0.0471	0.137
BM	2011/09/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0153	0.0151	0.0134	0.0241	0.00449
BM	2011/09/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00022	0.00022	0.00072	0.00016	0.00029
BM	2011/09/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00008	< 0.00005	< 0.00005
BM	2011/09/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0212	0.0211	0.0787	0.0420	0.0546
BM	2011/09/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0008	0.0009	0.0029	0.0007	0.0009
BM	2011/09/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00008	0.00020	< 0.00005	0.00005
BM	2011/09/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0016	< 0.0001	0.0002
BM	2011/09/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0018	0.0019	0.0007	0.0257	0.0007
BM	2011/09/23	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.032	0.022	0.011	0.020	0.176
BM	2011/09/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0005	0.0004	0.0007	0.0005
BM	2011/09/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00548	0.00845	0.00609	0.00809	0.00766
BM	2011/09/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	0.000020	< 0.000015	< 0.000015	< 0.000015
BM	2011/09/23	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.0004
BM	2011/09/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00007	< 0.00002	0.00003	< 0.00002
BM	2011/09/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0004	0.0003	0.0004	0.0002
BM	2011/09/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0968	0.159	0.0313	0.235	0.0408
BM	2011/09/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00779	0.0185	0.00432	0.0316	0.00305
BM	2011/09/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00050	0.00074	0.00052	0.00067	0.00072
BM	2011/09/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0464	0.0883	0.0931	0.0970	0.0819
BM	2011/09/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0006	0.0006	0.0006	0.0008	0.0003
BM	2011/09/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00010	0.00015	0.00009	0.00011	0.00020
BM	2011/09/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0003	0.0001	0.0003	0.0001
BM	2011/09/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0102	0.0014	< 0.0005	0.0007	< 0.0005
BM	2011/09/23	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.069	0.064	0.027	0.014	0.022
BM	2011/09/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0002	0.0006	0.0003	0.0005
BM	2011/09/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0105	0.00697	0.00876	0.0126	0.00857
BM	2011/09/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/09/23	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/09/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00002	0.00004	< 0.00002	0.00003
BM	2011/09/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0005	0.0004	0.0002	0.0003
BM	2011/09/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0243	0.147	0.305	0.327	0.160
BM	2011/09/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00007	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00061	0.00902	0.0544	0.0179	0.0187
BM	2011/09/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00025	0.00053	0.00071	0.00055	0.00070
BM	2011/09/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0956	0.0528	0.101	0.138	0.0902
BM	2011/09/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0007	0.0013	0.0011	0.0004	0.0008
BM	2011/09/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00015	0.00013	0.00011	0.00016	0.00016
BM	2011/09/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0001	0.0003	< 0.0001	0.0003
BM	2011/09/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	0.0036	< 0.0005	0.0006	< 0.0005
BM	2011/09/23	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002	0.002	0.011	< 0.002
BM	2011/09/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00005	0.00067
BM	2011/09/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0046	0.0166	0.0237
BM	2011/09/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.0154	0.0133	0.00911
BM	2011/09/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.007	0.008	< 0.001	< 0.001	< 0.001
BM	2011/09/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000033	0.000077	< 0.000015
BM	2011/09/23	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/09/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002	< 0.00002
BM	2011/09/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	5.46	4.15	9.78
BM	2011/09/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00039	< 0.00005	< 0.00005
BM	2011/09/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.010	0.007	0.007
BM	2011/09/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	1.18	0.470	1.13
BM	2011/09/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00059	0.00118	0.00063
BM	2011/09/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005	0.0872	0.0493	0.0408
BM	2011/09/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
BM	2011/09/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.0212	< 0.0005	0.0879
BM	2011/09/23	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.079	0.079	0.014	0.035	0.034
BM	2011/09/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00009	< 0.00005
BM	2011/09/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0005	0.0005	0.0010	0.0011	0.0003
BM	2011/09/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00227	0.00231	0.00477	0.00211	0.00484
BM	2011/09/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	0.000027	< 0.000015
BM	2011/09/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0007	< 0.0003	< 0.0003
BM	2011/09/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	< 0.00002	< 0.00002	< 0.00002
BM	2011/09/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0003	0.0002	0.0003	0.0003
BM	2011/09/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0980	0.0982	0.0436	0.0256	0.108
BM	2011/09/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0137	0.0137	0.00366	0.0199	0.00370
BM	2011/09/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00019	0.00019	0.00069	0.00013	0.00027
BM	2011/09/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0210	0.0211	0.0787	0.0416	0.0541
BM	2011/09/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0007	0.0007	0.0003	0.0004	0.0007
BM	2011/09/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	0.00006	0.00014	< 0.00005	< 0.00005
BM	2011/09/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00112	< 0.00005	< 0.00005
BM	2011/09/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0018	0.0019	0.0007	0.0257	0.0007
RC	2011/09/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.80	6.90	7.57	7.22	7.45

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.021	0.012	0.003	0.005	0.019
BM	2011/09/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0005	0.0004	0.0006	0.0004
BM	2011/09/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00528	0.00845	0.00599	0.00809	0.00766
BM	2011/09/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	0.000020	< 0.000015	< 0.000015	< 0.000015
BM	2011/09/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/09/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00007	< 0.00002	0.00003	< 0.00002
BM	2011/09/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	0.0004	0.0003	0.0004	0.0002
BM	2011/09/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0676	0.128	0.0180	0.169	0.0271
BM	2011/09/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00687	0.0163	0.00192	0.0291	0.00248
BM	2011/09/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00047	0.00074	0.00050	0.00067	0.00068
BM	2011/09/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0464	0.0883	0.0931	0.0970	0.0819
BM	2011/09/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0004	0.0004	< 0.0002	0.0002	< 0.0002
BM	2011/09/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00014	0.00007	0.00009	0.00018
BM	2011/09/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00017	< 0.00005	0.00008	< 0.00005
BM	2011/09/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0014	< 0.0005	0.0007	< 0.0005
RC	2011/09/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.24	7.66	7.73	7.63	7.59

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.061	0.034	0.006	0.003	0.010
BM	2011/09/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0001	0.0006	0.0002	0.0005
BM	2011/09/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0105	0.00679	0.00874	0.0126	0.00853
BM	2011/09/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/09/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/09/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	< 0.00002
BM	2011/09/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0004	0.0002	0.0003
BM	2011/09/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0192	0.108	0.212	0.196	0.127
BM	2011/09/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00046	0.00642	0.0477	0.0118	0.0161
BM	2011/09/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00023	0.00053	0.00069	0.00053	0.00069
BM	2011/09/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0956	0.0528	0.101	0.138	0.0902
BM	2011/09/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0006	0.0006	0.0003	< 0.0002	< 0.0002
BM	2011/09/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	0.00011	0.00009	0.00014	0.00015
BM	2011/09/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	0.00008
BM	2011/09/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0036	< 0.0005	0.0006	< 0.0005
RC	2011/09/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.63	7.26	7.68	7.85	7.58

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP/MS

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/22	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BM	2011/09/22	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	0.00061
BM	2011/09/22	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0046	0.0166	0.0237
BM	2011/09/22	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.0154	0.0133	0.00911
BM	2011/09/22	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.006	< 0.001	< 0.001	< 0.001
BM	2011/09/22	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/09/22	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/09/22	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
BM	2011/09/22	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0011	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	5.25	4.02	9.63
BM	2011/09/22	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00009	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.010	0.007	0.007
BM	2011/09/22	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	1.11	0.453	1.10
BM	2011/09/22	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/09/22	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00058	0.00115	0.00063
BM	2011/09/22	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/09/22	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005	0.0872	0.0493	0.0408
BM	2011/09/22	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0002	< 0.0001	< 0.0001	< 0.0001
BM	2011/09/22	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
BM	2011/09/22	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/09/22	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0022	0.0062	< 0.0005	0.0879
RC	2011/09/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.65	5.37	7.07	7.19	6.50

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.3	2.4	11.7	7.2	7.7
BM	2011/09/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	2.75	1.15	2.26
BM	2011/09/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.03	< 0.01	< 0.01
BM	2011/09/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
BM	2011/09/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.72	5.71	8.31	5.44	5.80
BM	2011/09/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.8	2.0	3.4	1.8	2.8
BM	2011/09/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	7.9	7.9	40.5	22.6	28.6

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	5.8	13.8	18.9	18.1	11.6
BM	2011/09/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.99	3.25	4.38	4.05	2.31
BM	2011/09/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/09/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.5	0.7	0.7	< 0.5
BM	2011/09/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.40	6.25	3.10	4.58	5.97
BM	2011/09/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.2	3.2	3.1	3.1	2.8
BM	2011/09/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	18.6	47.8	65.3	61.9	38.5

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

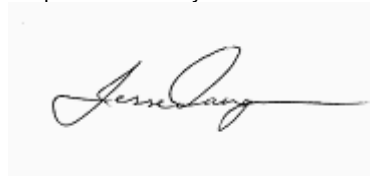
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	14.9	6.6	19.0	27.3	13.8
BM	2011/09/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.98	1.12	4.25	5.67	3.23
BM	2011/09/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/09/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5	< 0.5	0.7	0.7	0.5
BM	2011/09/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.37	3.71	4.76	6.54	6.33
BM	2011/09/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.0	1.9	3.2	4.0	3.2
BM	2011/09/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	49.4	21.0	64.9	91.6	47.9

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Dissolved Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	16.0	12.3	8.5
BM	2011/09/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	3.05	1.53	1.76
BM	2011/09/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.05	0.07	0.15
BM	2011/09/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	3.2	2.2	2.1
BM	2011/09/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	7.14	7.00	8.87
BM	2011/09/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	3.8	4.0	1.9
BM	2011/09/22	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	52.5	37.0	28.5

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

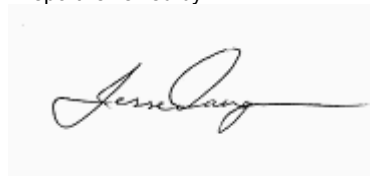
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.4	2.4	11.7	7.2	7.8
BM	2011/09/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.53	0.51	2.88	1.22	2.32
BM	2011/09/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.05	< 0.02	< 0.02
BM	2011/09/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.5	< 0.5	< 0.5
BM	2011/09/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.72	5.71	8.31	5.44	5.80
BM	2011/09/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.9	2.0	3.5	2.0	2.9
BM	2011/09/23	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	8.1	8.1	41.1	23.0	28.9

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

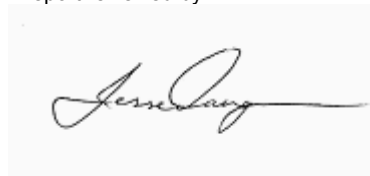
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
BM	2011/09/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	5.8	13.8	19.0	18.1	11.6
BM	2011/09/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.03	3.30	4.55	4.15	2.40
BM	2011/09/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/09/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.5	0.7	0.7	< 0.5
BM	2011/09/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.40	6.25	3.10	4.58	5.98
BM	2011/09/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.4	3.3	3.3	3.3	3.0
BM	2011/09/23	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	18.8	48.1	66.1	62.3	38.8

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

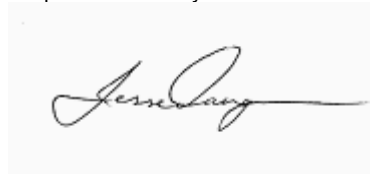
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	14.9	6.6	19.0	28.0	13.9
BM	2011/09/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.07	1.16	4.42	5.81	3.37
BM	2011/09/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/09/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.5	< 0.5	0.7	0.7	0.5
BM	2011/09/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.37	3.71	4.76	6.54	6.33
BM	2011/09/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.2	2.1	3.4	4.3	3.4
BM	2011/09/23	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	49.8	21.3	65.6	93.8	48.5

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Water Analysis - Total Metals - ICP

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
BM	2011/09/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	16.0	12.3	8.5
BM	2011/09/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50	3.23	1.63	1.83
BM	2011/09/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.05	0.07	0.16
BM	2011/09/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	3.4	2.3	2.2
BM	2011/09/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01	7.14	7.14	8.87
BM	2011/09/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	4.2	4.3	2.0
BM	2011/09/23	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	53.3	37.4	28.7

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

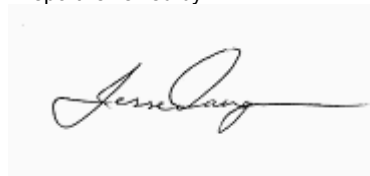
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13816	11-13816-D	11-13817	11-13818	11-13819
					Client ID:	WQ1	WQ1	WQ3	WQ4	WQ5
					Sample Date:	2011-09-19 00:00	Lab Duplicate	2011-09-20 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
JO	2011/09/24	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/09/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.1	5.1	2.5	4.9	5.2
BM	2011/09/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.1	5.1	2.6	4.9	5.2
RC	2011/09/21	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.026	0.025	0.014	0.034	0.030
BM	2011/09/23	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.005	0.005	0.034	0.002	0.002
JO	2011/09/26	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.19	0.19	0.19	0.20	< 0.08

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Date Received: 2011/09/21
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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

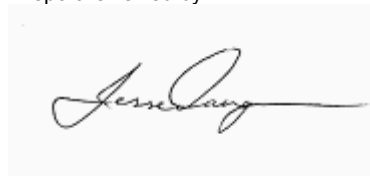
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13820	11-13821	11-13822	11-13823	11-13824
					Client ID:	WQ6	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-20 00:00
					MDL					
JO	2011/09/24	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.05	0.04	< 0.02	< 0.02	< 0.02
BM	2011/09/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.4	3.6	8.2	7.2	3.1
BM	2011/09/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.4	3.6	8.2	7.2	3.1
RC	2011/09/21	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.031	0.004	0.007	0.012	0.039
BM	2011/09/23	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002	0.007	0.005	0.008	0.006
JO	2011/09/26	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	1.23	< 0.08	0.59	0.14	0.21

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13825	11-13826	11-13827	11-13828	11-13829
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
JO	2011/09/24	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.04	0.02	< 0.02	< 0.02	< 0.02
BM	2011/09/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	6.5	6.6	6.9	5.2	3.7
BM	2011/09/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	6.6	6.6	7.0	5.2	3.7
RC	2011/09/21	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	0.023	0.004	0.009	0.007
BM	2011/09/23	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.007	0.010	0.007	0.007
JO	2011/09/26	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	0.23	0.14	0.55

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/09/21
Report Date: 2011/10/11

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-13830	11-13831	11-13832	11-13833	11-13834
					Client ID:	Field Blank	Trip Blank	BW137	BW161	BW101
					Sample Date:	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00	2011-09-19 00:00
					MDL					
JO	2011/09/24	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	0.04	0.07	0.06
BM	2011/09/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.2	< 0.1	0.7	0.6	0.6
BM	2011/09/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.1	< 0.1	0.7	0.7	0.7
RC	2011/09/21	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.034	0.041	0.022
BM	2011/09/23	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.049	0.067	0.149
JO	2011/09/26	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	< 0.08	0.11

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/10/11

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/09/24	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK/F-41
RC	2011/09/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.53	0.44-0.58	0.50	QC-ALK/F-41
RC	2011/09/21	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.63	1.44-1.76	1.60	CC-Anion-113B
RC	2011/09/21	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.632	0.54-0.66	0.60	CC-Anion-113B
RC	2011/09/21	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.8	25.2-30.8	28.00	CC-Anion-113B
JO	2011/09/23	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	700	552-934	743.00	QCP-C2-SLD02006
RC	2011/09/25	Turbidity	NTU	APHA 2130-b	0.1	11	8.5-11.5	10.00	QC-Turb-2
RC	2011/09/21	Chloride-D	mg/L (ppm)	APHA 4110	0.1	3.8	3.6-4.4	4.00	CC-Anion-113B
RC	2011/09/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.76	2.54-2.94	2.79	CC-EC-0.02M-37
JO	2011/09/24	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	29	22.2-31.7	27.00	QCP-C2-SLD02006

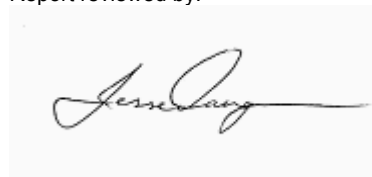
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Report Date: 2011/10/11

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/09/23	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	53.5	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	96.3	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/23	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	99.2	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/23	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	48.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	47.5	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	49.5	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	51.5	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/23	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	47.5	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/09/23	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.162	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/09/23	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	51.0	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.5	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/09/23	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.6	45-55	50.00	MS-CCV-HIGH
BM	2011/09/23	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	253	225-275	250.00	MS-CCV-HIGH
BM	2011/09/23	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	254	225-275	250.00	MS-CCV-HIGH
BM	2011/09/23	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
BM	2011/09/23	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/23	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	49.3	45.0-55.0	50.00	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/10/11

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/09/22	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	53.8	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/22	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	102	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/22	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.7	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	49.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	49.0	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	51.0	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/09/22	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	47.1	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/09/22	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.162	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/09/22	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.1	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.6	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/09/22	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	51.5	45-55	50.00	MS-CCV-HIGH
BM	2011/09/22	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	244	225-275	250.00	MS-CCV-HIGH
BM	2011/09/22	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	247	225-275	250.00	MS-CCV-HIGH
BM	2011/09/22	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	99.7	90-110	100.00	MS-CCV-HIGH
BM	2011/09/22	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/09/22	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/09/24	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.02	5.94-6.06	6.00	CC-pH-157

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Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/10/11

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-61850

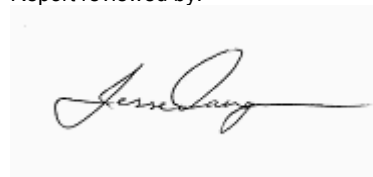
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/09/22	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	37.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/09/22	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	38.4	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/09/22	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	4.97	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/09/22	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	41.3	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/09/22	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.36	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/09/22	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	36.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
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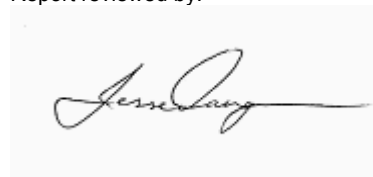
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/09/23	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	37.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/09/23	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.2	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/09/23	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.84	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/09/23	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	42.4	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/09/23	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.43	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/09/23	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	38.2	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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Manager
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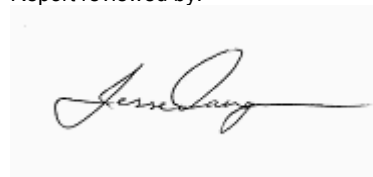
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/09/24	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.89	0.702-1.052	0.86	NH3SC-001
BM	2011/09/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.6	3.3-4.3	3.80	DMD-TOC-83-Low
BM	2011/09/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.6	3.3-4.3	3.80	DMD-TOC-83-Low
RC	2011/09/21	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.794	0.72-0.88	0.80	CC-Anion-113BL
BM	2011/09/23	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.84	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/09/26	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	9.29	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG
5667 70 Street
EDMONTON AB T6B 3P6

Date Received: 21-SEP-11
Report Date: 17-OCT-11 13:17 (MT)
Version: FINAL REV. 2

Client Phone: 780-940-4147

Certificate of Analysis

Lab Work Order #: L1061327
Project P.O. #: 245267
Job Reference: EC-61850
C of C Numbers:
Legal Site Desc:

Comments:

17-OCT-11: Revised Report: RC25523 resulted in Revised Results for CN. CAR25523 initiated as a result.

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1061327-1 11-13816-WQ1 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-2 11-13817-WQ3 Sampled By: CLIENT on 20-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-3 11-13818-WQ4 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-4 11-13819-WQ5 Sampled By: CLIENT on 20-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-5 11-13820-WQ6 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-6 11-13821-WQ7 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-7 11-13822-WQ8 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-8 11-13823-WQ9 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-9 11-13824-WQ10 Sampled By: CLIENT on 20-SEP-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1061327-9 11-13824-WQ10 Sampled By: CLIENT on 20-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-10 11-13825-WQ11 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-11 11-13826-WQ12 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-12 11-13827-WQ13 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-13 11-13828-WQ14 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-14 11-13829-WQ DUPLICATE Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-15 11-13830-FIELD BLANK Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-16 11-13831-TRIP BLANK Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	30-SEP-11 29-SEP-11	30-SEP-11 29-SEP-11	R2261515 R2260679
L1061327-17 11-13832-BW137 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1061327-17 11-13832-BW137 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	 <0.0050 <0.0050	 	 0.0050 0.0050	 mg/L mg/L	 30-SEP-11 29-SEP-11	 30-SEP-11 29-SEP-11	 R2261603 R2260811
L1061327-18 11-13833-BW161 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	 <0.0050 <0.0050	 	 0.0050 0.0050	 mg/L mg/L	 30-SEP-11 29-SEP-11	 30-SEP-11 29-SEP-11	 R2261603 R2260811
L1061327-19 11-13834-BW101 Sampled By: CLIENT on 19-SEP-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	 <0.0050 <0.0050	 	 0.0050 0.0050	 mg/L mg/L	 30-SEP-11 29-SEP-11	 30-SEP-11 29-SEP-11	 R2261603 R2260811

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-HH-COL-VA	Water	Total Cyanide by HH Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L1061327

Report Date: 17-OCT-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
EDMONTON AB T6B 3P6

Contact: JESSE DANG

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-HH-COL-VA								
	Water							
Batch	R2261515							
WG1359530-3	DUP	L1061327-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1359530-2	LCS							
Cyanide, Total			102		%		80-120	30-SEP-11
WG1359530-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	30-SEP-11
Batch	R2261603							
WG1359914-4	DUP	L1062075-3						
Cyanide, Total		0.124	0.136		mg/L	9.3	20	30-SEP-11
WG1359914-2	LCS							
Cyanide, Total			97		%		80-120	30-SEP-11
WG1359914-3	LCS							
Cyanide, Total			98		%		80-120	30-SEP-11
WG1359914-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	30-SEP-11
CN-WAD-MID-COL-VA								
	Water							
Batch	R2260679							
WG1358645-3	DUP	L1061327-16						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-SEP-11
WG1358645-2	LCS							
Cyanide, Weak Acid Diss			98		%		80-120	29-SEP-11
WG1358645-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	29-SEP-11
Batch	R2260811							
WG1359046-3	DUP	L1061675-6						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-SEP-11
WG1359046-2	LCS							
Cyanide, Weak Acid Diss			99		%		80-120	29-SEP-11
WG1359046-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	29-SEP-11

Quality Control Report

Workorder: L1061327

Report Date: 17-OCT-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
EDMONTON AB T6B 3P6
Contact: JESSE DANG

Page 2 of 2

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
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.

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
RC	2011/10/19	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	7	44	16	25	18
RC	2011/10/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.02	0.06	0.04	0.04	0.03
RC	2011/10/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	0.006	< 0.005	< 0.005	< 0.005
RC	2011/10/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/10/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.0	1.2	4.8	0.6	1.0
JO	2011/10/21	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	40	76	28	40	20
RC	2011/10/20	Turbidity	NTU	APHA 2130-b	0.1	2.6	1.2	1.5	0.9	1.0
RC	2011/10/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.3	0.2	0.3
RC	2011/10/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.022	0.090	0.048	0.052	0.042
JO	2011/10/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	8	< 2	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
RC	2011/10/19	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	43	43	70	61	30
RC	2011/10/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.04	0.04	0.07	0.06	0.03
RC	2011/10/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	0.008	< 0.005	< 0.005
RC	2011/10/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/10/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.7	1.7	3.5	3.2	1.5
JO	2011/10/21	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	100	---	104	80	36
RC	2011/10/20	Turbidity	NTU	APHA 2130-b	0.1	1.0	1.0	50	2.0	1.2
RC	2011/10/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.5	0.3	0.2
RC	2011/10/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.090	0.090	0.145	0.128	0.065
JO	2011/10/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	16	< 2	< 2

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
RC	2011/10/19	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	34	21	63	83	43
RC	2011/10/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.02	0.06	0.06	0.04
RC	2011/10/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/10/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/10/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.9	0.7	3.2	3.5	1.7
JO	2011/10/21	T-Dissolved Solids@180°C	mg/L (ppm)	APHA 2540 C	4	60	24	16	124	44
RC	2011/10/20	Turbidity	NTU	APHA 2130-b	0.1	1.1	1.0	1.6	1.6	0.8
RC	2011/10/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.4	0.2	0.3	0.5	0.2
RC	2011/10/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.072	0.043	0.133	0.170	0.090
JO	2011/10/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	< 2	< 2	< 2


All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
RC	2011/10/19	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1
RC	2011/10/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	< 0.02	< 0.02
RC	2011/10/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
RC	2011/10/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2011/10/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	< 0.5	< 0.5
JO	2011/10/21	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4
RC	2011/10/20	Turbidity	NTU	APHA 2130-b	0.1	0.2	0.3
RC	2011/10/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	< 0.1
RC	2011/10/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.001	0.001
JO	2011/10/24	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

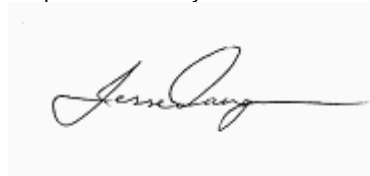
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.5	2.8	4.3	7.3	4.0
BM	2011/10/21	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.5	2.8	4.6	7.3	4.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

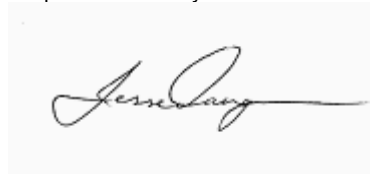
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
BM	2011/10/21	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.2	5.2	7.8	7.2	4.2
BM	2011/10/21	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	5.2	5.2	8.1	7.2	4.3

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

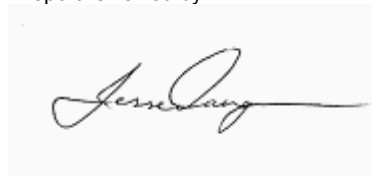
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.5	6.5	6.8	4.6	4.8
BM	2011/10/21	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.5	6.5	6.8	4.7	4.8

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
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Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

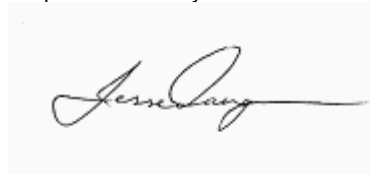
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
BM	2011/10/21	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.2	< 0.1
BM	2011/10/21	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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 Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.175	0.035	0.074	0.074	0.064
BM	2011/10/21	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00008	< 0.00005	< 0.00005
BM	2011/10/21	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0009	0.0009	0.0004	0.0005
BM	2011/10/21	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00279	0.00466	0.00200	0.00375	0.00516
BM	2011/10/21	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.009	0.008	0.007	0.007	0.006
BM	2011/10/21	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000022	< 0.000015	< 0.000015
BM	2011/10/21	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0006	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/21	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00002	< 0.00002	0.00003	< 0.00002
BM	2011/10/21	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	< 0.0001	0.0001	0.0002	0.0001
BM	2011/10/21	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.154	0.0898	0.0451	0.115	0.0877
BM	2011/10/21	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/21	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0117	0.00634	0.0116	0.00483	0.00631
BM	2011/10/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	0.000009	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/21	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00016	0.00062	0.00006	0.00016	0.00041
BM	2011/10/21	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	< 0.00005	0.00010	0.00010	0.00009
BM	2011/10/21	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/21	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0187	0.0734	0.0355	0.0404	0.0412
BM	2011/10/21	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0025	0.0008	0.0009	0.0009	0.0010
BM	2011/10/21	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00012	0.00015	< 0.00005	0.00005	0.00011
BM	2011/10/21	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0012	< 0.0001	0.0002	< 0.0001
BM	2011/10/21	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0012	< 0.0005	0.0250	< 0.0005	< 0.0005
BM	2011/10/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
BM	2011/10/21	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.031	0.030	0.009	0.024	0.058
BM	2011/10/21	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0004	0.0004	0.0006	0.0004
BM	2011/10/21	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00693	0.00684	0.00629	0.00774	0.00569
BM	2011/10/21	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.005	0.005	0.005	0.004
BM	2011/10/21	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/10/21	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/21	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	0.00003	0.00003	< 0.00002
BM	2011/10/21	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0001	0.0045	0.0002	< 0.0001
BM	2011/10/21	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.128	0.127	0.0325	0.234	0.0578
BM	2011/10/21	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00009	0.00009	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/21	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0164	0.0162	0.00851	0.0290	0.00279
BM	2011/10/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/21	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00051	0.00050	0.00049	0.00058	0.00043
BM	2011/10/21	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	0.00013	0.00021	0.00016	< 0.00005
BM	2011/10/21	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/21	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0713	0.0713	0.0941	0.0906	0.0574
BM	2011/10/21	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0008	0.0007	0.0004	0.0009	0.0007
BM	2011/10/21	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00011	0.00011	0.00008	0.00010	0.00013
BM	2011/10/21	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0002	0.0001	0.0002	0.0001
BM	2011/10/21	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.0116	< 0.0005	< 0.0005
BM	2011/10/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.208	0.085	0.021	0.022	0.030
BM	2011/10/21	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0001	0.0006	0.0001	0.0004
BM	2011/10/21	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00752	0.00563	0.00802	0.0103	0.00671
BM	2011/10/21	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.004	0.004	0.004	0.003	0.003
BM	2011/10/21	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/10/21	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/21	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	0.00004	0.00003	0.00003
BM	2011/10/21	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	0.0001	0.0002	< 0.0001	0.0001
BM	2011/10/21	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.106	0.119	0.260	0.259	0.138
BM	2011/10/21	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/21	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00219	0.0103	0.0382	0.0410	0.0164
BM	2011/10/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/21	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	0.00037	0.00056	0.00045	0.00049
BM	2011/10/21	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00009	< 0.00005	0.00016	0.00007	0.00016
BM	2011/10/21	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/21	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0624	0.0466	0.0927	0.109	0.0717
BM	2011/10/21	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0030	0.0015	0.0008	0.0005	0.0006
BM	2011/10/21	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00012	0.00016	0.00009	0.00013	0.00011
BM	2011/10/21	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0003	< 0.0001	0.0002	< 0.0001	0.0002
BM	2011/10/21	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
BM	2011/10/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
BM	2011/10/21	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002
BM	2011/10/21	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.003
BM	2011/10/21	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/10/21	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/10/21	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/10/21	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0002
BM	2011/10/21	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
BM	2011/10/21	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/10/21	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/10/21	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/10/21	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/10/21	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/21	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
BM	2011/10/21	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.125	0.016	0.048	0.058	0.042
BM	2011/10/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00008	< 0.00005	< 0.00005
BM	2011/10/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0009	0.0009	0.0004	0.0005
BM	2011/10/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00235	0.00456	0.00185	0.00368	0.00512
BM	2011/10/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.004	0.004	0.002	0.002	0.001
BM	2011/10/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	0.000022	< 0.000015	< 0.000015
BM	2011/10/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	0.0006	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	< 0.00002	< 0.00002	0.00003	< 0.00002
BM	2011/10/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0925	0.0473	0.0218	0.0921	0.0633
BM	2011/10/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00874	0.00405	0.00704	0.00425	0.00529
BM	2011/10/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00016	0.00062	0.00006	0.00015	0.00041
BM	2011/10/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	< 0.00005	0.00010	0.00010	0.00009
BM	2011/10/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0187	0.0734	0.0355	0.0404	0.0412
BM	2011/10/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0011	0.0004	0.0004	0.0008	0.0006
BM	2011/10/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00015	< 0.00005	0.00005	0.00011
BM	2011/10/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00120	< 0.00005	0.00015	< 0.00005
BM	2011/10/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0007	< 0.0005	0.0247	< 0.0005	< 0.0005
RC	2011/10/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.76	7.50	7.08	7.23	7.16

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
BM	2011/10/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.019	0.019	0.002	0.007	0.043
BM	2011/10/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0004	0.0006	0.0004
BM	2011/10/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00656	0.00668	0.00581	0.00740	0.00560
BM	2011/10/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	0.002	0.001	< 0.001
BM	2011/10/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/10/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	< 0.00002	0.00003	< 0.00002
BM	2011/10/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.100	0.100	0.0167	0.176	0.0441
BM	2011/10/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00009	0.00009	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0148	0.0148	0.00470	0.0254	0.00205
BM	2011/10/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00050	0.00049	0.00048	0.00055	0.00039
BM	2011/10/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	0.00013	0.00013	0.00016	< 0.00005
BM	2011/10/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0713	0.0713	0.0941	0.0906	0.0574
BM	2011/10/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0003	0.0003	< 0.0002	0.0003	0.0004
BM	2011/10/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00011	0.00008	0.00010	0.00013
BM	2011/10/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00020	0.00020	0.00010	0.00020	0.00010
BM	2011/10/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
RC	2011/10/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.55	7.57	7.78	7.65	7.42

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.159	0.059	0.007	0.003	0.019
BM	2011/10/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	0.0001	0.0006	0.0001	0.0004
BM	2011/10/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00713	0.00542	0.00799	0.0101	0.00666
BM	2011/10/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	0.001	< 0.001
BM	2011/10/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/10/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/10/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00003	0.00002	0.00003
BM	2011/10/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0804	0.0912	0.202	0.132	0.102
BM	2011/10/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/10/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00156	0.00858	0.0344	0.0341	0.0150
BM	2011/10/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/10/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013	0.00034	0.00051	0.00042	0.00047
BM	2011/10/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00009	< 0.00005	0.00016	0.00007	0.00016
BM	2011/10/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/10/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0624	0.0466	0.0927	0.109	0.0717
BM	2011/10/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0024	0.0009	0.0003	< 0.0002	0.0002
BM	2011/10/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00016	0.00009	0.00013	0.00011
BM	2011/10/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00028	0.00007	0.00020	< 0.00005	0.00020
BM	2011/10/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
RC	2011/10/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.43	7.19	7.61	7.77	7.58

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
BM	2011/10/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
BM	2011/10/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.003	0.003
BM	2011/10/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
BM	2011/10/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
BM	2011/10/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
BM	2011/10/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
BM	2011/10/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
BM	2011/10/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
BM	2011/10/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005
BM	2011/10/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
BM	2011/10/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
BM	2011/10/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
BM	2011/10/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005
RC	2011/10/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.59	5.33

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.2	11.3	6.3	6.1	5.3
BM	2011/10/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	2.71	1.08	1.81	0.92
BM	2011/10/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	0.04	< 0.01	< 0.01	< 0.01
BM	2011/10/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5
BM	2011/10/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.77	8.28	5.51	5.38	5.57
BM	2011/10/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.8	3.4	1.8	2.5	2.1
BM	2011/10/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	7.3	39.3	20.1	22.7	16.9

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

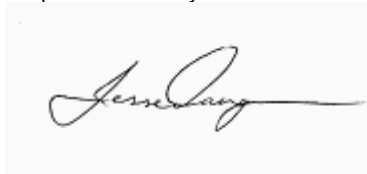
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
BM	2011/10/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	11.5	11.6	20.8	18.1	8.3
BM	2011/10/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.74	2.71	4.68	3.92	1.70
BM	2011/10/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/10/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.8	0.7	< 0.5
BM	2011/10/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.17	6.25	3.69	5.11	6.05
BM	2011/10/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.9	2.9	3.4	3.1	2.4
BM	2011/10/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	40.0	40.1	71.3	61.2	27.7

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	10.1	6.0	18.8	24.5	11.6
BM	2011/10/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.08	1.02	4.08	5.15	2.74
BM	2011/10/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
BM	2011/10/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	0.7	0.5
BM	2011/10/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.51	3.96	5.10	6.43	6.18
BM	2011/10/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.5	1.8	3.2	3.9	3.0
BM	2011/10/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	33.8	19.2	63.8	82.5	40.3

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

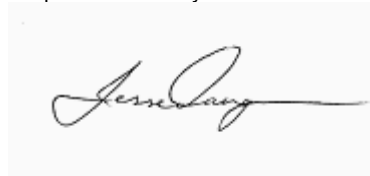
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
BM	2011/10/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/10/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
BM	2011/10/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/10/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/10/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
BM	2011/10/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
BM	2011/10/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.3	11.9	6.7	6.5	5.7
BM	2011/10/21	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	2.75	1.03	1.80	0.90
BM	2011/10/21	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.04	< 0.02	< 0.02	< 0.02
BM	2011/10/21	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	0.5	< 0.5	< 0.5	< 0.5
BM	2011/10/21	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.79	8.28	5.51	5.38	5.65
BM	2011/10/21	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.8	3.4	1.8	2.5	2.1
BM	2011/10/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	7.7	41.0	20.9	23.6	17.9

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
BM	2011/10/21	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	12.4	12.4	21.3	18.7	8.8
BM	2011/10/21	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	2.80	2.77	4.76	4.05	1.71
BM	2011/10/21	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.04	< 0.02	< 0.02
BM	2011/10/21	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.9	0.8	< 0.5
BM	2011/10/21	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.30	6.33	3.77	5.16	6.05
BM	2011/10/21	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.9	2.9	3.4	3.2	2.4
BM	2011/10/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	42.4	42.2	72.8	63.2	29.1

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Report reviewed by:



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ANALYTICAL REPORT

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Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

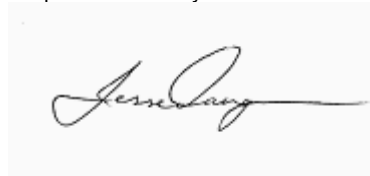
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
BM	2011/10/21	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	10.7	6.3	19.3	24.6	12.3
BM	2011/10/21	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	2.09	1.02	4.13	5.15	2.77
BM	2011/10/21	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
BM	2011/10/21	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	0.7	< 0.5
BM	2011/10/21	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.63	4.11	5.36	6.53	6.30
BM	2011/10/21	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.5	1.8	3.2	3.9	3.0
BM	2011/10/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	35.4	20.0	65.1	82.6	42.0

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Date Received: 2011/10/19
Report Date: 2011/11/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
BM	2011/10/21	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/10/21	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
BM	2011/10/21	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
BM	2011/10/21	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/10/21	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
BM	2011/10/21	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
BM	2011/10/21	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

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Report reviewed by:



Jesse Dang, B.Sc.
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/10/19
Report Date: 2011/11/01

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

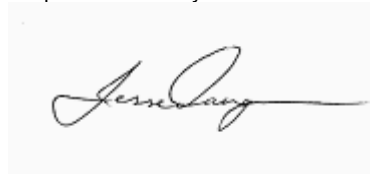
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16729	11-16730	11-16731	11-16732	11-16733
					Client ID:	WQ1	WQ3	WQ4	WQ5	WQ6
					Sample Date:	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00	2011-10-18 00:00	2011-10-17 00:00
					MDL					
JO	2011/10/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/10/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.014	0.022	0.017	0.030	0.027
BM	2011/10/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.033	< 0.001	0.002	0.002
JO	2011/10/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.09	< 0.08	< 0.08	< 0.08

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Report reviewed by:



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Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

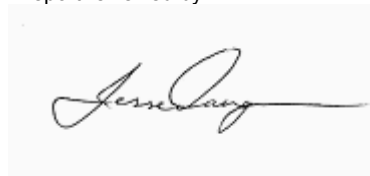
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16734	11-16734-D	11-16735	11-16736	11-16737
					Client ID:	WQ7	WQ7	WQ8	WQ9	WQ10
					Sample Date:	2011-10-17 00:00	Lab Duplicate	2011-10-17 00:00	2011-10-17 00:00	2011-10-18 00:00
					MDL					
JO	2011/10/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	---	< 0.02	< 0.02	< 0.02
RC	2011/10/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.071	0.071	0.012	0.061	0.048
BM	2011/10/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	0.005	0.003	0.008	0.004
JO	2011/10/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	---	0.19	0.14	0.11

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Report reviewed by:



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Nutrient Analysis - Water

Attention: Ott, Bruce

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File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16738	11-16739	11-16740	11-16741	11-16742
					Client ID:	WQ11	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00	2011-10-17 00:00
					MDL					
JO	2011/10/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	0.03	< 0.02	< 0.02	< 0.02
RC	2011/10/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.047	0.032	0.072	0.083	0.064
BM	2011/10/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002	0.002	0.006	0.004	0.007
JO	2011/10/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.10	0.18	0.09	0.09	< 0.08

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Date Received: 2011/10/19
Report Date: 2011/11/01

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

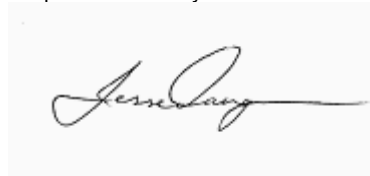
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-16743	11-16744
					Client ID:	Field Blank	Trip Blank
					Sample Date:	2011-10-17 00:00	2011-10-17 00:00
					MDL		
JO	2011/10/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02
RC	2011/10/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
BM	2011/10/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
JO	2011/10/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/11/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/10/19	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK/F-42
RC	2011/10/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-42
RC	2011/10/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.56	1.44-1.76	1.60	CC-Anion-113B
RC	2011/10/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.592	0.54-0.66	0.60	CC-Anion-113B
RC	2011/10/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.7	25.2-30.8	28.00	CC-Anion-113B
JO	2011/10/21	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	784	552-934	743.00	QCP-C2-SLD02006
RC	2011/10/20	Turbidity	NTU	APHA 2130-b	0.1	10	8.5-11.5	10.00	QC-Turb-2
RC	2011/10/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.3	3.6-4.4	4.00	CC-Anion-113B
RC	2011/10/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.77	2.54-2.94	2.79	CC-EC-0.02M-37
JO	2011/10/24	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	24	22.2-31.7	27.00	QCP-C2-SLD02006

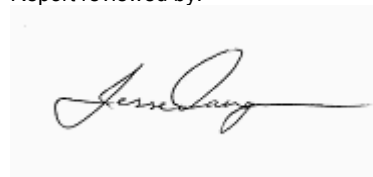
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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



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 Director of QA/QC
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Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

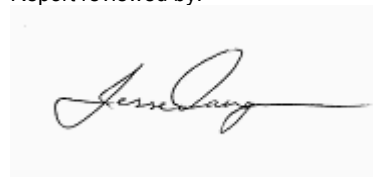
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/10/21	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.0	33.1-42.6	37.90	DMD-TOC-84-Mid
BM	2011/10/21	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.7	33.1-42.6	37.90	DMD-TOC-84-Mid

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/11/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/10/21	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	52.7	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	97.8	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/21	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	99.2	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/21	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	48.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	47.8	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	50.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.4	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	51.3	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/21	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	50.4	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/10/21	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.181	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/10/21	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	51.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.2	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.4	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/10/21	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.1	45-55	50.00	MS-CCV-HIGH
BM	2011/10/21	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	251	225-275	250.00	MS-CCV-HIGH
BM	2011/10/21	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	251	225-275	250.00	MS-CCV-HIGH
BM	2011/10/21	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	103	90-110	100.00	MS-CCV-HIGH
BM	2011/10/21	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.1	45.0-55.0	50.00	MS-CCV-HIGH

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Report reviewed by:

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 Manager
 Laboratory Services

Charlene Rollheiser
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2011/11/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/10/19	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	49.4	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	106	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/19	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	99.9	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/19	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	48.5	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	48.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	48.0	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	48.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	49.8	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	51.7	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
BM	2011/10/19	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	47.9	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/10/19	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	49.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/21	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.183	0.134-0.217	0.18	BZ-QCPHG008
BM	2011/10/19	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	48.9	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.3	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/10/19	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	50.8	45-55	50.00	MS-CCV-HIGH
BM	2011/10/19	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	238	225-275	250.00	MS-CCV-HIGH
BM	2011/10/19	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	250	225-275	250.00	MS-CCV-HIGH
BM	2011/10/19	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	48.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
BM	2011/10/19	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	48.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/10/19	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	47.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/10/19	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.01	5.94-6.06	6.00	CC-pH-158

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Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

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Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62129

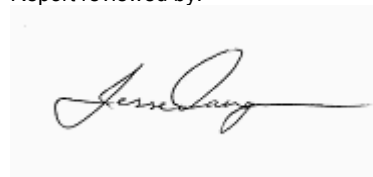
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/10/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	37.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/10/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	39.9	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/10/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.01	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/10/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	41.6	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/10/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.39	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/10/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	38.1	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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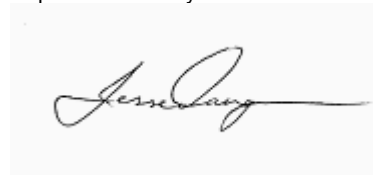
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/10/21	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	39.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/10/21	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	39.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/10/21	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	5.06	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/10/21	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	43.2	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/10/21	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.48	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/10/21	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	39.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

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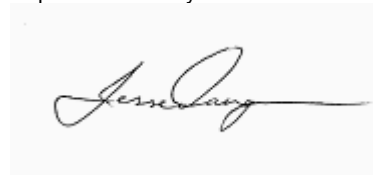
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/10/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.88	0.702-1.052	0.86	NH3SC-001
RC	2011/10/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.767	0.72-0.88	0.80	CC-Anion-113BL
BM	2011/10/21	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	5.06	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/10/24	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	9.17	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 19-OCT-11
Report Date: 28-OCT-11 10:26 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1073886
Project P.O. #: 245297
Job Reference: EC-62129
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1073886-1 WQ1~(11-16729) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-2 WQ3~(11-16730) Sampled By: CLIENT on 18-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-3 WQ4~(11-16731) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-4 WQ5~(11-16732) Sampled By: CLIENT on 18-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-5 WQ6~(11-16733) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-6 WQ7~(11-16734) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-7 WQ8~(11-16735) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-8 WQ9~(11-16736) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276808
L1073886-9 WQ10~(11-16737) Sampled By: CLIENT on 18-OCT-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1073886-9 WQ10~(11-16737) Sampled By: CLIENT on 18-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276809
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-10 WQ11~(11-16738) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-11 WQ12~(11-16739) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-12 WQ13~(11-16740) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-13 WQ14~(11-16741) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-14 WQ DUPLICATE~(11-16742) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-15 FIELD BLANK~(11-16743) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024
L1073886-16 TRIP BLANK~(11-16744) Sampled By: CLIENT on 17-OCT-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	27-OCT-11	27-OCT-11	R2276962
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-OCT-11	28-OCT-11	R2277024

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1073886

Report Date: 28-OCT-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2276809							
WG1376853-3	DUP	L1073886-9						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	27-OCT-11
WG1376853-2	LCS							
Cyanide, Total			116.6		%		80-120	27-OCT-11
WG1376853-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	27-OCT-11
Batch	R2276962							
WG1377257-3	DUP	L1073886-13						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	27-OCT-11
WG1377257-2	LCS							
Cyanide, Total			106.4		%		80-120	27-OCT-11
WG1377257-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	27-OCT-11
CN-WAD-MID-COL-VA								
	Water							
Batch	R2276808							
WG1376844-3	DUP	L1071289-5						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	27-OCT-11
WG1376844-2	LCS							
Cyanide, Weak Acid Diss			100.6		%		80-120	27-OCT-11
WG1376844-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	27-OCT-11
Batch	R2277024							
WG1377503-3	DUP	L1073886-13						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-OCT-11
WG1377503-2	LCS							
Cyanide, Weak Acid Diss			111.1		%		80-120	28-OCT-11
WG1377503-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	28-OCT-11

Quality Control Report

Workorder: L1073886

Report Date: 28-OCT-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6
Contact: KRISTINE CONNOR

Page 2 of 2

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
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.



AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG
5667 70 Street
EDMONTON AB T6B 3P6

Date Received: 16-NOV-11
Report Date: 23-NOV-11 08:38 (MT)
Version: FINAL

Client Phone: 780-940-4147

Certificate of Analysis

Lab Work Order #: L1085601
Project P.O. #: 405817
Job Reference: EC-62363
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1085601-1 WQ1~11-19496 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-2 WQ3~11-19497 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-3 WQ4~11-19498 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-4 WQ5~11-19499 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-5 WQ6~11-19500 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-6 WQ7~11-19501 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-7 WQ8~11-19502 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2289975 R2289979
L1085601-8 WQ911-19503 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-9 WQ10~11-19504 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1085601-9 WQ10~11-19504 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-10 WQ11~11-19505 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-11 WQ12~11-19506 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-12 WQ13~11-19507 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-13 WQ14~11-19508 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-14 WQ DUPLICATE~11-19509 Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-15 FIELD BLANK Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451
L1085601-16 TRIP BLANK Sampled By: CLIENT on 14-NOV-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	22-NOV-11 22-NOV-11	22-NOV-11 22-NOV-11	R2290452 R2290451

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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

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Quality Control Report

Workorder: L1085601

Report Date: 23-NOV-11

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
 5667 70 Street
 EDMONTON AB T6B 3P6

Contact: JESSE DANG

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2289975							
WG1392126-3	DUP	L1085601-5						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-NOV-11
WG1392126-2	LCS							
Cyanide, Total			100.6		%		80-120	22-NOV-11
WG1392126-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	22-NOV-11
Batch	R2290452							
WG1392330-3	DUP	L1085601-16						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-NOV-11
WG1392330-2	LCS							
Cyanide, Total			105.4		%		80-120	22-NOV-11
WG1392330-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	22-NOV-11
CN-WAD-MID-COL-VA								
	Water							
Batch	R2289979							
WG1392127-3	DUP	L1085601-7						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-NOV-11
WG1392127-2	LCS							
Cyanide, Weak Acid Diss			106.1		%		80-120	22-NOV-11
WG1392127-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	22-NOV-11
Batch	R2290451							
WG1392328-3	DUP	L1085601-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	22-NOV-11
WG1392328-2	LCS							
Cyanide, Weak Acid Diss			99.3		%		80-120	22-NOV-11
WG1392328-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	22-NOV-11

Quality Control Report

Workorder: L1085601

Report Date: 23-NOV-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
EDMONTON AB T6B 3P6
Contact: JESSE DANG

Page 2 of 2

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
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.

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

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
RC	2011/12/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	50	50	71	105	53
RC	2011/12/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.105	0.105	0.149	0.214	0.110
RC	2011/12/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.05	0.07	0.07	0.05
RC	2011/12/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.010	0.010	0.047	0.036	0.012
RC	2011/12/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/12/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	2.1	2.1	3.7	4.7	2.2
JO	2011/12/20	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	76	72	100	124	140
JO	2011/12/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	11	14	< 2	2	8
RC	2011/12/16	Turbidity	NTU	APHA 2130-b	0.1	4.4	4.8	1.6	2.4	2.8
RC	2011/12/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2	0.3	0.5	0.5

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
RC	2011/12/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1	38	13	31
RC	2011/12/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.001	< 0.001	0.124	0.102	0.110
RC	2011/12/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	< 0.02	< 0.02	0.16	0.17	0.11
RC	2011/12/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
RC	2011/12/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2011/12/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	< 0.5	< 0.5	18.0	27.6	17.6
JO	2011/12/20	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	4	< 4	80	56	44
JO	2011/12/20	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	8	10	7
RC	2011/12/16	Turbidity	NTU	APHA 2130-b	0.1	0.8	0.6	52	120	58
RC	2011/12/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	< 0.1	< 0.1	0.1	0.2	0.2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

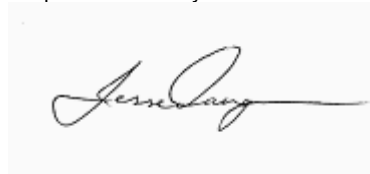
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
AD	2011/12/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.4	---	7.4	4.2	3.6
AD	2011/12/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.7	---	7.4	4.2	3.6

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

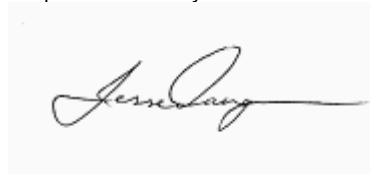
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
AD	2011/12/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.6	< 0.1	0.7	1.0	1.0
AD	2011/12/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.6	< 0.1	0.7	1.0	1.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.229	0.226	0.021	0.023	0.052
BM	2011/12/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0007	0.0006	0.0002	0.0005
BM	2011/12/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0126	0.0126	0.00795	0.0151	0.00923
BM	2011/12/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.001	0.002	< 0.001
BM	2011/12/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000029	0.000033	< 0.000015	0.000019	0.000052
BM	2011/12/20	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0005	0.0005	< 0.0003	< 0.0003	< 0.0003
BM	2011/12/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00017	0.00016	0.00003	0.00004	0.00006
BM	2011/12/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0008	0.0009	0.0004	0.0002	0.0004
BM	2011/12/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.506	0.501	0.175	0.316	0.171
BM	2011/12/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	0.00013	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/12/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0529	0.0529	0.0340	0.0772	0.0251
BM	2011/12/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/12/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00070	0.00071	0.00060	0.00063	0.00066
BM	2011/12/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00045	0.00043	0.00024	0.00022	0.00024
BM	2011/12/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/12/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0901	0.0902	0.102	0.139	0.0880
BM	2011/12/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0098	0.0101	0.0011	0.0008	0.0021
BM	2011/12/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00020	0.00020	0.00011	0.00024	0.00016
BM	2011/12/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0009	0.0009	0.0003	0.0002	0.0004
BM	2011/12/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0112	0.0112	< 0.0005	0.0051	0.0092
BM	2011/12/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/20	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002	< 0.002	1.02	< 0.002	< 0.002
BM	2011/12/20	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00118	0.00071	0.00010
BM	2011/12/20	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0388	0.0234	0.0177
BM	2011/12/20	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	< 0.00005	0.0356	0.00915	0.0131
BM	2011/12/20	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0001	< 0.0001	< 0.0001
BM	2011/12/20	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.001	0.001	0.001
BM	2011/12/20	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.0230	< 0.000015	< 0.000015
BM	2011/12/20	Chromium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	0.0004	< 0.0003	< 0.0003
BM	2011/12/20	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002	0.00054	< 0.00002	< 0.00002
BM	2011/12/20	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0141	< 0.0001	< 0.0001
BM	2011/12/20	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0002	3.35	9.67	4.18
BM	2011/12/20	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.291	< 0.00005	< 0.00005
BM	2011/12/20	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.005	0.007	0.006
BM	2011/12/20	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.935	1.14	0.469
BM	2011/12/21	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/12/20	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00123	0.00060	0.00117
BM	2011/12/20	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00125	< 0.00005	< 0.00005
BM	2011/12/20	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/12/20	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00102	< 0.00005	< 0.00005
BM	2011/12/20	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005	0.0608	0.0394	0.0477
BM	2011/12/20	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005	< 0.00005
BM	2011/12/20	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/20	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002	0.0167	< 0.0002	< 0.0002
BM	2011/12/20	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00018	< 0.00005	< 0.00005
BM	2011/12/20	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0010	< 0.0001	< 0.0001
BM	2011/12/20	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.433	0.0913	< 0.0005
BM	2011/12/20	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.010	0.010	0.003	0.008	0.009
BM	2011/12/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0005	0.0002	0.0004
BM	2011/12/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00860	0.00854	0.00771	0.0147	0.00851
BM	2011/12/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.001	0.002	< 0.001
BM	2011/12/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	0.000017
BM	2011/12/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/12/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	0.00002	0.00003	0.00003
BM	2011/12/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0003	0.0004	0.0002	0.0003
BM	2011/12/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0851	0.0859	0.113	0.144	0.0871
BM	2011/12/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BM	2011/12/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0207	0.0210	0.0287	0.0683	0.0209
BM	2011/12/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/12/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00068	0.00066	0.00056	0.00061	0.00063
BM	2011/12/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00006	0.00005	0.00012	0.00008	0.00010
BM	2011/12/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/12/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0901	0.0901	0.102	0.139	0.0880
BM	2011/12/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0002	0.0002	< 0.0002	0.0003	< 0.0002
BM	2011/12/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00015	0.00016	0.00009	0.00022	0.00015
BM	2011/12/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00018	0.00021	0.00018	< 0.00005	0.00019
BM	2011/12/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0090	0.0079	< 0.0005	0.0051	0.0056
RC	2011/12/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.40	7.48	7.63	7.55	7.52

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:

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 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/19	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
BM	2011/12/19	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00081	0.00070	0.00009
BM	2011/12/19	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0311	0.0234	0.0177
BM	2011/12/19	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.0196	0.00915	0.0131
BM	2011/12/19	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/19	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.002	0.001	< 0.001	0.001	0.001
BM	2011/12/19	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
BM	2011/12/19	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
BM	2011/12/19	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00023	< 0.00002	< 0.00002
BM	2011/12/19	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/19	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	2.35	9.67	4.09
BM	2011/12/19	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	0.005	0.007	0.006
BM	2011/12/19	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.903	1.14	0.466
BM	2011/12/21	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
BM	2011/12/19	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00096	0.00058	0.00108
BM	2011/12/19	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00068	< 0.00005	< 0.00005
BM	2011/12/19	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
BM	2011/12/19	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005	0.0552	0.0394	0.0477
BM	2011/12/19	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
BM	2011/12/19	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
BM	2011/12/19	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
BM	2011/12/19	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	0.376	0.0913	< 0.0005
RC	2011/12/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.50	5.14	7.15	6.56	7.09

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

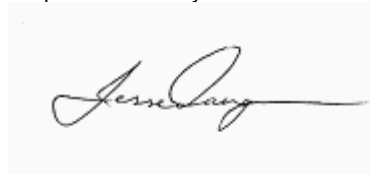
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	14.7	14.8	20.6	30.8	14.5
BM	2011/12/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.38	3.42	4.70	6.40	3.38
BM	2011/12/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
BM	2011/12/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.7	1.0	< 0.5
BM	2011/12/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.53	6.54	5.25	7.60	6.47
BM	2011/12/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.3	3.3	3.4	4.5	3.3
BM	2011/12/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	50.6	51.0	70.8	103	50.1

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Report reviewed by:



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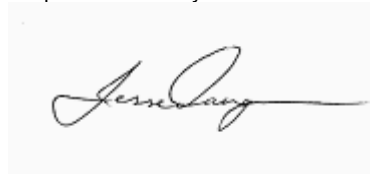
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	13.2	8.6	12.3
BM	2011/12/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50	2.06	1.79	1.55
BM	2011/12/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.07	0.16	0.07
BM	2011/12/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	2.6	2.1	2.2
BM	2011/12/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	< 0.01	7.96	9.03	7.37
BM	2011/12/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	4.9	1.8	4.1
BM	2011/12/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	41.5	28.9	37.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

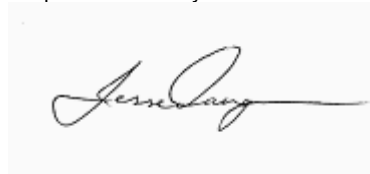
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	14.7	14.8	20.6	30.8	14.5
BM	2011/12/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.45	3.43	4.71	6.42	3.38
BM	2011/12/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	0.02	< 0.02	< 0.02	< 0.02
BM	2011/12/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6	0.5	0.8	1.0	< 0.5
BM	2011/12/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.58	6.54	5.25	7.60	6.47
BM	2011/12/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.4	3.4	3.5	4.5	3.3
BM	2011/12/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	50.9	51.1	70.8	103	50.1

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
BM	2011/12/20	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	13.2	8.6	12.3
BM	2011/12/20	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50	2.14	1.79	1.59
BM	2011/12/20	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	0.16	0.15	0.07
BM	2011/12/20	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	3.5	2.1	2.2
BM	2011/12/20	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01	8.89	9.03	7.37
BM	2011/12/20	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	5.1	1.9	4.2
BM	2011/12/20	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0	41.9	28.8	37.3

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2011/12/15
Report Date: 2012/01/12

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

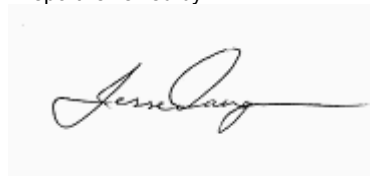
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21060	11-21060-D	11-21061	11-21062	11-21063
					Client ID:	WQ7	WQ7	WQ13	WQ14	WQ Duplicate
					Sample Date:	2011-12-13 00:00	Lab Duplicate	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
JO	2011/12/20	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2011/12/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.008	0.004	0.003
BM	2011/12/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	0.006	< 0.001	0.001
JO	2011/12/20	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.11	0.13	1.02	0.10	< 0.08

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MDL - Method Detection Limit

Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Date Received: 2011/12/15
Report Date: 2012/01/12

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

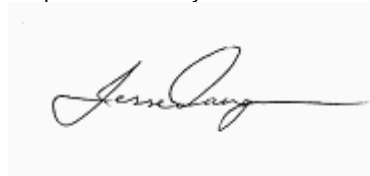
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	11-21064	11-21065	11-21066	11-21067	11-21068
					Client ID:	Field Blank	Trip Blank	BW0173	BW0101	BW0161
					Sample Date:	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00	2011-12-13 00:00
					MDL					
JO	2011/12/20	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	0.03	< 0.02
RC	2011/12/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003	< 0.003
BM	2011/12/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	0.060	0.148	0.061
JO	2011/12/20	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Report Date: 2012/01/12

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2011/12/15	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	59	56-77	65.00	QC-ALK/F-43
RC	2011/12/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.75	2.54-2.94	2.79	CC-EC-0.02M-39
RC	2011/12/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-43
RC	2011/12/15	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.64	1.44-1.76	1.60	CC-Anion-114B
RC	2011/12/15	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.598	0.54-0.66	0.60	CC-Anion-114B
RC	2011/12/15	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	27.0	25.2-30.8	28.00	CC-Anion-114B
JO	2011/12/20	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	672	552-934	743.00	QCP-C2-SLD02006
JO	2011/12/20	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	29	22.2-31.7	27.00	QCP-C2-SLD02006
RC	2011/12/16	Turbidity	NTU	APHA 2130-b	0.1	9.8	8.5-11.5	10.00	QC-Turb-4
RC	2011/12/15	Chloride-D	mg/L (ppm)	APHA 4110	0.1	3.9	3.6-4.4	4.00	CC-Anion-114B

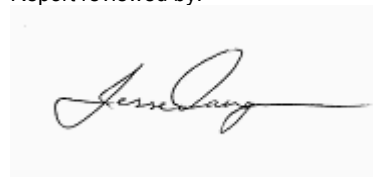
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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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 Manager
 Laboratory Services



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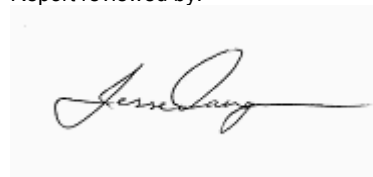
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
AD	2011/12/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.8	33.1-42.6	37.90	DMD-TOC-85-Mid
AD	2011/12/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	37.8	33.1-42.6	37.90	DMD-TOC-85-Mid

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Project No. VE52095

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Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/12/20	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	52.8	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	99.6	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/20	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	98.4	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/20	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.6	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	48.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	48.9	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	49.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.2	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	50.6	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/20	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	47.4	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/12/20	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	52.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/21	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.272	0.212-0.340	0.28	C2-QCPHG009
BM	2011/12/20	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.0	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.6	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/12/20	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	50.8	45-55	50.00	MS-CCV-HIGH
BM	2011/12/20	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	240	225-275	250.00	MS-CCV-HIGH
BM	2011/12/20	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	249	225-275	250.00	MS-CCV-HIGH
BM	2011/12/20	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90-110	100.00	MS-CCV-HIGH
BM	2011/12/20	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/20	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.6	45.0-55.0	50.00	MS-CCV-HIGH

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Report reviewed by:



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ANALYTICAL REPORT

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Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

Analyst	Date of Analysis (yyyy/mm/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/12/19	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	53.2	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	106	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/19	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/19	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.5	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	52.0	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	50.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.6	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	53.2	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	99.4	90.0-110	100.00	MS-CCV-HIGH
BM	2011/12/19	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	51.0	45.0-55.5	50.00	MS-CCV-HIGH
BM	2011/12/19	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/21	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.272	0.212-0.340	0.28	C2-QCPHG009
BM	2011/12/19	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.1	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.7	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.5	11.25-13.75	12.50	MS-CCV-HIGH
BM	2011/12/19	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	51.1	45-55	50.00	MS-CCV-HIGH
BM	2011/12/19	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	251	225-275	250.00	MS-CCV-HIGH
BM	2011/12/19	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	253	225-275	250.00	MS-CCV-HIGH
BM	2011/12/19	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.9	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
BM	2011/12/19	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.4	45.0-55.0	50.00	MS-CCV-HIGH
BM	2011/12/19	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	50.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2011/12/15	pH @ 25°C BC-D	---	APHA 4500H	0.01	5.98	5.92-6.08	6.00	QC-pH-1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/01/12

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

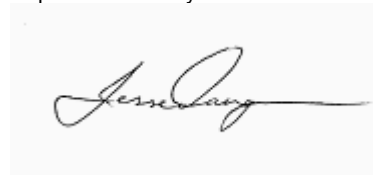
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/12/19	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	38.6	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/12/19	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	39.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/12/19	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	5.04	4.50-5.50	5.00	QCP-QCS-1 (CCV-Cats)
BM	2011/12/19	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	43.7	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/12/19	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.35	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/12/19	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	39.0	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/01/12

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

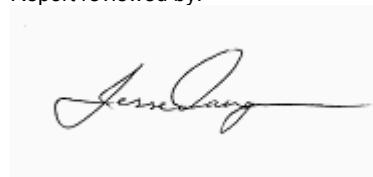
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
BM	2011/12/20	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	37.8	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/12/20	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	40.3	33.8-41.3	37.50	QCP-QCS (CCV-Cats)
BM	2011/12/20	Phosphorus-T	mg/L (ppm)	APHA 3125 B	0.02	4.98	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
BM	2011/12/20	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	42.7	38.3-46.8	42.50	QCP-QCS (CCV-Cats)
BM	2011/12/20	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.30	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
BM	2011/12/20	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	38.7	33.8-41.3	37.50	QCP-QCS (CCV-Cats)

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/01/12

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62562

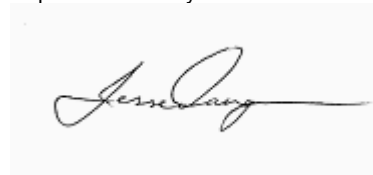
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JO	2011/12/20	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.64	0.47-0.74	0.61	NH3SC-001
RC	2011/12/15	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.770	0.72-0.88	0.80	CC-Anion-114BL
BM	2011/12/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3125 B	0.020	4.98	4.50-5.50	5.00	QCP-QCS (CCV-Cats)
JO	2011/12/20	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	7.82	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 14-DEC-11
Report Date: 28-DEC-11 16:40 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1095727
Project P.O. #: 405829
Job Reference: EC-62544
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1095727-1 EC-62544~(11-20955) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-2 EC-62544~(11-20956) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-3 EC-62544~(11-20957) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-4 EC-62544~(11-20958) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-5 EC-62544~(11-20959) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-6 EC-62544~(11-20960) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-7 EC-62544~(11-20961) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-8 EC-62544~(11-20962) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	28-DEC-11 24-DEC-11	28-DEC-11 24-DEC-11	R2306805 R2306146
L1095727-9 EC-62544~(11-20963) Sampled By: CLIENT on 12-DEC-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L1095727

Report Date: 28-DEC-11

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
 5667 - 70 STREET
 EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2306805							
WG1409879-3	DUP	L1095727-6						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	28-DEC-11
WG1409879-2	LCS							
Cyanide, Total			113.5		%		80-120	28-DEC-11
WG1409879-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	28-DEC-11
CN-WAD-MID-COL-VA								
	Water							
Batch	R2306146							
WG1409482-2	LCS							
Cyanide, Weak Acid Diss			112.7		%		80-120	24-DEC-11
WG1409482-3	LCS							
Cyanide, Weak Acid Diss			103.6		%		80-120	24-DEC-11
WG1409482-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	24-DEC-11

Quality Control Report

Workorder: L1095727

Report Date: 28-DEC-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Page 2 of 3

Contact: KRISTINE CONNOR

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1095727

Report Date: 28-DEC-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6
Contact: KRISTINE CONNOR

Page 3 of 3

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Total Cyanide by H2SO4 Distillation							
	1	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	2	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	3	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	4	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	5	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	6	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	7	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	8	12-DEC-11	28-DEC-11 10:00	14	16	days	EHT
	9	12-DEC-11	28-DEC-11 10:00	14	16	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 L1095727 were received on 14-DEC-11 14:45.

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.



AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 15-DEC-11
Report Date: 29-DEC-11 16:41 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1096214
Project P.O. #: 305834
Job Reference: EC-62562
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1096214-1 WQ7~(11-21060) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-2 WQ13~(11-21061) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-3 WQ14~(11-21062) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-4 WQ DUPLICATE~(11-21063) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-5 FIELD BLANK~(11-21064) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-6 TRIP BLANK~(11-21065) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-7 BW0173~(11-21066) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-8 BW0101~(11-21067) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER Miscellaneous Parameters							
Cyanide, Total	<0.0050		0.0050	mg/L	29-DEC-11	29-DEC-11	R2307290
Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	28-DEC-11	29-DEC-11	R2306876
L1096214-9 BW0161~(11-21068) Sampled By: CLIENT on 13-DEC-11 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L1096214

Report Date: 29-DEC-11

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
 5667 - 70 STREET
 EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2307290							
WG1410348-3	DUP	L1096214-9						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-DEC-11
WG1410348-2	LCS							
Cyanide, Total			108.1		%		80-120	29-DEC-11
WG1410348-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	29-DEC-11
CN-WAD-MID-COL-VA								
	Water							
Batch	R2306876							
WG1410237-4	DUP	L1096214-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	29-DEC-11
WG1410237-2	LCS							
Cyanide, Weak Acid Diss			99.4		%		80-120	29-DEC-11
WG1410237-3	LCS							
Cyanide, Weak Acid Diss			107.2		%		80-120	29-DEC-11
WG1410237-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	29-DEC-11

Quality Control Report

Workorder: L1096214

Report Date: 29-DEC-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Page 2 of 3

Contact: KRISTINE CONNOR

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1096214

Report Date: 29-DEC-11

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6
Contact: KRISTINE CONNOR

Page 3 of 3

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Total Cyanide by H2SO4 Distillation							
	1	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	2	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	3	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	4	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	5	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	6	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	7	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	8	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
	9	13-DEC-11	29-DEC-11 10:05	14	16	days	EHT
Weak Acid Dissociable Cyanide by Dist.							
	1	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	2	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	3	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	4	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	5	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	6	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	7	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	8	13-DEC-11	28-DEC-11 23:20	14	15	days	EHT
	9	13-DEC-11	28-DEC-11 23:20	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 L1096214 were received on 15-DEC-11 14:27.

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.

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
RC	2012/01/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	53	51	57	73	72
RC	2012/01/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.108	0.104	0.115	0.153	0.151
RC	2012/01/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.07	0.05	0.07	0.07
JL	2012/01/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.030	0.031	0.021	0.062	0.060
JL	2012/01/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.005	0.005	0.006	0.005	0.009
JL	2012/01/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.5	1.5	2.6	4.1	4.4
EL	2012/01/23	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	68	---	76	120	108
EL	2012/01/19	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	< 2	< 2	15
RC	2012/01/18	Turbidity	NTU	APHA 2130-b	0.1	1.3	1.3	0.9	0.7	3.3
JL	2012/01/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.3	0.3	0.4

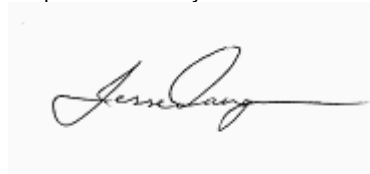
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
RC	2012/01/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	45	23	75	102	71
RC	2012/01/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.096	0.048	0.159	0.207	0.150
RC	2012/01/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.03	0.07	0.07	0.07
JL	2012/01/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.030	0.013	0.065	0.073	0.068
JL	2012/01/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.005	0.009	0.006	0.007	0.007
JL	2012/01/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	2.7	0.9	4.4	4.9	4.4
EL	2012/01/23	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	64	40	104	128	108
EL	2012/01/19	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	6	< 2	< 2	3	5
RC	2012/01/18	Turbidity	NTU	APHA 2130-b	0.1	1.7	0.8	0.9	3.0	1.5
JL	2012/01/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.4	0.6	0.4

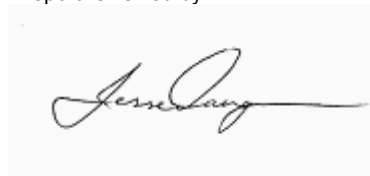
All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2012/01/18	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	< 1	< 1
RC	2012/01/18	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	< 0.001	< 0.001
RC	2012/01/18	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	< 0.02	< 0.02
JL	2012/01/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005
JL	2012/01/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	0.004
JL	2012/01/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	< 0.5	< 0.5
EL	2012/01/23	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	< 4	< 4
EL	2012/01/19	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2
RC	2012/01/18	Turbidity	NTU	APHA 2130-b	0.1	0.3	0.3
JL	2012/01/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	< 0.1	< 0.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
RC	2012/01/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.043	0.043	0.025	0.017	0.071
RC	2012/01/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0011	0.0011	0.0004	0.0005	0.0006
RC	2012/01/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00531	0.00529	0.00874	0.00630	0.00852
RC	2012/01/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.002	0.001	0.002	0.002
RC	2012/01/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000032	0.000036	< 0.000015	< 0.000015	< 0.000015
RC	2012/01/23	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0009	0.0009	< 0.0003	< 0.0003	< 0.0003
RC	2012/01/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00000	0.00002	0.00004	< 0.00002	0.00004
RC	2012/01/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0073	0.0074	< 0.0001	< 0.0001	0.0002
RC	2012/01/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0944	0.0948	0.112	0.0211	0.190
RC	2012/01/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00084	0.00084	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00655	0.00660	0.0182	0.00588	0.0245
RC	2012/01/25	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/01/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00078	0.00076	0.00067	0.00050	0.00061
RC	2012/01/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00008	0.00011	0.00019	0.00023
RC	2012/01/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/01/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0866	0.0866	0.0957	0.104	0.109
RC	2012/01/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0013	0.0014	0.0009	0.0004	0.0038
RC	2012/01/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00018	0.00018	0.00020	0.00009	0.00012
RC	2012/01/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0016	0.0016	0.0002	0.0001	0.0003
RC	2012/01/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0124	0.0126	0.0102	0.0014	0.0011
RC	2012/01/18	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
RC	2012/01/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.039	0.072	0.061	0.044	0.051
RC	2012/01/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0002	0.0006	0.0002	0.0005
RC	2012/01/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00787	0.00604	0.00898	0.0153	0.00821
RC	2012/01/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	< 0.001	0.002	0.002	0.001
RC	2012/01/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/01/23	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/01/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00003	0.00004	0.00005	0.00004
RC	2012/01/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0001
RC	2012/01/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0483	0.192	0.181	0.478	0.156
RC	2012/01/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00353	0.0143	0.0315	0.0968	0.0228
RC	2012/01/25	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/01/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00073	0.00056	0.00061	0.00069	0.00061
RC	2012/01/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00022	0.00015	0.00021
RC	2012/01/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/01/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0886	0.0566	0.114	0.145	0.108
RC	2012/01/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0017	0.0012	0.0025	0.0013	0.0023
RC	2012/01/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00024	0.00018	0.00012	0.00030	0.00012
RC	2012/01/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	< 0.0001	0.0003	0.0002	0.0003
RC	2012/01/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0010	0.0021	0.0012	0.0142	0.0059
RC	2012/01/18	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2012/01/23	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.002	< 0.002
RC	2012/01/23	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
RC	2012/01/23	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
RC	2012/01/23	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
RC	2012/01/23	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002
RC	2012/01/23	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0015
RC	2012/01/23	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
RC	2012/01/23	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	< 0.00005
RC	2012/01/25	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
RC	2012/01/23	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
RC	2012/01/23	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005	< 0.000005
RC	2012/01/23	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002	< 0.0002
RC	2012/01/23	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/23	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/23	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005
RC	2012/01/18	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

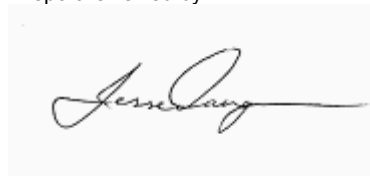
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
RC	2012/01/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.006	0.006	0.005	< 0.002	0.003
RC	2012/01/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0011	0.0011	0.0004	0.0005	0.0005
RC	2012/01/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00485	0.00480	0.00841	0.00605	0.00766
RC	2012/01/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/01/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0009	0.0009	< 0.0003	< 0.0003	< 0.0003
RC	2012/01/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00002	0.00002	0.00003	< 0.00002	0.00002
RC	2012/01/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	0.0002
RC	2012/01/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0271	0.0275	0.0542	0.0036	0.0655
RC	2012/01/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00450	0.00446	0.0166	0.00135	0.0167
RC	2012/01/25	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/01/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00076	0.00076	0.00066	0.00050	0.00056
RC	2012/01/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00009	0.00010	0.00010	0.00019	0.00020
RC	2012/01/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/01/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0866	0.0866	0.0957	0.104	0.107
RC	2012/01/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0002	0.0003	< 0.0002	< 0.0002	< 0.0002
RC	2012/01/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00016	0.00016	0.00018	0.00008	0.00010
RC	2012/01/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00150	0.00150	0.00020	0.00013	0.00020
RC	2012/01/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0087	0.0087	0.0015	0.0014	0.0011
RC	2012/01/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.46	7.57	7.58	7.65	7.62

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
RC	2012/01/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.014	0.033	0.010	0.003	0.005
RC	2012/01/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0002	0.0006	0.0002	0.0005
RC	2012/01/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00738	0.00563	0.00808	0.0144	0.00757
RC	2012/01/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/01/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/01/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00003	0.00003	0.00004	0.00003
RC	2012/01/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0002	< 0.0001	0.0001
RC	2012/01/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0159	0.113	0.0787	0.147	0.0632
RC	2012/01/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/01/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00152	0.0108	0.0245	0.0772	0.0185
RC	2012/01/25	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/01/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00068	0.00052	0.00057	0.00065	0.00054
RC	2012/01/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00005	0.00020	0.00013	0.00020
RC	2012/01/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/01/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0870	0.0554	0.112	0.145	0.106
RC	2012/01/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0005	< 0.0002	< 0.0002	0.0002
RC	2012/01/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00021	0.00015	0.00011	0.00028	0.00010
RC	2012/01/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00020	0.00005	0.00020	0.00007	0.00019
RC	2012/01/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0009	0.0017	0.0011	0.0090	0.0026
RC	2012/01/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.51	7.10	7.54	7.44	7.59

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

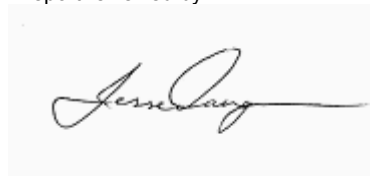
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2012/01/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	< 0.002
RC	2012/01/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
RC	2012/01/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
RC	2012/01/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
RC	2012/01/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002
RC	2012/01/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
RC	2012/01/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	< 0.00005
RC	2012/01/25	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008
RC	2012/01/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
RC	2012/01/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005	< 0.000005
RC	2012/01/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/01/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002
RC	2012/01/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/01/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005
RC	2012/01/18	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.60	5.23

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
RC	2012/01/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	12.7	12.6	15.0	21.2	20.9
RC	2012/01/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.06	3.07	3.42	4.80	4.70
RC	2012/01/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.04	0.04	< 0.01	0.01	0.01
RC	2012/01/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.6	0.6	< 0.5	0.8	0.9
RC	2012/01/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	10.2	10.2	7.28	5.27	6.11
RC	2012/01/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.6	3.6	3.3	3.5	3.5
RC	2012/01/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	44.2	44.2	51.7	72.6	71.6

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
RC	2012/01/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	12.6	6.8	21.9	30.4	20.8
RC	2012/01/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.55	1.19	4.83	6.30	4.61
RC	2012/01/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	0.01	< 0.01	0.01
RC	2012/01/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.9	1.0	0.8
RC	2012/01/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	7.43	4.09	6.33	8.61	610
RC	2012/01/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.0	2.0	3.6	4.3	3.4
RC	2012/01/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	41.9	21.8	74.6	102	70.8

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

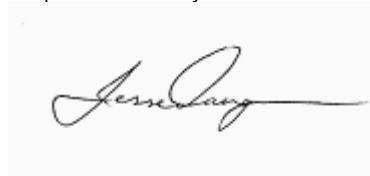
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2012/01/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
RC	2012/01/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50	< 0.50
RC	2012/01/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
RC	2012/01/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
RC	2012/01/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01
RC	2012/01/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5
RC	2012/01/18	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

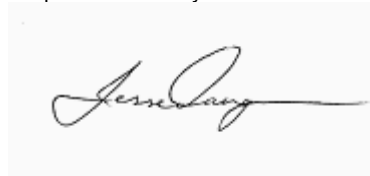
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
RC	2012/01/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	12.7	12.8	15.4	21.8	22.0
RC	2012/01/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.00	3.03	3.45	4.89	4.79
RC	2012/01/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.04	0.04	< 0.02	< 0.02	< 0.02
RC	2012/01/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6	0.6	0.5	0.9	0.9
RC	2012/01/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	10.5	10.8	7.74	5.51	6.16
RC	2012/01/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.6	3.6	3.4	3.6	3.6
RC	2012/01/18	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	44.0	44.4	52.7	74.6	74.6

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

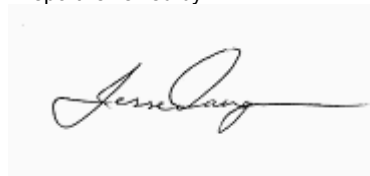
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
RC	2012/01/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	13.2	7.2	23.2	31.2	21.9
RC	2012/01/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	2.60	1.24	4.98	6.30	4.74
RC	2012/01/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/01/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.9	1.0	0.9
RC	2012/01/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	7.56	4.10	6.50	8.73	6.13
RC	2012/01/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.1	2.1	3.8	4.4	3.6
RC	2012/01/18	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	43.8	23.1	78.4	104	74.1

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
RC	2012/01/23	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
RC	2012/01/23	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50	< 0.50
RC	2012/01/23	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02
RC	2012/01/23	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
RC	2012/01/23	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01	< 0.01
RC	2012/01/23	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5
RC	2012/01/18	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
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Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

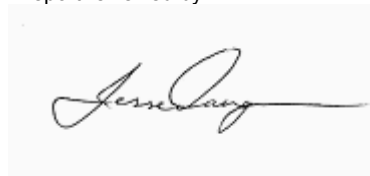
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1350	12-1350-D	12-1351	12-1352	12-1353
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-01-12 00:00	Lab Duplicate	N/P	2012-01-12 00:00	2012-01-12 00:00
					MDL					
EL	2012/01/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/01/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.9	1.9	3.7	8.0	7.7
RC	2012/01/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.9	1.9	3.7	8.0	7.7
JL	2012/01/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.037	0.037	0.008	0.019	0.010
RC	2012/01/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.044	0.041	0.005	0.019	0.020
EL	2012/01/22	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	0.16	0.15

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
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Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

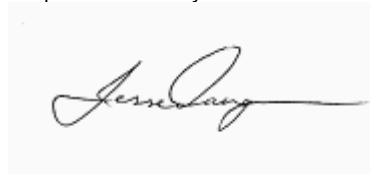
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1354	12-1355	12-1356	12-1357	12-1358
					Client ID:	WQ10	WQ12	WQ13	WQ14	WQ Duplicate
					Sample Date:	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	2012-01-12 00:00	N/P
					MDL					
EL	2012/01/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/01/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.7	6.1	7.6	3.8	7.8
RC	2012/01/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.7	6.1	7.6	5.5	9.8
JL	2012/01/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.008	< 0.003	0.015	0.014	0.013
RC	2012/01/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.007	0.007	0.004	0.019	0.010
EL	2012/01/22	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.10	< 0.08	< 0.08	0.16

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
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 Laboratory Services



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 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/01/18
Report Date: 2012/02/02

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

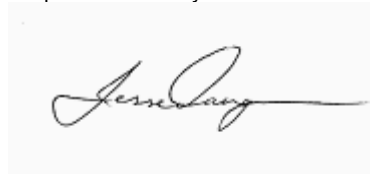
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1359	12-1360
					Client ID:	Field Blank	Trip Blank
					Sample Date:	N/P	N/P
					MDL		
EL	2012/01/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02
RC	2012/01/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.5	< 0.1
RC	2012/01/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	0.5	< 0.1
JL	2012/01/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2012/01/20	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	< 0.001	< 0.001
EL	2012/01/22	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/01/17	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	59	56-77	65.00	QC-ALK/F-44
RC	2012/01/17	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.76	2.54-2.94	2.79	CC-EC-0.02M-40
RC	2012/01/17	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.53	0.44-0.58	0.50	QC-ALK/F-44
JL	2012/01/20	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.61	1.44-1.76	1.60	CC-Anion-114B
JL	2012/01/20	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.624	0.54-0.66	0.60	CC-Anion-114B
JL	2012/01/20	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	26.9	25.2-30.8	28.00	CC-Anion-114B
EL	2012/01/23	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-B	4	848	577 - 977	777.00	C2-SLD02006
EL	2012/01/19	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	30	22.2-31.7	27.00	QCP-E2-SLD02008
RC	2012/01/17	Turbidity	NTU	APHA 2130-b	0.1	9.8	8.5-11.5	10.00	QC-Turb-4
JL	2012/01/20	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.2	3.6-4.4	4.00	CC-Anion-114B

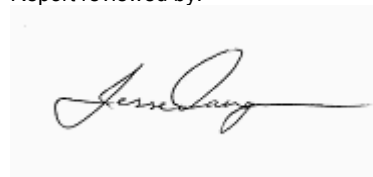
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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/01/23	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	50.7	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	98.7	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/23	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	98.8	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/23	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	49.5	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	49.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	48.3	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.1	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	54.1	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/23	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	51.3	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/01/23	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/25	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.283	0.212-0.340	0.28	C2-QCPHG009
RC	2012/01/23	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	49.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	49.6	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.8	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/01/23	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/01/23	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	256	225-275	250.00	MS-CCV-HIGH
RC	2012/01/23	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	248	225-275	250.00	MS-CCV-HIGH
RC	2012/01/23	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90-110	100.00	MS-CCV-HIGH
RC	2012/01/23	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/23	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.0	45.0-55.0	50.00	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/01/20	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	52.8	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	110	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/20	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/20	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.7	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	47.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	48.0	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	48.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	50.3	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	48.1	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	95.4	90.0-110	100.00	MS-CCV-HIGH
RC	2012/01/20	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	48.8	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/01/20	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	52.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/25	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.283	0.212-0.340	0.28	C2-QCPHG009
RC	2012/01/20	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	50.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	52.0	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.0	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/01/20	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	51.2	45-55	50.00	MS-CCV-HIGH
RC	2012/01/20	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	236	225-275	250.00	MS-CCV-HIGH
RC	2012/01/20	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	247	225-275	250.00	MS-CCV-HIGH
RC	2012/01/20	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	94.3	90-110	100.00	MS-CCV-HIGH
RC	2012/01/20	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/20	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	49.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/01/18	pH @ 25°C BC-D	---	APHA 4500H	0.01	5.99	5.92-6.08	6.00	QC-pH-2

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/01/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	24.8	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/01/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	25.2	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/01/20	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	254	225-275	250.00	MS-CCV-HIGH
RC	2012/01/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	25.1	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/01/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	2.42	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
RC	2012/01/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	24.5	22.5-27.6	25.10	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
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Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/01/23	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	25.3	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/01/23	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	24.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/01/23	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	244	225-275	250.00	MS-CCV-HIGH
RC	2012/01/23	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	25.1	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/01/23	Silicon-T	mg/L (ppm)	APHA 3125 B	0.01	2.49	2.10-2.57	2.33	QCP-QCS (CCV-Cats)
RC	2012/01/23	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	24.4	22.5-27.6	25.10	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

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 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/02/02

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62667

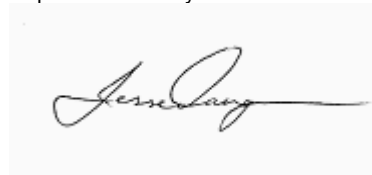
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
EL	2012/01/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.59	0.47-0.74	0.61	NH3SC-001
RC	2012/01/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-86-Low
RC	2012/01/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-86-Low
JL	2012/01/20	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.796	0.72-0.88	0.80	CC-Anion-114BL
RC	2012/01/20	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	235	225-275	250.00	MS-CCV-HIGH
EL	2012/01/22	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	8.01	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

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Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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AMEC Environment & Infrastructure
ATTN: Bruce Ott
600 - 4445 Lougheed Hwy
Burnaby BC V5C 0E4

Date Received: 19-JAN-12
Report Date: 06-FEB-12 14:45 (MT)
Version: FINAL

Client Phone: 604-473-5315

Certificate of Analysis

Lab Work Order #: L1105609
Project P.O. #: NOT SUBMITTED
Job Reference: VE52095
C of C Numbers:
Legal Site Desc:

Comments: Please find the Cyanate results at the end of the report.

Selam Worku
Account Manager

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

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1105609-1	L1105609-2	L1105609-3	L1105609-4	L1105609-5
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date					
		Sampled Time					
		Client ID	WQ3	WQ7	WQ8	WQ9	WQ10
Grouping	Analyte						
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)		<0.50	<0.50	<0.50	<0.50	<0.50

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1105609-6	L1105609-7	L1105609-8	L1105609-9	L1105609-10
		Description	WATER	WATER	WATER	WATER	WATER
		Sampled Date					
		Sampled Time					
		Client ID	WQ12	WQ13	WQ14	WQ FIELD BLANK	WQ TRIP BLANK
Grouping	Analyte						
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)		<0.50	<0.50	<0.50	<0.50	<0.50

ALS ENVIRONMENTAL ANALYTICAL REPORT

Grouping	Analyte	Sample ID Description Sampled Date Sampled Time Client ID	L1105609-11 WATER WQ DUPLICATE				
WATER							
Cyanides	Thiocyanate (SCN) (mg/L)		<0.50				

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.

** 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

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: L1105609

Report Date: 06-FEB-12

Page 1 of 2

Client: AMEC Environment & Infrastructure
 # 600 - 4445 Lougheed Hwy
 Burnaby BC V5C 0E4
 Contact: Bruce Ott

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-SCN-VA		Water						
Batch	R2315650							
WG1418989-2 CRM		VA-SCN-LOW-CONTROL						
Thiocyanate (SCN)			100.4		%		85-115	20-JAN-12
WG1418989-3 CRM		VA-SCN-HIGH-CONTROL						
Thiocyanate (SCN)			103.0		%		85-115	20-JAN-12
WG1418989-4 DUP		L1105609-8						
Thiocyanate (SCN)		<0.50	<0.50	RPD-NA	mg/L	N/A	20	20-JAN-12
WG1418989-1 MB								
Thiocyanate (SCN)			<0.50		mg/L		0.5	20-JAN-12

Quality Control Report

Workorder: L1105609

Report Date: 06-FEB-12

Page 2 of 2

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
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.

ANALYSIS REPORT

DATE: January 26/12
 PROJECT No: 403-1015



APPROVED BY: *[Signature]*

CLIENT: ALS Environmental
 8081 Lougheed Highway
 Burnaby, B. C
 V5A 1W9
 CONTACT: Selam Worku

445-5600 Parkwood Way
 Richmond, B.C.
 V6V 2M2
 Tel. 604 273-3600
 Fax 604 273-3609

COMMENTS: Cyanate* analysis results for samples received January 20/12
 Samples preserved with NaOH

Sample	Date Submitted	Initial Ammonia concentration mgN/L	Ammonia After hydrolization mgN/L	CNO* mg/L	Log In
L1105609-1 WQ3	Jan. 20/12	<0.05 (<0.05)	<0.05 (<0.05)	<1	120120C-01
L1105609-2 WQ7	Jan. 20/12	<0.05	<0.05	<1	120120C-02
L1105609-3 WQ8	Jan. 20/12	<0.05	0.056	<1	120120C-03
L1105609-4 WQ9	Jan. 20/12	<0.05	<0.05	<1	120120C-04
L1105609-5 WQ10	Jan. 20/12	<0.05	<0.05	<1	120120C-05
L1105609-6 WQ12	Jan. 20/12	<0.05	<0.05	<1	120120C-06
L1105609-7 WQ13	Jan. 20/12	<0.05	<0.05	<1	120120C-07
L1105609-8 WQ14	Jan. 20/12	<0.05	<0.05	<1	120120C-08
L1105609-9 WQ Field Blank	Jan. 20/12	<0.05	<0.05	<1	120120C-09
L1105609-10 WQ Trip Blank	Jan. 20/12	<0.05	<0.05	<1	120120C-10
L1105609-11 WQ Duplicate	Jan. 20/12	<0.05	<0.05	<1	120120C-11
QC True Value		1.00			
QC Found Value		1.00			

Results in parenthesis are for duplicate analysis

Note: Detection Limit increase due to ammonia background in acid used for neutralization

* Standard Method 4500CN-L. Cyanates . Ammonia analysis by 4500-NH3 F. Phenate method (with modifications)



Report To				Service Requested (Rush for routine analysis subject to availability)			
Company: AMEC		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other		<input checked="" type="radio"/> Regular (Default)			
Contact: Bruce Ott		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax		<input type="radio"/> Priority (Specify Date Required → →) Surcharges apply			
Address: Suite 600, 4445 Lougheed Highway, Burnaby, B.C. V5C 0E4		Email 1: bruce.ott@amec.com		<input type="radio"/> Emergency (1 Business Day) - 100% Surcharge			
Phone: (604)295-4758 Fax: (604)294-4664		Email 2:		<input type="radio"/> For Emergency < 1 Day, ASAP or Weekend - Contact ALS			
Invoice To Same as Report ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				Analysis Request			
Company:		Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)			
Contact:		Job #: VE52095		P		P	
Address:		PO / AFE:					
Phone:		LSD:					
Fax:		Quote #: Q28456					
Lab Work Order # (lab use only)		ALS Contact:		Cyanate		Thiocyanate	
L1105609		Sampler:					
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Cyanate	Thiocyanate	Number of Containers
	WQ3			Water	X	X	2
	WQ7			Water	X	X	2
	WQ8			Water	X	X	2
	WQ9			Water	X	X	2
	WQ10			Water	X	X	2
	WQ12			Water	X	X	2
	WQ13			Water	X	X	2
	WQ14			Water	X	X	2
	WQ FIELD BLANK			Water	X	X	2
	WQ TRIP BLANK			Water	X	X	2
	WQ DUPLICATE			Water	X	X	2
Special Instructions / Regulations / Hazardous Details							
<p>Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.</p> <p>By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.</p> <p>Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.</p>							
SHIPMENT_RELEASE (client use):			SHIPMENT_RECEPTION (lab use only):			SHIPMENT_VERIFICATION (lab use only):	
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:
L. Nordin	17-Jan-11	14:00	Brittany	Jan.19	8:55	-1.5 °C	
							Observations: Yes / No ? If Yes add SIF

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
RC	2012/02/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	51	52	64	80	74
RC	2012/02/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.103	0.103	0.131	0.165	0.154
RC	2012/02/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.07	0.06	0.07	0.06
JL	2012/02/16	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.020	0.019	0.013	0.028	0.025
JL	2012/02/16	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.007	0.006	0.005	0.010	0.009
JL	2012/02/16	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.6	1.5	3.4	4.7	4.6
EL	2012/02/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	56	48	76	100	88
EL	2012/02/14	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	4	5	2	3	< 2
RC	2012/02/15	Turbidity	NTU	APHA 2130-b	0.1	2.2	1.7	1.7	2.2	1.1
JL	2012/02/16	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	0.4	0.4	0.4

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
RC	2012/02/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	51	26	75	< 1	< 1
RC	2012/02/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.106	0.054	0.156	< 0.001	< 0.001
RC	2012/02/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.03	0.07	< 0.02	< 0.02
JL	2012/02/16	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.012	0.034	0.023	< 0.005	< 0.005
JL	2012/02/16	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.006	0.009	0.009	< 0.003	< 0.003
JL	2012/02/16	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.2	1.0	4.7	< 0.5	< 0.5
EL	2012/02/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	60	52	112	< 4	< 4
EL	2012/02/14	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	< 2	< 2	< 2
RC	2012/02/15	Turbidity	NTU	APHA 2130-b	0.1	0.4	1	1.2	0.3	0.5
JL	2012/02/16	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2	0.4	0.1	< 0.1

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
RC	2012/02/15	Alkalinity as CaCO3	mg/L (ppm)	APHA 2320	1	62
RC	2012/02/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.126
RC	2012/02/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.06
JL	2012/02/16	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.012
JL	2012/02/16	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.006
JL	2012/02/16	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.4
EL	2012/02/15	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	72
EL	2012/02/14	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	< 2
RC	2012/02/15	Turbidity	NTU	APHA 2130-b	0.1	1.0
JL	2012/02/16	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3

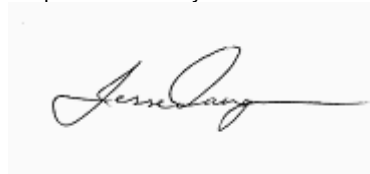
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MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:



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 Laboratory Services



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
RC	2012/02/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.157	0.163	0.050	< 0.002	0.030
RC	2012/02/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0013	0.0014	0.0005	0.0005	0.0006
RC	2012/02/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00618	0.00651	0.0151	0.00672	0.00784
RC	2012/02/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000054	< 0.000015	< 0.000015
RC	2012/02/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0012	0.0013	0.0006	< 0.0003	< 0.0003
RC	2012/02/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00006	0.00006	0.00000	< 0.00002	< 0.00002
RC	2012/02/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0001	0.0002	0.0007	0.0003	0.0004
RC	2012/02/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.283	0.286	0.152	0.0232	0.132
RC	2012/02/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00007	0.00010	< 0.00005	< 0.00005
RC	2012/02/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0208	0.0222	0.0195	0.00322	0.0185
RC	2012/02/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/02/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00083	0.00083	0.00086	0.00054	0.00064
RC	2012/02/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00010	0.00012	0.00042	0.00030	0.00024
RC	2012/02/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/02/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0865	0.0869	0.110	0.109	0.108
RC	2012/02/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0055	0.0057	0.0023	0.0003	0.0015
RC	2012/02/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00027	0.00025	0.00009	0.00012
RC	2012/02/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0022	0.0023	0.0003	0.0001	0.0002
RC	2012/02/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.0681	< 0.0005	0.0008
RC	2012/02/15	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

All Analytical results pertain to samples analyzed as received.

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MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
RC	2012/02/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.010	0.069	0.019	< 0.002	< 0.002
RC	2012/02/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0002	0.0006	< 0.0001	< 0.0001
RC	2012/02/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00762	0.00661	0.00750	< 0.00005	< 0.00005
RC	2012/02/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/02/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/02/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00005	< 0.00002	< 0.00002	< 0.00002
RC	2012/02/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0005	0.0004	< 0.0001	< 0.0001
RC	2012/02/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0202	0.297	0.164	< 0.0001	< 0.0001
RC	2012/02/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.0400	0.0252	< 0.00005	< 0.00005
RC	2012/02/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/02/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00080	0.00056	0.00059	< 0.00005	< 0.00005
RC	2012/02/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00009	0.00022	< 0.00005	< 0.00005
RC	2012/02/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/02/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0925	0.0579	0.106	0.000000	< 0.000005
RC	2012/02/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0004	0.0018	0.0012	< 0.0002	< 0.0002
RC	2012/02/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00028	0.00017	0.00011	< 0.00005	< 0.00005
RC	2012/02/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0001	0.0002	< 0.0001	< 0.0001
RC	2012/02/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	0.0012	< 0.0005	< 0.0005	< 0.0005
RC	2012/02/15	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---	---	---	---	---

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MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
RC	2012/02/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.023
RC	2012/02/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/02/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004
RC	2012/02/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0109
RC	2012/02/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/02/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001
RC	2012/02/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015
RC	2012/02/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003
RC	2012/02/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00002
RC	2012/02/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002
RC	2012/02/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.109
RC	2012/02/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/02/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001
RC	2012/02/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0191
RC	2012/02/20	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
RC	2012/02/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00079
RC	2012/02/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00016
RC	2012/02/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006
RC	2012/02/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/02/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.103
RC	2012/02/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/02/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/02/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0012
RC	2012/02/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00023
RC	2012/02/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002
RC	2012/02/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0240
RC	2012/02/15	pH @ 25°C BC-T	pH units	APHA 4500H	0.01	---

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Report reviewed by:



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
RC	2012/02/21	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.004	0.004	< 0.002	< 0.002	< 0.002
RC	2012/02/21	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0011	0.0011	0.0003	0.0004	0.0005
RC	2012/02/21	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00451	0.00453	0.00908	0.00633	0.00740
RC	2012/02/21	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/21	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/21	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/02/21	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0009	0.0009	< 0.0003	< 0.0003	< 0.0003
RC	2012/02/21	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002	0.00002
RC	2012/02/21	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0003	0.0003	0.0004
RC	2012/02/21	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0174	0.0176	0.0472	0.0150	0.0677
RC	2012/02/21	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/21	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.0139	0.00150	0.0138
RC	2012/02/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/02/21	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00071	0.00072	0.00071	0.00050	0.00057
RC	2012/02/21	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00015	0.00023	0.00021
RC	2012/02/21	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/02/21	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0827	0.0825	0.0984	0.107	0.105
RC	2012/02/21	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/21	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
RC	2012/02/21	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00018	0.00018	0.00022	0.00008	0.00011
RC	2012/02/21	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00142	0.00140	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	0.0276	< 0.0005	0.0008
RC	2012/02/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.83	7.88	7.86	7.94	7.89

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

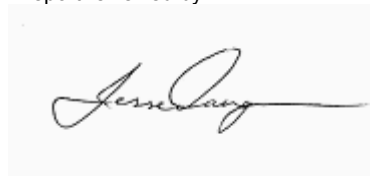
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
RC	2012/02/21	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.007	0.024	< 0.002	< 0.002	< 0.002
RC	2012/02/21	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0001	0.0005	< 0.0001	< 0.0001
RC	2012/02/21	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00759	0.00593	0.00759	< 0.00005	< 0.00005
RC	2012/02/21	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/21	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/21	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/02/21	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/02/21	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00000	< 0.00002	< 0.00002
RC	2012/02/21	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0001	0.0003	0.0004	< 0.0001	< 0.0001
RC	2012/02/21	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0152	0.132	0.0892	< 0.0001	< 0.0001
RC	2012/02/21	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/02/21	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00520	0.0206	< 0.00005	< 0.00005
RC	2012/02/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/02/21	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00071	0.00051	0.00059	< 0.00005	< 0.00005
RC	2012/02/21	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	0.00009	0.00022	< 0.00005	< 0.00005
RC	2012/02/21	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/02/21	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0908	0.0563	0.106	< 0.000005	< 0.000005
RC	2012/02/21	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/02/21	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0005	< 0.0002	< 0.0002	< 0.0002
RC	2012/02/21	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00026	0.00014	0.00011	< 0.00005	< 0.00005
RC	2012/02/21	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/02/21	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0090	0.0016	< 0.0005	< 0.0005
RC	2012/02/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.83	7.49	7.88	5.84	5.51

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

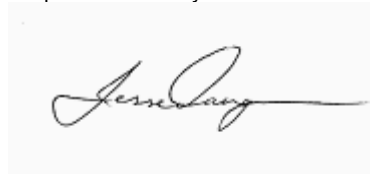
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
RC	2012/02/21	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002
RC	2012/02/21	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/02/21	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003
RC	2012/02/21	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00861
RC	2012/02/21	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/02/21	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
RC	2012/02/21	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015
RC	2012/02/21	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003
RC	2012/02/21	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00002
RC	2012/02/21	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002
RC	2012/02/21	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0507
RC	2012/02/21	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/02/21	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
RC	2012/02/21	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0132
RC	2012/02/20	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
RC	2012/02/21	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00073
RC	2012/02/21	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00013
RC	2012/02/21	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006
RC	2012/02/21	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/02/21	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0972
RC	2012/02/21	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/02/21	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/02/21	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002
RC	2012/02/21	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00022
RC	2012/02/21	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/02/21	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0111
RC	2012/02/15	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.88

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773


Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
RC	2012/02/21	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	12.6	12.6	16.5	22.9	21.2
RC	2012/02/21	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.98	2.98	3.60	5.05	4.63
RC	2012/02/21	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	0.02	< 0.01	< 0.01	< 0.01
RC	2012/02/21	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5	0.5	0.5	0.9	0.8
RC	2012/02/21	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	8.54	8.52	6.50	4.93	5.35
RC	2012/02/21	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.5	3.5	3.5	3.7	3.5
RC	2012/02/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	43.8	43.8	56.0	78.1	72.1

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

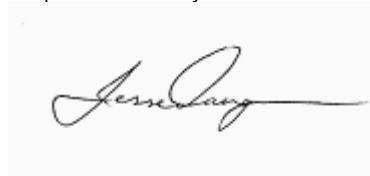
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
RC	2012/02/21	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	13.8	7.2	21.4	< 0.5	< 0.5
RC	2012/02/21	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.73	1.24	4.75	< 0.50	< 0.50
RC	2012/02/21	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
RC	2012/02/21	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5
RC	2012/02/21	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.38	3.72	5.48	< 0.01	< 0.01
RC	2012/02/21	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.1	2.0	3.5	< 0.5	< 0.5
RC	2012/02/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	45.8	23.0	73.1	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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Burnaby, BC V5C 0E4

Date Received: 2012/02/14
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Water Analysis - Dissolved Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

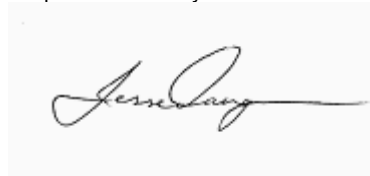
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
RC	2012/02/21	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	16.2
RC	2012/02/21	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.53
RC	2012/02/21	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01
RC	2012/02/21	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5
RC	2012/02/21	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.45
RC	2012/02/21	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.4
RC	2012/02/21	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	54.9

All Analytical results pertain to samples analyzed as received.

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Report reviewed by:



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 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
RC	2012/02/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	13.0	13.0	18.3	23.2	21.7
RC	2012/02/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.03	3.07	3.96	5.11	4.70
RC	2012/02/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.06	0.06	< 0.02	< 0.02	< 0.02
RC	2012/02/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6	0.6	0.6	0.9	0.8
RC	2012/02/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	8.61	8.59	7.08	4.93	5.37
RC	2012/02/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.5	3.6	3.8	3.7	3.5
RC	2012/02/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	45.1	45.2	62.0	79.1	73.7

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Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

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Burnaby, BC V5C 0E4

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Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
RC	2012/02/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	13.9	7.3	21.4	< 0.5	< 0.5
RC	2012/02/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	2.71	1.27	4.74	< 0.50	< 0.50
RC	2012/02/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/02/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.8	< 0.5	< 0.5
RC	2012/02/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.38	3.72	5.48	0.02	< 0.01
RC	2012/02/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.1	2.0	3.5	< 0.5	< 0.5
RC	2012/02/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	45.9	23.4	73.0	< 6.0	< 6.0

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Water Analysis - Total Metals

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

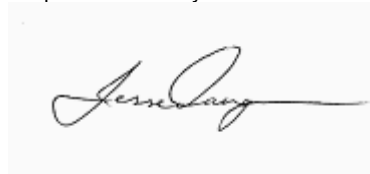
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
RC	2012/02/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	17.2
RC	2012/02/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.71
RC	2012/02/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02
RC	2012/02/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6
RC	2012/02/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.51
RC	2012/02/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.5
RC	2012/02/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	58.2

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Date Received: 2012/02/14
Report Date: 2012/03/01

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1767	12-1767-D	12-1768	12-1769	12-1770
					Client ID:	WQ3	WQ3	WQ7	WQ8	WQ9
					Sample Date:	2012-02-13 00:00	Lab Duplicate	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00
					MDL					
EL	2012/02/16	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-d	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
RC	2012/02/15	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.5	1.5	2.4	8.1	7.2
RC	2012/02/15	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.5	1.5	2.9	8.1	7.2
JL	2012/02/16	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.039	0.040	< 0.003	0.012	0.011
RC	2012/02/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.041	0.038	0.004	0.012	0.012
EL	2012/02/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.13	0.15	0.27	0.22	0.22

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APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

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Date Received: 2012/02/14
Report Date: 2012/03/01

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1771	12-1772	12-1773	12-1774	12-1775
					Client ID:	WQ10	WQ12	WQ13	Trip Blank	Field Blank
					Sample Date:	2012-02-13 00:00	2012-02-13 00:00	2012-02-13 00:00	N/P	N/P
					MDL					
EL	2012/02/16	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-d	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
RC	2012/02/15	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.1	5.4	6.9	0.4	0.2
RC	2012/02/15	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.1	5.4	6.9	0.4	0.2
JL	2012/02/16	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.010	< 0.003	< 0.003
RC	2012/02/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.005	< 0.001	0.010	< 0.001	< 0.001
EL	2012/02/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	0.14	0.20	< 0.08	< 0.08

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Report reviewed by:



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AMEC Environment & Infrastructure
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Date Received: 2012/02/14
Report Date: 2012/03/01

Nutrient Analysis - Water

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

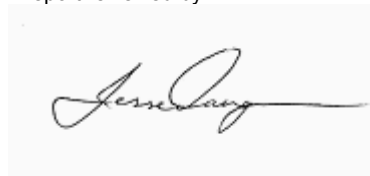
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-1776
					Client ID:	WQ Duplicate
					Sample Date:	N/P
					MDL	
EL	2012/02/16	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-d	0.01	< 0.01
RC	2012/02/15	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.2
RC	2012/02/15	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.2
JL	2012/02/16	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.007
RC	2012/02/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.003
EL	2012/02/16	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.14

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Report reviewed by:



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 Manager
 Laboratory Services



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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/03/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/02/15	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	61	56-77	65.00	QC-ALK/F-44
RC	2012/02/15	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.78	2.54-2.94	2.79	CC-EC-0.02M-40
RC	2012/02/15	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-44
JL	2012/02/16	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.65	1.44-1.76	1.60	CC-Anion-115B
JL	2012/02/16	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.636	0.54-0.66	0.60	CC-Anion-115B
JL	2012/02/16	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	28.1	25.2-30.8	28.00	CC-Anion-115B
EL	2012/02/15	T-Dissolved Solids @ 180°C	mg/L (ppm)	APHA 2540-d	4	720	552-934	743.00	QCP-C2-SLD02008
EL	2012/02/14	Total Suspended Solids @ 105°C	mg/L (ppm)	APHA 2540-d	2	24	22-32	27.00	QCP-E2-SLD02008
RC	2012/02/15	Turbidity	NTU	APHA 2130-b	0.1	9.6	8.5-11.5	10.00	QC-Turb-4
JL	2012/02/16	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.1	3.6-4.4	4.00	CC-Anion-115B

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Total Alkalinity titration performed to pH endpoint 4.5.

Report reviewed by:

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 Manager
 Laboratory Services

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Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/02/16	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	47.5	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	97.0	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/16	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	98.1	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/16	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	48.9	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	49.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	47.5	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	49.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	46.3	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	99.6	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/16	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	51.7	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/02/16	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/20	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.260	0.212-0.340	0.28	C2-QCPHG009
RC	2012/02/16	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	47.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	13.6	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/02/16	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	49.8	45-55	50.00	MS-CCV-HIGH
RC	2012/02/16	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
RC	2012/02/16	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	246	225-275	250.00	MS-CCV-HIGH
RC	2012/02/16	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	99.0	90-110	100.00	MS-CCV-HIGH
RC	2012/02/16	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	51.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/16	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	49.0	45.0-55.0	50.00	MS-CCV-HIGH

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MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
 Manager
 Laboratory Services



Charlene Rollheiser
 Director of QA/QC
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ANALYTICAL REPORT

AMEC Environment & Infrastructure
 Suite 600, 4445 Lougheed Highway
 Burnaby, BC V5C 0E4

Report Date: 2012/03/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/02/21	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	46.8	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	103	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/21	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	101	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/21	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	48.7	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	48.2	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	49.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	51.2	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/02/21	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	50.0	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/02/21	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/20	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.260	0.212-0.340	0.28	C2-QCPHG009
RC	2012/02/21	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	46.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	48.7	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.7	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/02/21	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	49.7	45-55	50.00	MS-CCV-HIGH
RC	2012/02/21	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
RC	2012/02/21	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	248	225-275	250.00	MS-CCV-HIGH
RC	2012/02/21	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	98.4	90-110	100.00	MS-CCV-HIGH
RC	2012/02/21	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/21	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	48.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/02/15	pH @ 25°C BC-D	---	APHA 4500H	0.01	6.02	5.92-6.08	6.00	QC-pH-2

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Report reviewed by:

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 Manager
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Charlene Rollheiser
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ANALYTICAL REPORT

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Report Date: 2012/03/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/02/21	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	24.8	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/02/21	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	24.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/02/21	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	240	225-275	250.00	MS-CCV-HIGH
RC	2012/02/21	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	25.2	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/02/21	Silicon-D	µg/L (ppb)	APHA 3125 B	10.00	127	105-129	117.00	MS-CCV-HIGH
RC	2012/02/21	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	24.1	22.5-27.6	25.10	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/03/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

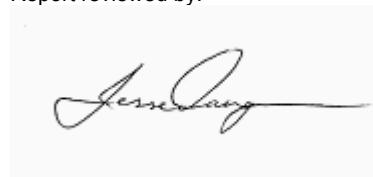
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/02/16	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	24.8	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/02/16	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	24.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/02/16	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	241	225-275	250.00	MS-CCV-HIGH
RC	2012/02/16	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	25.0	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/02/16	Silicon-T	µg/L (ppb)	APHA 3125 B	10.00	128	105-129	117.00	MS-CCV-HIGH
RC	2012/02/16	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	24.5	22.5-27.6	25.10	MS-CCV-HIGH

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:



Jesse Dang, B.Sc.
Manager
Laboratory Services



Charlene Rollheiser
Director of QA/QC
Laboratory Services

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ANALYTICAL REPORT

AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Report Date: 2012/03/01

Quality Control Standard

Attention: Ott, Bruce

Project No. VE52095

File No.: EC-62773

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
EL	2012/02/16	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.54	0.47-0.74	0.61	NH3SC-001
RC	2012/02/15	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-86-Low
RC	2012/02/15	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-86-Low
JL	2012/02/16	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.790	0.72-0.88	0.80	CC-Anion-115BL
RC	2012/02/16	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	241	225-275	250.00	MS-CCV-HIGH
EL	2012/02/16	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	7.27	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Report reviewed by:

Jesse Dang, B.Sc.
 Manager
 Laboratory Services

Charlene Rollheiser
 Director of QA/QC
 Laboratory Services

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AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 14-FEB-12
Report Date: 22-FEB-12 10:43 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1114156
Project P.O. #: 2220
Job Reference: EC-62773
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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

ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1114156-1 WQ3~12-1767 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	20-FEB-12 20-FEB-12	21-FEB-12 21-FEB-12	R2327791 R2327796
L1114156-2 WQ7~12-1768 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-3 WQ8~12-1769 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-4 WQ9~12-1770 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-5 WQ10~12-1771 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-6 WQ12~12-1772 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-7 WQ13~12-1773 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-8 TRIP BLANK~12-1774WQ Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	17-FEB-12 17-FEB-12	20-FEB-12 17-FEB-12	R2327341 R2326962
L1114156-9 FIELD BLANK~12-1775WQ Sampled By: CLIENT on 13-FEB-12 Matrix:							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1114156-9 FIELD BLANK~12-1775WQ Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	 <0.0050 <0.0050	 	 0.0050 0.0050	 mg/L mg/L	 17-FEB-12 17-FEB-12	 20-FEB-12 17-FEB-12	 R2327341 R2326962
L1114156-10 DUPLICATE~12-1776 Sampled By: CLIENT on 13-FEB-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	 <0.0050 <0.0050	 	 0.0050 0.0050	 mg/L mg/L	 17-FEB-12 17-FEB-12	 20-FEB-12 17-FEB-12	 R2327341 R2326962

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1114156

Report Date: 22-FEB-12

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2327341							
WG1431461-2	LCS							
Cyanide, Total			108.2		%		80-120	20-FEB-12
WG1431461-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	20-FEB-12
Batch	R2327791							
WG1432041-2	LCS							
Cyanide, Total			106.5		%		80-120	21-FEB-12
WG1432041-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	21-FEB-12
CN-WAD-MID-COL-VA								
	Water							
Batch	R2326962							
WG1431069-4	DUP	L1114029-5						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	17-FEB-12
WG1431069-2	LCS							
Cyanide, Weak Acid Diss			116.1		%		80-120	17-FEB-12
WG1431069-3	LCS							
Cyanide, Weak Acid Diss			96.9		%		80-120	17-FEB-12
WG1431069-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	17-FEB-12
Batch	R2327796							
WG1432080-3	DUP	L1114988-2						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	21-FEB-12
WG1432080-2	LCS							
Cyanide, Weak Acid Diss			111.9		%		80-120	21-FEB-12
WG1432080-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	21-FEB-12

Quality Control Report

Workorder: L1114156

Report Date: 22-FEB-12

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6
Contact: KRISTINE CONNOR

Page 2 of 2

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
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.

Final Analytical Report

Attention: Bruce Ott
AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Results for File: EC-62887
Project Number: VE52095
Project Name: NewGold Blackwater
Date Received: 2012/03/14
Date of Report: 2012/03/21

Report reviewed by:

A handwritten signature in blue ink, appearing to read "Jesse Dang".

Jesse Dang, B.Sc.
Manager
Laboratory Services

A handwritten signature in blue ink, appearing to read "Charlene Rollheiser".

Charlene Rollheiser
Director of QA/QC
Laboratory Services

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Water Analysis

Project No. VE52095

 Final
 File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
JL	2012/03/16	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	53	53	58	77
JL	2012/03/16	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.105	0.106	0.120	0.159
JL	2012/03/16	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.07	0.06	0.08
JL	2012/03/14	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.020	0.019	0.010	0.035
JL	2012/03/14	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2012/03/14	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.7	1.8	3.2	4.6
EL	2012/03/19	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	68	---	72	108
EL	2012/03/21	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	---	< 2	< 2
JL	2012/03/16	Turbidity	NTU	APHA 2130-b	0.1	1.0	1.1	0.7	1.0
JL	2012/03/14	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.1	0.2	0.3

Water Analysis

Project No. VE52095

 Final
 File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WO9	WO10	WO12	WO13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
JL	2012/03/16	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	74	54	25	75
JL	2012/03/16	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.155	0.111	0.053	0.153
JL	2012/03/16	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.06	0.03	0.07
JL	2012/03/14	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.027	0.026	0.032	0.023
JL	2012/03/14	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2012/03/14	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	4.8	3.4	1.2	4.6
EL	2012/03/19	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	96	72	40	100
EL	2012/03/21	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	2	< 2	6	3
JL	2012/03/16	Turbidity	NTU	APHA 2130-b	0.1	1.2	0.3	1.8	1.9
JL	2012/03/14	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.3	0.2	0.2	0.3

Water Analysis

Project No. VE52095

 Final
 File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
JL	2012/03/16	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	42	87	59	9
JL	2012/03/16	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.088	0.172	0.158	0.094
JL	2012/03/16	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.05	0.15	0.09	0.19
JL	2012/03/14	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.073	0.076	< 0.005	< 0.005
JL	2012/03/14	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2012/03/14	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	4.0	2.2	19.9	31.2
EL	2012/03/19	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	48	96	40	52
EL	2012/03/21	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	< 2	< 2	< 2	13
JL	2012/03/16	Turbidity	NTU	APHA 2130-b	0.1	0.4	0.6	0.5	63
JL	2012/03/14	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.5	0.2	0.2

Water Analysis

Project No. VE52095

 Final
 File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
JL	2012/03/16	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	32	25	< 1	< 1
JL	2012/03/16	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.110	0.052	< 0.001	< 0.001
JL	2012/03/16	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.12	0.03	< 0.02	< 0.02
JL	2012/03/14	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	0.030	< 0.005	< 0.005
JL	2012/03/14	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
JL	2012/03/14	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	19.9	1.2	< 0.5	< 0.5
EL	2012/03/19	T-Dissolved Solids 180°C	mg/L (ppm)	APHA 2540 C	4	56	48	< 4	< 4
EL	2012/03/21	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	7	< 2	< 2	< 2
JL	2012/03/16	Turbidity	NTU	APHA 2130-b	0.1	16	1.2	0.3	0.2
JL	2012/03/14	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.2	0.2	< 0.1	< 0.1

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.021	0.022	0.015	0.016
RC	2012/03/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00000	< 0.00005
RC	2012/03/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0011	0.0011	0.0004	0.0005
RC	2012/03/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00477	0.00533	0.0105	0.00673
RC	2012/03/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.003	0.002	0.001	0.002
RC	2012/03/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0009	0.0009	< 0.0003	< 0.0003
RC	2012/03/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002	0.00003	< 0.00002
RC	2012/03/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0615	0.0604	0.103	0.0416
RC	2012/03/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00438	0.00433	0.0184	0.00608
RC	2012/03/16	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00088	0.00100	0.00084	0.00056
RC	2012/03/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00018	0.00028
RC	2012/03/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0860	0.0972	0.101	0.106
RC	2012/03/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0007	0.0007	0.0007	0.0014
RC	2012/03/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00021	0.00023	0.00028	0.00009
RC	2012/03/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0016	0.0016	0.0001	< 0.0001
RC	2012/03/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0015	0.0016	0.0067	0.0009

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WO9	WO10	WO12	WO13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.026	0.009	0.141	0.038
RC	2012/03/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0004	0.0003	0.0006
RC	2012/03/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00780	0.00771	0.00864	0.00800
RC	2012/03/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.001	< 0.001	< 0.001	0.001
RC	2012/03/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000017	< 0.000015
RC	2012/03/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	0.0005	< 0.0003
RC	2012/03/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	< 0.00002	0.00018	0.00004
RC	2012/03/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.144	0.0171	0.628	0.212
RC	2012/03/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00006	< 0.00005
RC	2012/03/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0204	0.00150	0.144	0.0307
RC	2012/03/16	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00066	0.00088	0.00069	0.00062
RC	2012/03/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00026	< 0.00005	0.00017	0.00032
RC	2012/03/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.106	0.0944	0.0582	0.106
RC	2012/03/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0015	0.0002	0.0039	0.0021
RC	2012/03/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	0.00030	0.00024	0.00014
RC	2012/03/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	< 0.0001	0.0002	0.0002
RC	2012/03/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0015	0.0013	0.0041	0.0007

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.015	0.009	0.020	0.031
RC	2012/03/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00007	0.00052
RC	2012/03/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0004	0.0233	0.0223
RC	2012/03/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00750	0.00641	0.00108	0.00947
RC	2012/03/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	0.002	0.001	0.002
RC	2012/03/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	0.0004	< 0.0003	< 0.0003
RC	2012/03/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00003	< 0.00002	< 0.00002
RC	2012/03/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0615	0.187	0.0331	9.60
RC	2012/03/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00010
RC	2012/03/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	0.001	0.008	0.007
RC	2012/03/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00759	0.00576	0.0189	1.06
RC	2012/03/16	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00252	0.00076	0.00649	0.00066
RC	2012/03/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00013	0.00045	0.00013	< 0.00005
RC	2012/03/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0618	0.0697	0.193	0.0402
RC	2012/03/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0003	0.0009	0.0007	0.0003
RC	2012/03/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00010	0.00014	0.00011	< 0.00005
RC	2012/03/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	0.0013	< 0.0001	< 0.0001
RC	2012/03/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0016	0.0049	0.0014	0.0642

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.025	0.057	< 0.002	< 0.002
RC	2012/03/16	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00012	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0139	0.0002	< 0.0001	< 0.0001
RC	2012/03/16	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.0127	0.00649	< 0.00005	< 0.00005
RC	2012/03/16	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.002	< 0.001	< 0.001	< 0.001
RC	2012/03/16	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/16	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/03/16	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	0.00006	< 0.00002	< 0.00002
RC	2012/03/16	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	4.28	0.288	< 0.0001	< 0.0001
RC	2012/03/16	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00006	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	0.006	< 0.001	< 0.001	< 0.001
RC	2012/03/16	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.459	0.0424	< 0.00005	< 0.00005
RC	2012/03/16	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/16	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00102	0.00065	< 0.00005	< 0.00005
RC	2012/03/16	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00010	< 0.00005	< 0.00005
RC	2012/03/16	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/16	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.0479	0.0582	< 0.000005	< 0.000005
RC	2012/03/16	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/16	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0003	0.0015	< 0.0002	< 0.0002
RC	2012/03/16	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00019	< 0.00005	< 0.00005
RC	2012/03/16	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/16	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0017	0.0025	< 0.0005	< 0.0005

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.006	0.006	0.005	< 0.002
RC	2012/03/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0010	0.0010	0.0003	0.0005
RC	2012/03/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00427	0.00408	0.00870	0.00589
RC	2012/03/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0006	0.0006	< 0.0003	< 0.0003
RC	2012/03/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00002	< 0.00002
RC	2012/03/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0191	0.0190	0.0494	0.0141
RC	2012/03/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00248	0.00246	0.0150	0.00368
RC	2012/03/16	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00067	0.00067	0.00066	0.00046
RC	2012/03/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00013	0.00019
RC	2012/03/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0738	0.0717	0.0889	0.0934
RC	2012/03/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0002	< 0.0002	< 0.0002	< 0.0002
RC	2012/03/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00017	0.00024	0.00008
RC	2012/03/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00118	0.00115	< 0.00005	< 0.00005
RC	2012/03/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0015	0.0016	0.0059	0.0009
JL	2012/03/16	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.87	7.95	7.95	8.09

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WO9	WO10	WO12	WO13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	0.008	0.020	< 0.002
RC	2012/03/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0001	0.0004
RC	2012/03/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00723	0.00758	0.00555	0.00800
RC	2012/03/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/03/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	< 0.00002	0.00002
RC	2012/03/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0682	0.0115	0.134	0.0795
RC	2012/03/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0139	0.00106	0.00749	0.0174
RC	2012/03/16	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00053	0.00073	0.00054	0.00058
RC	2012/03/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00019	< 0.00005	0.00007	0.00019
RC	2012/03/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.100	0.0863	0.0537	0.105
RC	2012/03/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	0.0003	< 0.0002
RC	2012/03/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00027	0.00015	0.00013
RC	2012/03/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0015	0.0013	0.0036	0.0007
JL	2012/03/16	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	8.10	7.91	7.60	8.07

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.015	< 0.002	0.009	0.002
RC	2012/03/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00007	0.00049
RC	2012/03/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0004	0.0220	0.0208
RC	2012/03/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00739	0.00565	0.00091	0.00947
RC	2012/03/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	0.001	< 0.001	< 0.001
RC	2012/03/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/03/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00003	< 0.00002	< 0.00002
RC	2012/03/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0397	0.119	0.0109	9.25
RC	2012/03/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	0.001	0.008	0.007
RC	2012/03/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00649	0.00393	0.0156	0.959
RC	2012/03/16	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00213	0.00066	0.00554	0.00061
RC	2012/03/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00038	0.00011	< 0.00005
RC	2012/03/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0583	0.0623	0.202	0.0383
RC	2012/03/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0002	0.0003	< 0.0002	< 0.0002
RC	2012/03/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00009	0.00013	0.00011	< 0.00005
RC	2012/03/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00100	< 0.00005	< 0.00005
RC	2012/03/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0016	0.0041	0.0011	0.0609
JL	2012/03/16	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.80	8.17	8.00	7.07

Water Analysis - Dissolved Metals

Project No. VE52095

 Final
 File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.006	0.021	< 0.002	< 0.002
RC	2012/03/20	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0123	0.0002	< 0.0001	< 0.0001
RC	2012/03/20	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.0124	0.00549	< 0.00005	< 0.00005
RC	2012/03/20	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/03/20	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/03/20	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	< 0.00002	< 0.00002
RC	2012/03/20	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	3.84	0.142	< 0.0001	< 0.0001
RC	2012/03/20	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	0.006	< 0.001	< 0.001	< 0.001
RC	2012/03/20	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.397	0.00728	< 0.00005	< 0.00005
RC	2012/03/16	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/03/20	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00090	0.00056	< 0.00005	< 0.00005
RC	2012/03/20	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00007	< 0.00005	< 0.00005
RC	2012/03/20	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/03/20	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.0445	0.0529	< 0.000005	< 0.000005
RC	2012/03/20	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/03/20	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0003	< 0.0002	< 0.0002
RC	2012/03/20	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00015	< 0.00005	< 0.00005
RC	2012/03/20	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/03/20	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0017	0.0025	< 0.0005	< 0.0005
JL	2012/03/16	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.63	7.57	5.68	5.42

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	12.5	12.2	15.7	21.0
RC	2012/03/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.82	2.78	3.38	4.71
RC	2012/03/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.04	0.04	< 0.01	0.02
RC	2012/03/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5	0.5	0.5	0.8
RC	2012/03/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	9.56	9.15	6.56	4.84
RC	2012/03/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.5	3.4	3.4	3.5
RC	2012/03/20	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	42.7	41.8	53.0	71.9

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WO9	WO10	WO12	WO13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	19.9	13.8	6.8	19.8
RC	2012/03/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	4.40	2.55	1.16	4.35
RC	2012/03/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	< 0.01	< 0.01	0.01
RC	2012/03/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.8	< 0.5	< 0.5	0.8
RC	2012/03/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.36	6.22	3.12	5.26
RC	2012/03/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.4	3.0	1.9	3.3
RC	2012/03/20	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	67.7	44.9	21.8	67.4

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	9.3	15.0	20.9	8.1
RC	2012/03/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	2.61	8.75	< 0.50	1.62
RC	2012/03/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01	0.04	< 0.01	0.15
RC	2012/03/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	2.5	< 0.5	1.9
RC	2012/03/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	6.77	13.5	5.83	8.94
RC	2012/03/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.2	6.2	8.3	1.9
RC	2012/03/20	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	33.8	73.4	52.8	26.8

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	11.8	6.8	< 0.5	< 0.5
RC	2012/03/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	1.40	1.19	< 0.50	< 0.50
RC	2012/03/20	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.06	< 0.01	< 0.01	< 0.01
RC	2012/03/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	2.0	< 0.5	< 0.5	< 0.5
RC	2012/03/20	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	7.17	3.13	< 0.01	< 0.01
RC	2012/03/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.9	2.0	< 0.5	< 0.5
RC	2012/03/20	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	35.2	21.8	< 6.0	< 6.0

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	13.3	13.6	16.8	22.9
RC	2012/03/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.22	3.19	3.82	5.07
RC	2012/03/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.04	0.04	< 0.02	< 0.02
RC	2012/03/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.6	0.6	0.5	0.9
RC	2012/03/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	9.62	9.74	7.29	5.61
RC	2012/03/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.8	3.8	3.7	3.8
RC	2012/03/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	46.6	47.1	57.6	78.1

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WQ9	WQ10	WQ12	WQ13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	21.8	14.6	7.5	21.7
RC	2012/03/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	4.85	2.91	1.31	5.59
RC	2012/03/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	< 0.02	< 0.02	0.02
RC	2012/03/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.9	< 0.5	< 0.5	1.0
RC	2012/03/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.17	7.81	3.94	6.11
RC	2012/03/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.7	3.3	2.1	4.2
RC	2012/03/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	74.5	48.5	24.0	77.1

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	10.0	15.6	22.7	8.8
RC	2012/03/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	2.93	9.52	< 0.50	1.80
RC	2012/03/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02	0.05	< 0.02	0.16
RC	2012/03/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	2.7	< 0.5	2.1
RC	2012/03/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	7.12	15.0	7.24	10.2
RC	2012/03/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.6	6.6	9.1	2.1
RC	2012/03/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	36.9	78.2	57.3	29.4

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
RC	2012/03/16	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	12.3	7.3	< 0.5	< 0.5
RC	2012/03/16	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.65	1.27	< 0.50	< 0.50
RC	2012/03/16	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.07	< 0.02	< 0.02	< 0.02
RC	2012/03/16	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.3	< 0.5	< 0.5	< 0.5
RC	2012/03/16	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	8.42	3.81	< 0.01	< 0.01
RC	2012/03/16	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	4.5	2.0	< 0.5	< 0.5
RC	2012/03/16	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	37.5	23.5	< 6.0	< 6.0

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2556	12-2556-D	12-2557	12-2558
					Client ID:	WQ3	WQ3	WQ7	WQ8
					Sample Date:	2012/03/12 0:00	Lab Duplicate	2012/03/12 0:00	2012/03/12 0:00
					MDL				
EL	2012/03/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/03/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.4	1.4	2.1	7.7
RC	2012/03/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.4	1.4	2.1	7.8
JL	2012/03/14	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.037	0.034	< 0.003	0.011
RC	2012/03/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.036	0.038	< 0.001	0.008
EL	2012/03/21	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	0.16	0.10

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2559	12-2560	12-2561	12-2562
					Client ID:	WO9	WO10	WO12	WO13
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
EL	2012/03/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/03/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	7.4	1.9	5.4	6.8
RC	2012/03/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	7.4	1.9	5.7	6.8
JL	2012/03/14	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.007	0.004	< 0.003	0.009
RC	2012/03/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.006	< 0.001	< 0.001	0.005
EL	2012/03/21	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	0.09

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2563	12-2564	12-2565	12-2566
					Client ID:	WQ17	WQ18	BW173	BW101
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
EL	2012/03/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	0.03
RC	2012/03/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.3	6.0	0.8	0.9
RC	2012/03/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	3.3	6.0	0.8	0.9
JL	2012/03/14	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	0.031	< 0.003	< 0.003
RC	2012/03/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	< 0.001	0.037	< 0.001	0.144
EL	2012/03/21	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	< 0.08

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-62887

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-2567	12-2568	12-2569	12-2570
					Client ID:	BW161	WO Duplicate	Trip Blank	Field Blank
					Sample Date:	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00	2012/03/12 0:00
					MDL				
EL	2012/03/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/03/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.3	5.5	< 0.1	0.4
RC	2012/03/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	1.3	5.5	< 0.1	0.5
JL	2012/03/14	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2012/03/16	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.059	< 0.001	< 0.001	< 0.001
EL	2012/03/21	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	< 0.08	< 0.08

Quality Control Standard

Project No. VE52095

File No. EC-62887

Water Analysis

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
JL	2012/03/16	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	60	56-77	65.00	QC-ALK/F-44
JL	2012/03/16	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.76	2.54-2.94	2.79	CC-EC-0.02M-40
JL	2012/03/16	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-44
JL	2012/03/14	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.72	1.44-1.76	1.60	CC-Anion-115B
JL	2012/03/14	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.641	0.54-0.66	0.60	CC-Anion-115B
JL	2012/03/14	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	30.2	25.2-30.8	28.00	CC-Anion-115B
EL	2012/03/19	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540-d	4	788	552-934	743.00	QCP-C2-SLD02008
EL	2012/03/21	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	27	22-32	27.00	QCP-E2-SLD02008
JL	2012/03/16	Turbidity	NTU	APHA 2130-b	0.1	9.3	8.5-11.5	10.00	QC-Turb-4
JL	2012/03/14	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.4	3.6-4.4	4.00	CC-Anion-115B

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/03/16	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	47.7	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	98.4	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/16	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	99.5	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/16	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.1	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	49.7	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	52.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	49.2	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/16	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	50.9	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/03/16	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.282	0.212-0.340	0.28	C2-QCPHG009
RC	2012/03/16	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.8	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.6	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/03/16	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.6	45-55	50.00	MS-CCV-HIGH
RC	2012/03/16	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	252	225-275	250.00	MS-CCV-HIGH
RC	2012/03/16	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	250	225-275	250.00	MS-CCV-HIGH
RC	2012/03/16	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	50.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90-110	100.00	MS-CCV-HIGH
RC	2012/03/16	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	49.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.8	45.0-55.0	50.00	MS-CCV-HIGH

Quality Control Standard

Project No. VE52095

File No. EC-62887

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/03/20	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	49.6	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	92.5	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/20	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	91.2	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/20	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	47.5	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	45.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	47.8	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	47.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	45.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	45.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	54.1	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	46.4	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	94.5	90.0-110	100.00	MS-CCV-HIGH
RC	2012/03/20	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	45.3	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/03/20	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	46.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/16	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.282	0.212-0.340	0.28	C2-QCPHG009
RC	2012/03/20	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	45.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	45.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.7	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	11.3	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/03/20	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	45.5	45-55	50.00	MS-CCV-HIGH
RC	2012/03/20	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	233	225-275	250.00	MS-CCV-HIGH
RC	2012/03/20	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	242	225-275	250.00	MS-CCV-HIGH
RC	2012/03/20	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	46.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	90.4	90-110	100.00	MS-CCV-HIGH
RC	2012/03/20	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	45.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/03/20	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	45.8	45.0-55.0	50.00	MS-CCV-HIGH
JL	2012/03/16	pH @ 25°C BC-D	pH Units	APHA 4500H	0.01	6.00	5.92-6.08	6.00	QC-pH-2

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/03/20	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	23.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/03/20	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	23.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/03/20	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	250	225-275	250.00	MS-CCV-HIGH
RC	2012/03/20	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	23.7	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/03/20	Silicon-D	µg/L (ppb)	APHA 3125 B	10.00	126	105-129	117.00	MS-CCV-HIGH
RC	2012/03/20	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	24.1	22.5-27.6	25.10	MS-CCV-HIGH

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/03/16	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	25.9	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/03/16	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	26.2	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/03/16	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	255	225-275	250.00	MS-CCV-HIGH

Quality Control Standard

Project No. VE52095

File No. EC-62887

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/03/16	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	25.4	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/03/16	Silicon-T	µg/L (ppb)	APHA 3125 B	10.00	124	105-129	117.00	MS-CCV-HIGH
RC	2012/03/16	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	26.1	22.5-27.6	25.10	MS-CCV-HIGH

Nutrient Analysis - Water

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
EL	2012/03/15	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.58	0.47-0.74	0.61	NH3SC-001
RC	2012/03/19	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.9	3.3-4.3	3.80	DMD-TOC-86-Low
RC	2012/03/19	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.9	3.3-4.3	3.80	DMD-TOC-86-Low
JL	2012/03/14	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.863	0.72-0.88	0.80	CC-Anion-115BL
RC	2012/03/16	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	255	225-275	250.00	MS-CCV-HIGH
EL	2012/03/21	Total Kjeldahl Nitrogen (TKN)	mgN/L(ppm)	APHA 4500-D	0.08	7.06	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

Analytical Comments

Project No. VE52095

File No. EC-62887

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.



AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG
5667 70 Street
EDMONTON AB T6B 3P6

Date Received: 15-MAR-12
Report Date: 21-MAR-12 11:21 (MT)
Version: FINAL

Client Phone: 780-940-4147

Certificate of Analysis

Lab Work Order #: L1124156
Project P.O. #: 2220
Job Reference: EC-62887
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1124156-1 WQ3~12-2556 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-2 WQ7~12-2557 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-3 WQ8~12-2558 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-4 WQ9~12-2559 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-5 WQ10~12-2560 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-6 WQ12~12-2561 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-7 WQ13~12-2562 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-8 WQ17~12-2563 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-9 WQ18~12-2564 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1124156-9 WQ18~12-2564 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-10 BW173~12-2565 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-11 BW101~12-2566 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-12 BW161~12-2567 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-13 WQ DUPLICATE~12-2568 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-14 TRIP BLANK~12-2569 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650
L1124156-15 FIELD BLANK~12-2570 Sampled By: CLIENT on 03-MAR-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	19-MAR-12 19-MAR-12	19-MAR-12 19-MAR-12	R2339648 R2339650

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*
- D.L. - The reporting limit.*
- 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: L1124156

Report Date: 21-MAR-12

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Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
EDMONTON AB T6B 3P6

Contact: JESSE DANG

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2339648							
WG1444265-3	DUP	L1124156-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	19-MAR-12
WG1444265-2	LCS							
Cyanide, Total			105.9		%		80-120	19-MAR-12
WG1444265-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	19-MAR-12
CN-WAD-MID-COL-VA								
	Water							
Batch	R2339650							
WG1444266-3	DUP	L1124156-2						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	19-MAR-12
WG1444266-2	LCS							
Cyanide, Weak Acid Diss			110.7		%		80-120	19-MAR-12
WG1444266-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	19-MAR-12

Quality Control Report

Workorder: L1124156

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Client: AMEC EARTH & ENVIRONMENTAL
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Contact: JESSE DANG

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
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1124156

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Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
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Contact: JESSE DANG

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Cyanides							
Total Cyanide by H2SO4 Distillation							
	1	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	2	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	3	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	4	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	5	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	6	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	7	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	8	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	9	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	10	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	11	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	12	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	13	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	14	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
	15	03-MAR-12	19-MAR-12 14:15	14	16	days	EHT
Weak Acid Dissociable Cyanide by Dist.							
	1	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	2	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	3	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	4	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	5	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	6	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	7	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	8	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	9	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	10	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	11	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	12	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	13	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	14	03-MAR-12	19-MAR-12 14:45	14	16	days	EHT
	15	03-MAR-12	19-MAR-12 14:45	14	16	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 L1124156 were received on 15-MAR-12 08:56.

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.

Quality Control Report

Workorder: L1124156

Report Date: 21-MAR-12

Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
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Contact: JESSE DANG

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.

Final Analytical Report

Attention: Bruce Ott
AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Results for File: EC-63034
Project Number: VE52095
Project Name: NewGold Blackwater
Date Received: 2012/04/18
Date of Report: 2012/04/26
Sublet Data: Attached

Report reviewed by:

A handwritten signature in blue ink, appearing to read "Jesse Dang".

Jesse Dang, B.Sc.
Manager
Laboratory Services

A handwritten signature in blue ink, appearing to read "Charlene Rollheiser".

Charlene Rollheiser
Director of QA/QC
Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
SR	2012/04/19	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	52	53	26	52
SR	2012/04/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.100	0.101	0.055	0.105
SR	2012/04/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.08	0.08	0.05	0.07
SR	2012/04/19	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	0.013	< 0.005
SR	2012/04/19	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.003	0.003	0.005	0.011
SR	2012/04/19	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.5	1.5	1.7	1.9
EL	2012/04/23	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	80	68	56	96
EL	2012/04/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	2	2	2	< 2
SR	2012/04/19	Turbidity	NTU	APHA 2130-b	0.1	1.2	1.2	3.3	1.6
SR	2012/04/19	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	0.2	0.3	0.4

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
SR	2012/04/19	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	66	64	47	25
SR	2012/04/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.132	0.131	0.095	0.049
SR	2012/04/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.08	0.08	0.06	0.04
SR	2012/04/19	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	0.009	< 0.005	0.009
SR	2012/04/19	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.009	0.010	0.007	0.009
SR	2012/04/19	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.8	4.1	2.6	0.8
EL	2012/04/23	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	92	104	76	44
EL	2012/04/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	5	7	< 2	< 2
SR	2012/04/19	Turbidity	NTU	APHA 2130-b	0.1	0.9	2.6	2.0	7.1
SR	2012/04/19	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.1	0.4	0.1	0.3

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3457
					Client ID:	WQ13	WQ14	WQ Duplicate	Trip Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
SR	2012/04/19	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	65	75	52	< 1
SR	2012/04/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.134	0.154	0.101	0.001
SR	2012/04/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.08	0.08	0.07	< 0.02
SR	2012/04/19	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	0.011	< 0.005	< 0.005
SR	2012/04/19	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.011	0.010	0.013	< 0.003
SR	2012/04/19	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.9	3.7	1.7	< 0.5
EL	2012/04/23	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	84	104	80	< 4
EL	2012/04/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	6	2	< 2	< 2
SR	2012/04/19	Turbidity	NTU	APHA 2130-b	0.1	2.2	2.1	1.5	0.2
SR	2012/04/19	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.4	0.4	0.4	< 0.1

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
EL	2012/04/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/04/18	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.5	2.5	4.9	12.9
RC	2012/04/18	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	2.5	2.6	4.9	13.2
EL	2012/04/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08	< 0.08	0.11	0.20

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
EL	2012/04/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/04/18	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	8.1	9.9	3.4	9.3
RC	2012/04/18	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	8.1	9.9	3.4	9.3
EL	2012/04/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.18	0.13	< 0.08	0.10

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
EL	2012/04/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/04/18	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.5	8.5	13.0	0.2
RC	2012/04/18	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.6	8.7	13.3	0.2
EL	2012/04/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.14	0.10	0.18	< 0.08

Water Analysis

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
EL	2012/04/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02
RC	2012/04/18	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1
RC	2012/04/18	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	< 0.1
EL	2012/04/24	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	< 0.08

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.029	0.029	0.252	0.091
RC	2012/04/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	0.00006	0.00005	< 0.00005
RC	2012/04/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0011	0.0012	0.0009	0.0004
RC	2012/04/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00512	0.00506	0.00929	0.01020
RC	2012/04/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000027	< 0.000015
RC	2012/04/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0008	0.0008	< 0.0003	< 0.0003
RC	2012/04/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002	< 0.00002	0.00010	0.00005
RC	2012/04/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	0.0004	0.0003
RC	2012/04/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0788	0.0800	0.4350	0.2170
RC	2012/04/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00017	< 0.00005
RC	2012/04/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00444	0.00452	0.03420	0.01690
RC	2012/04/24	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00070	0.00071	0.00045	0.00057
RC	2012/04/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00006	0.00005	0.00032	0.00029
RC	2012/04/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.076900	0.077200	0.051200	0.080000
RC	2012/04/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0007	0.0006	0.0063	0.0031
RC	2012/04/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00017	0.00012	0.00015
RC	2012/04/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0018	0.0018	0.0004	0.0004
RC	2012/04/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.0023	< 0.0005

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
RC	2012/04/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.011	0.139	0.117	0.413
RC	2012/04/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	0.0007	0.0006	0.0005
RC	2012/04/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00593	0.01020	0.00823	0.01070
RC	2012/04/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/04/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/04/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00008	< 0.00002	0.00012
RC	2012/04/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0003	< 0.0001	0.0001
RC	2012/04/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0293	0.3400	0.1190	0.5560
RC	2012/04/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00005	< 0.00005	0.00007	0.00018
RC	2012/04/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.01780	0.04950	0.00366	0.02770
RC	2012/04/24	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00050	0.00061	0.00070	0.00036
RC	2012/04/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00024	0.00035	0.00012	0.00028
RC	2012/04/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.089000	0.088200	0.076100	0.049100
RC	2012/04/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0005	0.0064	0.0027	0.0112
RC	2012/04/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00008	0.00015	0.00021	0.00015
RC	2012/04/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	0.0007	0.0004	0.0007
RC	2012/04/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	0.0021	< 0.0005	0.0006

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.114	0.056	0.094	0.003
RC	2012/04/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0003	0.0004	< 0.0001
RC	2012/04/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.01010	0.01320	0.01010	< 0.00005
RC	2012/04/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000092	< 0.000015
RC	2012/04/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/04/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00009	0.00006	0.00006	< 0.00002
RC	2012/04/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0002	< 0.0001	0.0003	< 0.0001
RC	2012/04/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.3520	0.5060	0.2230	< 0.0001
RC	2012/04/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00074	0.00344
RC	2012/04/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.05900	0.08780	0.01720	< 0.00005
RC	2012/04/24	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00056	0.00058	0.00063	< 0.00005
RC	2012/04/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00033	0.00023	0.00029	< 0.00005
RC	2012/04/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.086900	0.091700	0.078800	< 0.000005
RC	2012/04/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0055	0.0015	0.0032	< 0.0002
RC	2012/04/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00014	0.00021	0.00024	< 0.00005
RC	2012/04/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0004	0.0004	< 0.0001
RC	2012/04/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005	< 0.0005	0.0007	< 0.0005

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
RC	2012/04/19	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	< 0.002
RC	2012/04/19	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001
RC	2012/04/19	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015
RC	2012/04/19	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003
RC	2012/04/19	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	< 0.00002
RC	2012/04/19	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001
RC	2012/04/19	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/24	Mercury-T	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
RC	2012/04/19	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006
RC	2012/04/19	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	< 0.000005
RC	2012/04/19	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	< 0.0002
RC	2012/04/19	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005
RC	2012/04/19	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001
RC	2012/04/19	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	< 0.0005

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.010	0.010	0.047	0.027
RC	2012/04/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00007	0.00006	0.00005	< 0.00005
RC	2012/04/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0011	0.0012	0.0004	0.0004
RC	2012/04/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00490	0.00489	0.00701	0.00960
RC	2012/04/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	0.000027	< 0.000015
RC	2012/04/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0008	0.0008	< 0.0003	< 0.0003
RC	2012/04/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	< 0.00002	0.00002	0.00004
RC	2012/04/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	0.0004	0.0003
RC	2012/04/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0404	0.0417	0.1020	0.1230
RC	2012/04/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00339	0.00343	0.00912	0.01430
RC	2012/04/24	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00064	0.00069	0.00041	0.00054
RC	2012/04/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00022	0.00027
RC	2012/04/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.076900	0.077200	0.051200	0.080000
RC	2012/04/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	0.0011	0.0005
RC	2012/04/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00017	0.00008	0.00015
RC	2012/04/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00159	0.00157	< 0.00005	0.00013
RC	2012/04/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	0.0023	< 0.0005
SR	2012/04/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.88	7.88	7.55	7.89

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
RC	2012/04/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002	0.013	0.019	0.089
RC	2012/04/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0006	0.0005	0.0002
RC	2012/04/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00593	0.00908	0.00768	0.00786
RC	2012/04/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/04/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/04/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002	0.00004	< 0.00002	0.00006
RC	2012/04/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0003	< 0.0001	0.0001
RC	2012/04/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0128	0.1330	0.0392	0.2420
RC	2012/04/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00005	< 0.00005
RC	2012/04/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.01270	0.03610	0.00214	0.01820
RC	2012/04/24	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00046	0.00061	0.00070	0.00036
RC	2012/04/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00024	0.00024	0.00011	0.00013
RC	2012/04/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.089000	0.093100	0.081900	0.051800
RC	2012/04/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	0.0002	0.0002	0.0020
RC	2012/04/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00008	0.00014	0.00021	0.00013
RC	2012/04/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00022	0.00013	0.00008
RC	2012/04/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	0.0021	< 0.0005	0.0006
SR	2012/04/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	8.00	7.96	7.80	7.45

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.012	0.009	0.029	< 0.002
RC	2012/04/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00014	< 0.00005
RC	2012/04/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0003	0.0004	< 0.0001
RC	2012/04/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00905	0.01210	0.00962	< 0.00005
RC	2012/04/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	0.000092	< 0.000015
RC	2012/04/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/04/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00004	0.00003	0.00004	< 0.00002
RC	2012/04/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0002	< 0.0001	0.0003	< 0.0001
RC	2012/04/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.1510	0.2830	0.1290	< 0.0001
RC	2012/04/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00014	< 0.00005
RC	2012/04/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/04/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.04550	0.06540	0.01470	< 0.00005
RC	2012/04/24	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008	< 0.000008	< 0.000008	< 0.000008
RC	2012/04/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00056	0.00058	0.00051	< 0.00005
RC	2012/04/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00025	0.00018	0.00025	< 0.00005
RC	2012/04/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/04/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.091800	0.097100	0.073900	< 0.000005
RC	2012/04/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/04/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/04/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002	< 0.0002	0.0006	< 0.0002
RC	2012/04/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00021	0.00024	< 0.00005
RC	2012/04/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00017	0.00008	0.00013	< 0.00005
RC	2012/04/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005
SR	2012/04/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.99	7.99	7.83	---

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
RC	2012/04/18	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	< 0.002
RC	2012/04/18	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/04/18	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/04/18	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
RC	2012/04/18	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015
RC	2012/04/18	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003
RC	2012/04/18	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	< 0.00002
RC	2012/04/18	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/04/18	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/04/18	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001
RC	2012/04/18	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/24	Mercury-D	mg/L (ppm)	APHA 3112	0.000008	< 0.000008
RC	2012/04/18	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006
RC	2012/04/18	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	< 0.000005
RC	2012/04/18	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001
RC	2012/04/18	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	< 0.0002
RC	2012/04/18	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005
RC	2012/04/18	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	< 0.0005
SR	2012/04/19	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	5.74

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	13.4	13.5	7.0	14.7
RC	2012/04/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.22	3.24	1.26	3.75
RC	2012/04/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.05	0.05	< 0.01	0.02
RC	2012/04/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.6	0.6	0.5	1.5
RC	2012/04/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	8.21	7.93	4.99	4.99
RC	2012/04/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.7	3.7	2.5	3.1
RC	2012/04/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	46.8	47.0	22.8	52.2

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
RC	2012/04/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	19.2	18.8	13.1	7.1
RC	2012/04/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	4.54	4.39	2.62	1.30
RC	2012/04/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	0.02	< 0.01	< 0.01
RC	2012/04/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	1.0	1.2	< 0.5	0.7
RC	2012/04/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	3.98	4.95	5.98	4.16
RC	2012/04/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.3	3.2	3.1	1.9
RC	2012/04/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	66.7	65.0	43.5	22.9

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	19.0	21.8	15.0	< 0.5
RC	2012/04/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	4.44	4.82	3.85	< 0.50
RC	2012/04/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	0.02	0.02	< 0.01
RC	2012/04/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	1.4	1.9	1.5	< 0.5
RC	2012/04/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.00	5.27	5.27	< 0.01
RC	2012/04/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.2	3.3	3.2	< 0.5
RC	2012/04/19	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	65.6	74.3	53.4	< 6.0

Water Analysis - Dissolved Metals

Project No. VE52095

 Final
 File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
RC	2012/04/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
RC	2012/04/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	< 0.50
RC	2012/04/18	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01
RC	2012/04/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
RC	2012/04/18	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	< 0.01
RC	2012/04/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5
RC	2012/04/19	D-Hardness as CaCO ₃	mg/L (ppm)	Calculation	6.0	< 6.0

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	13.6	13.5	7.2	15.1
RC	2012/04/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.25	3.29	1.26	3.75
RC	2012/04/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.05	0.05	< 0.02	0.03
RC	2012/04/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.7	0.7	0.6	1.6
RC	2012/04/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	8.78	8.64	5.86	5.30
RC	2012/04/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.7	3.8	2.5	3.1
RC	2012/04/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	47.3	47.2	23.1	53.2

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
RC	2012/04/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	19.6	19.0	13.1	7.1
RC	2012/04/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	4.67	4.40	2.64	1.30
RC	2012/04/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.04	0.04	< 0.02	< 0.02
RC	2012/04/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.0	1.3	0.5	0.8
RC	2012/04/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.42	5.54	6.48	4.95
RC	2012/04/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.4	3.2	3.1	1.9
RC	2012/04/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	68.3	65.5	43.6	22.9

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
RC	2012/04/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	18.9	22.3	15.0	< 0.5
RC	2012/04/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	4.44	4.83	3.85	< 0.50
RC	2012/04/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.03	0.03	0.03	< 0.02
RC	2012/04/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.4	2.0	1.6	< 0.5
RC	2012/04/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.48	5.61	5.57	< 0.01
RC	2012/04/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.2	3.3	3.2	< 0.5
RC	2012/04/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	65.5	75.4	53.4	< 6.0

Water Analysis - Total Metals

Project No. VE52095

 Final
 File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
RC	2012/04/19	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
RC	2012/04/19	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	< 0.50
RC	2012/04/19	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	< 0.02
RC	2012/04/19	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
RC	2012/04/19	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	< 0.01
RC	2012/04/19	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5
RC	2012/04/19	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	< 6.0

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3446	12-3446-D	12-3447	12-3448
					Client ID:	WQ3	WQ3	WQ6	WQ7
					Sample Date:	2012/04/16 0:00	Lab Duplicate	2012/04/17 0:00	2012/04/17 0:00
					MDL				
SR	2012/04/19	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.029	0.028	< 0.003	< 0.003
RC	2012/04/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.043	0.043	0.002	0.020

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3449	12-3450	12-3451	12-3452
					Client ID:	WQ8	WQ9	WQ10	WQ12
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/16 0:00	2012/04/16 0:00
					MDL				
SR	2012/04/19	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2012/04/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.017	0.016	0.003	0.004

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3453	12-3454	12-3455	12-3456
					Client ID:	WQ13	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/04/16 0:00	2012/04/17 0:00	2012/04/17 0:00	2012/04/17 0:00
					MDL				
SR	2012/04/19	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.006	---
RC	2012/04/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.015	0.015	0.021	< 0.001

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63034

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-3457
					Client ID:	Trip Blank
					Sample Date:	2012/04/17 0:00
					MDL	
SR	2012/04/19	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003
RC	2012/04/19	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	< 0.001

Quality Control Standard

Project No.

File No. EC-63034

Water Analysis

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
SR	2012/04/19	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	61	56-77	65.00	QC-ALK/F-45
SR	2012/04/19	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.74	2.54-2.94	2.79	CC-EC-0.02M-41
SR	2012/04/19	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-45
SR	2012/04/19	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.45	1.44-1.76	1.60	CC-Anion-116B
SR	2012/04/19	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.627	0.54-0.66	0.60	CC-Anion-116B
SR	2012/04/19	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	28.8	25.2-30.8	28.00	CC-Anion-116B
EL	2012/04/23	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540-d	4	844	628-1059	844.00	OCP-E2-SLD02008
EL	2012/04/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	34	26-36	31.00	OCP-E2-SLD02008
SR	2012/04/19	Turbidity	NTU	APHA 2130-b	0.1	11	8.5-11.5	10.00	QC-Turb-5
SR	2012/04/19	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.1	3.6-4.4	4.00	CC-Anion-116B

Water Analysis

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
EL	2012/04/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.60	0.47-0.74	0.61	NH3SC-001
RC	2012/04/18	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-89-Low
RC	2012/04/18	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	3.7	3.3-4.3	3.80	DMD-TOC-89-Low
EL	2012/04/24	Total Kjeldahl Nitrogen (TKN)	mg/L(ppm)	APHA 4500N-D	0.08	7.28	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/19	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	48.1	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/19	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/19	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	50.8	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	48.7	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	52.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	51.8	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/19	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	49.5	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/04/19	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/24	Mercury-T	µg/L (ppb)	APHA 3112	0.008000	0.229000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/04/19	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	53.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	49.4	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.5	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/04/19	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.4	45-55	50.00	MS-CCV-HIGH
RC	2012/04/19	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	248	225-275	250.00	MS-CCV-HIGH
RC	2012/04/19	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	246	225-275	250.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63034

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/19	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	53.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	102	90-110	100.00	MS-CCV-HIGH
RC	2012/04/19	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	53.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/19	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	49.5	45.0-55.0	50.00	MS-CCV-HIGH

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/18	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	50.3	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/18	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	99.2	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/18	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.9	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	45.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	49.5	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	51.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	50.9	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	51.4	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	99.8	90.0-110	100.00	MS-CCV-HIGH
RC	2012/04/18	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	47.4	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/04/18	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/24	Mercury-D	µg/L (ppb)	APHA 3112	0.008000	0.229000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/04/18	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	53.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	47.5	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.5	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/04/18	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	50.0	45-55	50.00	MS-CCV-HIGH
RC	2012/04/18	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	245	225-275	250.00	MS-CCV-HIGH
RC	2012/04/18	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	248	225-275	250.00	MS-CCV-HIGH
RC	2012/04/18	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	99.9	90-110	100.00	MS-CCV-HIGH
RC	2012/04/18	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/04/18	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	50.7	45.0-55.0	50.00	MS-CCV-HIGH
SR	2012/04/19	pH @ 25°C BC-D	pH Units	APHA 4500H	0.01	6.03	5.92-6.08	6.00	QC-pH-2

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/18	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	25.3	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/04/18	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	26.5	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/04/18	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	236	225-275	250.00	MS-CCV-HIGH
RC	2012/04/18	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	25.3	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/04/18	Silicon-D	µg/L (ppb)	APHA 3125 B	10.00	128	105-129	117.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63034

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/18	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	26.3	22.5-27.6	25.10	MS-CCV-HIGH

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/04/19	Calcium-T	mg/L (ppm)	APHA 3125 B	0.5	25.6	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/04/19	Magnesium-T	mg/L (ppm)	APHA 3125 B	0.50	26.2	22.5-27.6	25.10	MS-CCV-HIGH
RC	2012/04/19	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	268	225-275	250.00	MS-CCV-HIGH
RC	2012/04/19	Potassium-T	mg/L (ppm)	APHA 3125 B	0.5	26.6	22.7-27.8	25.30	MS-CCV-HIGH
RC	2012/04/19	Silicon-T	µg/L (ppb)	APHA 3125 B	10.00	121	105-129	117.00	MS-CCV-HIGH
RC	2012/04/19	Sodium-T	mg/L (ppm)	APHA 3125 B	0.5	25.8	22.5-27.6	25.10	MS-CCV-HIGH

Nutrient Analysis - Water

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
SR	2012/04/19	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.733	0.72-0.88	0.80	CC-Anion-116BL
RC	2012/04/19	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	268	225-275	250.00	MS-CCV-HIGH

Analytical Comments

Project No. VE52095

File No. EC-63034

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit



AMEC EARTH & ENVIRONMENTAL
ATTN: JESSE DANG
5667 70 Street
EDMONTON AB T6B 3P6

Date Received: 18-APR-12
Report Date: 25-APR-12 15:00 (MT)
Version: FINAL

Client Phone: 780-940-4147

Certificate of Analysis

Lab Work Order #: L1136250
Project P.O. #: 2220
Job Reference: EC-63034
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1136250-1 WQ3~12-3446 Sampled By: CLIENT on 16-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 20-APR-12	24-APR-12 20-APR-12	R2355494 R2354107
L1136250-2 WQ6~12-3447 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 23-APR-12	24-APR-12 23-APR-12	R2355494 R2354750
L1136250-3 WQ7~12-3448 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 23-APR-12	24-APR-12 23-APR-12	R2355494 R2354750
L1136250-4 WQ8~12-3449 Sampled By: CLIENT on 16-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 23-APR-12	24-APR-12 23-APR-12	R2355494 R2354750
L1136250-5 WQ9~12-3450 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 20-APR-12	24-APR-12 20-APR-12	R2355494 R2354107
L1136250-6 WQ10~12-3451 Sampled By: CLIENT on 16-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 20-APR-12	24-APR-12 20-APR-12	R2355494 R2354107
L1136250-7 WQ12~12-3452 Sampled By: CLIENT on 16-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 20-APR-12	24-APR-12 20-APR-12	R2355494 R2354107
L1136250-8 WQ13~12-3453 Sampled By: CLIENT on 16-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L	24-APR-12 23-APR-12	24-APR-12 23-APR-12	R2355494 R2354750
L1136250-9 WQ14~12-3454 Sampled By: CLIENT on 17-APR-12 Matrix:							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1136250-9 WQ14~12-3454 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	24-APR-12	24-APR-12	R2355494
	<0.0050		0.0050	mg/L	20-APR-12	20-APR-12	R2354107
L1136250-10 WQ DUPLICATE~12-3455 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	24-APR-12	24-APR-12	R2355494
	<0.0050		0.0050	mg/L	23-APR-12	23-APR-12	R2354750
L1136250-11 FIELD BLANK~12-3456 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	24-APR-12	24-APR-12	R2355494
	<0.0050		0.0050	mg/L	23-APR-12	23-APR-12	R2354750
L1136250-12 TRIP BLANK~12-3457 Sampled By: CLIENT on 17-APR-12 Matrix: Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050		0.0050	mg/L	24-APR-12	24-APR-12	R2355494
	<0.0050		0.0050	mg/L	23-APR-12	23-APR-12	R2354750

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-MID-SA-COL-VA	Water	Total Cyanide by H2SO4 Distillation	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Total or strong acid dissociable (SAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			
CN-WAD-MID-COL-VA	Water	Weak Acid Dissociable Cyanide by Dist.	APHA 4500-CN Cyanide
This analysis is carried out using procedures adapted from APHA Method 4500-CN "Cyanide". Weak acid dissociable (WAD) cyanide are determined by sample distillation and analysis using the chloramine-T colourimetric method.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

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

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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: L1136250

Report Date: 25-APR-12

Page 1 of 2

Client: AMEC EARTH & ENVIRONMENTAL
 5667 70 Street
 EDMONTON AB T6B 3P6

Contact: JESSE DANG

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-MID-SA-COL-VA								
	Water							
Batch	R2355494							
WG1461600-3	DUP	L1136250-1						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	24-APR-12
WG1461600-2	LCS							
Cyanide, Total			104.8		%		80-120	24-APR-12
WG1461600-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	24-APR-12
CN-WAD-MID-COL-VA								
	Water							
Batch	R2354107							
WG1460080-4	DUP	L1136250-9						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	20-APR-12
WG1460080-3	LCS							
Cyanide, Weak Acid Diss			105.4		%		80-120	20-APR-12
WG1460080-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	20-APR-12
Batch	R2354750							
WG1460612-4	DUP	L1136250-2						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	23-APR-12
WG1460612-2	LCS							
Cyanide, Weak Acid Diss			116.9		%		80-120	23-APR-12
WG1460612-3	LCS							
Cyanide, Weak Acid Diss			103.4		%		80-120	23-APR-12
WG1460612-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	23-APR-12

Quality Control Report

Workorder: L1136250

Report Date: 25-APR-12

Client: AMEC EARTH & ENVIRONMENTAL
5667 70 Street
EDMONTON AB T6B 3P6
Contact: JESSE DANG

Page 2 of 2

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
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.

FileNbr	SampleName	LabNbr	DateSampled	Description
EC-63034	WQ3	12-3446-	2012/04/16	Water
EC-63034	WQ6	12-3447-	2012/04/17	Water
EC-63034	WQ7	12-3448-	2012/04/17	Water
EC-63034	WQ8	12-3449-	2012/04/16	Water
EC-63034	WQ9	12-3450-	2012/04/17	Water
EC-63034	WQ10	12-3451-	2012/04/16	Water
EC-63034	WQ12	12-3452-	2012/04/16	Water
EC-63034	WQ13	12-3453-	2012/04/16	Water
EC-63034	WQ14	12-3454-	2012/04/17	Water
EC-63034	WQ Duplicate	12-3455-	2012/04/17	Water
EC-63034	Field Blank	12-3456-	2012/04/17	Water
EC-63034	Trip Blank	12-3457-	2012/04/17	Water





AMEC Environment & Infrastructure
ATTN: Bruce Ott
600 - 4445 Lougheed Hwy
Burnaby BC V5C 0E4

Date Received: 18-APR-12
Report Date: 02-MAY-12 12:07 (MT)
Version: FINAL

Client Phone: 604-473-5315

Certificate of Analysis

Lab Work Order #: L1136681
Project P.O. #: NOT SUBMITTED
Job Reference: VE52095
C of C Numbers:
Legal Site Desc:

Comments: Note that 2 Cyanate samples were received for sample 'WQ7'.

Cyanate was not received for sample 'Duplicate'. Per client's instructions, sample labeled as 'WQ7' was used for sample 'Duplicate' for Cyanate analysis.

Selam Worku
Account Manager

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ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1136681-1 WATER WQ FIELD BLANK	L1136681-2 WATER WQ TRIP BLANK	L1136681-3 WATER WQ DUPLICATE	L1136681-4 WATER WQ3	L1136681-5 WATER WQ6
Grouping	Analyte					
WATER						
Cyanides	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	<0.50	<0.50	0.72	<0.50	<0.50

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID		L1136681-6 WATER WQ7	L1136681-7 WATER WQ8	L1136681-8 WATER WQ9	L1136681-9 WATER WQ10	L1136681-10 WATER WQ12
Grouping	Analyte					
WATER						
Cyanides	Cyanate (mg/L)	<0.20	<0.20	<0.20	<0.20	<0.20
	Thiocyanate (SCN) (mg/L)	0.72	<0.50	0.52	<0.50	0.71

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

		Sample ID	L1136681-11	L1136681-12			
		Description	WATER	WATER			
		Sampled Date					
		Sampled Time					
		Client ID	WQ13	WQ14			
Grouping	Analyte						
WATER							
Cyanides	Cyanate (mg/L)		<0.20	<0.20			
	Thiocyanate (SCN) (mg/L)		<0.50	<0.50			

* 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	Cyanate	DLIS	L1136681-1, -10, -11, -12, -2, -3, -4, -5, -6, -7, -8, -9

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLIS	Detection Limit Adjusted: Insufficient Sample

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-CNO-WT	Water	Cyanate	APHA 4500-CN-L
CN-SCN-VA	Water	Thiocyanate by Colour	APHA 4500-CN CYANIDE

This analysis is carried out using procedures adapted from APHA Method 4500-CN- M "Thiocyanate" Thiocyanate is determined by the ferric nitrate colourimetric method.

** 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
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: L1136681

Report Date: 02-MAY-12

Page 2 of 2

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
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.



Re:		Report Format / Distribution			Service Requested (Rush for routine analysis subject to availability)													
Company: AMEC		<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Other			<input checked="" type="radio"/> Regular (Default)													
Contact: Bruce Ott		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> Excel <input type="checkbox"/> Digital <input type="checkbox"/> Fax			<input type="radio"/> Priority (Specify Date Required → →) Surcharges apply													
Address: Suite 600, 4445 Lougheed Highway, Burnaby, B.C. V5C 0E4		Email 1: bruce.ott@amec.com			<input type="radio"/> Emergency (1 Business Day) - 100% Surcharge													
Phone: (604)295-4758 Fax: (604)294-4664		Email 2:			<input type="radio"/> For Emergency < 1 Day, ASAP or Weekend - Contact ALS													
Invoice To Same as Report? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Client / Project Information			Analysis Request													
Company:		Job #: VE52095			Please indicate below Filtered, Preserved or both (F, P, F/P)													
Contact:		PO / AFE:			P													
Address:		LSD:			P													
Phone: Fax:		Quote #: Q28456			Number of Containers													
Lab Work Order # (lab use only)		ALS Contact:			Sampler:			Cyanate				Thiocyanate						
NI 36681																		
Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Cyanate	Thiocyanate												
	WQ Field Blank																	
	WQ Trip Blank																	
	WQ Duplicate																	
	WQ3			Water	X	X												2
	WQ6			Water	X	X												2
	WQ7			Water	X	X												2
	WQ8			Water	X	X												2
	WQ9			Water	X	X												2
	WQ10			Water	X	X												2
	WQ12			Water	X	X												2
	WQ13			Water	X	X												2
	WQ14			Water	X	X												2
Special Instructions / Regulations / Hazardous Details																		
<p>Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.</p> <p>By the use of this form the user acknowledges and agrees with the Terms and Conditions as provided on a separate Excel tab.</p> <p>Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.</p>																		
SHIPMENT: RELEASE (client use) SHIPMENT: RECEPTION (lab use only) SHIPMENT: VERIFICATION (lab use only)																		
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF								
L. Nordin	17-Apr-12	15:00	Tristan	April 18	17:45	7 °C												

Final Analytical Report

Attention: Bruce Ott
AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Results for File: EC-63189
Project Number: VE52095
Project Name: NewGold Blackwater
Date Received: 2012/05/16
Date of Report: 2012/05/28
Sublet Data: Attached

Report reviewed by:

A handwritten signature in blue ink, appearing to read "Jesse Dang".

Jesse Dang, B.Sc.
Manager
Laboratory Services

A handwritten signature in blue ink, appearing to read "Charlene Rollheiser".

Charlene Rollheiser
Director of QA/QC
Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

Water Analysis

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/17	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	31	29	12	75
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH ₃ -G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/05/17	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.064	0.060	0.033	0.159
SR	2012/05/22	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.07	0.07	0.10
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	0.098
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	0.008
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.021	0.021	0.004	0.002
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	0.9	0.9	< 0.5	4.2
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	36	36	12	80
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.18	0.18	0.30	0.18
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	13	12	23	3
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	4.3	4.2	2.7	1.3
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	0.9	0.8	1.1	1.5

Water Analysis

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WO9	WO10	WO11	WO12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/17	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	60	15	14	14
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH ₃ -G	0.02	< 0.02	< 0.02	< 0.02	0.02
RC	2012/05/17	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.125	0.037	0.038	
SR	2012/05/22	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001				0.031
SR	2012/05/22	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.10	0.07	0.07	0.06
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.050	0.005	0.005	< 0.005
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.003	< 0.003	< 0.003	0.005
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	< 0.003	< 0.003
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.012	0.006	0.009	0.002
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	3.5	0.8	0.9	0.6
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	84	44	80	48
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.30	0.27	0.26	0.20
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	11	7	< 2	4
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	3.3	4.3	1.7	2.5
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	1.2	1.0	1.7	0.9

Water Analysis

Project No. VE52095

 Final
 File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/17	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	60	2
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH ₃ -G	0.02	< 0.02	< 0.02
SR	2012/05/22	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.121	< 0.001
SR	2012/05/22	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.08	< 0.02
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	0.046	< 0.005
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.009	< 0.001
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	4.0	< 0.5
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	92	< 4
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.21	< 0.08
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	12	< 2
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	3.2	0.7
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	1.1	< 0.1

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/22	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.221	0.211	0.336	0.028
RC	2012/05/22	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	0.00006	< 0.00005	< 0.00005
RC	2012/05/22	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0007	0.0004	0.0005
RC	2012/05/22	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00708	0.00726	0.00601	0.00730
RC	2012/05/22	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/22	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000019	0.000017
RC	2012/05/22	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0007	0.0006	< 0.0003	< 0.0003
RC	2012/05/22	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00009	0.00010	0.00012	0.00003
RC	2012/05/22	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0005	0.0006	0.0007
RC	2012/05/22	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.3210	0.3220	0.3300	0.0831
RC	2012/05/22	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00017	0.00016	0.00014	< 0.00005
RC	2012/05/22	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/22	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.01450	0.01480	0.02120	0.14700
RC	2012/05/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/22	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00029	0.00025	0.00008	0.00049
RC	2012/05/22	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00029	0.00031	0.00038	0.00025
RC	2012/05/22	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/22	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.050700	0.050900	0.023200	0.103000
RC	2012/05/22	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0058	0.0058	0.0077	0.0004
RC	2012/05/22	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00018	0.00018	0.00012	0.00010
RC	2012/05/22	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0014	0.0014	0.0006	< 0.0001
RC	2012/05/22	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0027	0.0027	0.0016	0.0020

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WQ9	WQ10	WQ11	WQ12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/22	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.208	0.315	0.418	0.252
RC	2012/05/22	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0005	0.0001	0.0002
RC	2012/05/22	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00998	0.00732	0.00713	0.00738
RC	2012/05/22	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/22	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000050	0.000016	< 0.000015	0.000027
RC	2012/05/22	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003	0.0003	< 0.0003
RC	2012/05/22	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00011	0.00008	0.00007	0.00006
RC	2012/05/22	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	0.0004	0.0008	0.0004
RC	2012/05/22	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.2940	0.2730	0.2570	0.2220
RC	2012/05/22	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00009	0.00012	0.00006	0.00009
RC	2012/05/22	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/22	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.08960	0.01730	0.00428	0.01530
RC	2012/05/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/22	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00045	0.00014	< 0.00005	0.00015
RC	2012/05/22	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00044	0.00038	0.00035	0.00022
RC	2012/05/22	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/22	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.086600	0.034000	0.035300	0.037700
RC	2012/05/22	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0072	0.0053	0.0051	0.0055
RC	2012/05/22	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00012	0.00015	0.00016	0.00022
RC	2012/05/22	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	0.0004	0.0006	0.0003
RC	2012/05/22	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0036	0.0040	0.0018	0.0015

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/22	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.142	< 0.002
RC	2012/05/22	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0006	< 0.0001
RC	2012/05/22	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00874	< 0.00005
RC	2012/05/22	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
RC	2012/05/22	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015
RC	2012/05/22	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	< 0.0003	< 0.0003
RC	2012/05/22	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00008	< 0.00002
RC	2012/05/22	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0004	< 0.0001
RC	2012/05/22	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.2490	< 0.0001
RC	2012/05/22	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00007	< 0.00005
RC	2012/05/22	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001
RC	2012/05/22	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.08570	< 0.00005
RC	2012/05/23	Mercury-T	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005
RC	2012/05/22	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00045	< 0.00005
RC	2012/05/22	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00041	< 0.00005
RC	2012/05/22	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006
RC	2012/05/22	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.087700	< 0.000005
RC	2012/05/22	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/22	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/05/22	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0044	< 0.0002
RC	2012/05/22	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00011	< 0.00005
RC	2012/05/22	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0005	< 0.0001
RC	2012/05/22	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0011	< 0.0005

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.108	0.105	0.201	0.002
RC	2012/05/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0006	0.0006	0.0003	0.0005
RC	2012/05/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00408	0.00404	0.00328	0.00611
RC	2012/05/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/05/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	0.0004	0.0004	< 0.0003	< 0.0003
RC	2012/05/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00005	0.00004	0.00005	< 0.00002
RC	2012/05/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.1400	0.1400	0.1610	0.0350
RC	2012/05/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00456	0.00453	0.00408	0.10300
RC	2012/05/23	Mercury-D	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00028	0.00025	0.00008	0.00043
RC	2012/05/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00021	0.00021	0.00027	0.00023
RC	2012/05/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.050700	0.050900	0.022700	0.100000
RC	2012/05/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0021	0.0020	0.0029	< 0.0002
RC	2012/05/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00012	0.00011	0.00008	0.00010
RC	2012/05/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00103	0.00108	0.00035	0.00016
RC	2012/05/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0027	0.0027	0.0013	0.0020
RC	2012/05/17	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.76	7.66	7.23	8.04

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WQ9	WQ10	WQ11	WQ12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.045	0.199	0.382	0.164
RC	2012/05/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0003	0.0001	< 0.0001
RC	2012/05/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00705	0.00548	0.00614	0.00585
RC	2012/05/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	0.000050	< 0.000015	< 0.000015	< 0.000015
RC	2012/05/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0003	< 0.0003
RC	2012/05/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00004	0.00006	0.00003
RC	2012/05/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	< 0.0001	0.0004	< 0.0001
RC	2012/05/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0851	0.1280	0.2160	0.1250
RC	2012/05/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.06200	0.00311	0.00202	0.00530
RC	2012/05/23	Mercury-D	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00044	0.00014	< 0.00005	0.00015
RC	2012/05/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00035	0.00032	0.00028	0.00017
RC	2012/05/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.085700	0.034000	0.035300	0.037300
RC	2012/05/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0006	0.0027	0.0050	0.0027
RC	2012/05/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	0.00013	0.00016	0.00019
RC	2012/05/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00030	0.00027	0.00057	0.00023
RC	2012/05/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0036	0.0040	0.0018	0.0015
RC	2012/05/17	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.98	7.32	7.19	
SR	2012/05/22	pH @ 25°C BC-D	pH units	APHA 4500H	0.01				7.22

Water Analysis - Dissolved Metals

Project No. VE52095

 Final
 File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/16	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.028	< 0.002
RC	2012/05/16	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	< 0.0001
RC	2012/05/16	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00710	< 0.00005
RC	2012/05/16	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
RC	2012/05/16	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015
RC	2012/05/16	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003
RC	2012/05/16	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	< 0.00002
RC	2012/05/16	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0891	< 0.0001
RC	2012/05/16	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001
RC	2012/05/16	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.05930	< 0.00005
RC	2012/05/23	Mercury-D	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005
RC	2012/05/16	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00053	< 0.00005
RC	2012/05/16	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00026	< 0.00005
RC	2012/05/16	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006
RC	2012/05/16	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.087700	< 0.000005
RC	2012/05/16	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005
RC	2012/05/16	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001
RC	2012/05/16	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0007	< 0.0002
RC	2012/05/16	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	< 0.00005
RC	2012/05/16	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00029	< 0.00005
RC	2012/05/16	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0011	< 0.0005
SR	2012/05/22	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.90	5.70

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	6.8	6.7	3.1	18.3
RC	2012/05/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	1.56	1.54	0.88	4.40
RC	2012/05/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.02	0.02	< 0.01	0.02
RC	2012/05/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5	< 0.5	< 0.5	0.8
RC	2012/05/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	5.19	5.19	3.98	4.21
RC	2012/05/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.4	2.3	1.7	3.7
RC	2012/05/17	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	23.3	23.1	11.4	63.9

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WQ9	WQ10	WQ11	WQ12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	14.8	4.1	4.8	4.3
RC	2012/05/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.42	0.81	0.94	0.68
RC	2012/05/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	< 0.01	0.01	< 0.01
RC	2012/05/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.9	< 0.5	< 0.5	< 0.5
RC	2012/05/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.34	4.00	4.32	3.28
RC	2012/05/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.2	1.7	1.8	1.4
RC	2012/05/17	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	51.0	13.6	15.9	13.4

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/16	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	14.9	< 0.5
RC	2012/05/16	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	3.38	< 0.50
RC	2012/05/16	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	< 0.01
RC	2012/05/16	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.7	< 0.5
RC	2012/05/16	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.33	< 0.01
RC	2012/05/16	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	3.0	< 0.5
RC	2012/05/17	D-Hardness as CaCO ₃	mg/L (ppm)	Calculation	6.0	51.0	< 6.0

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/22	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	7.1	7.2	3.4	19.9
RC	2012/05/22	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.58	1.59	0.94	4.59
RC	2012/05/22	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.04	0.04	< 0.02	0.03
RC	2012/05/22	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.5	0.5	< 0.5	0.8
RC	2012/05/22	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	6.06	5.91	4.46	4.66
RC	2012/05/22	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.4	2.3	1.7	3.7
RC	2012/05/17	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	24.3	24.5	12.5	68.6

Water Analysis - Total Metals

Project No. VE52095		Final File No. EC-63189							
Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WQ9	WQ10	WQ11	WQ12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/22	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	15.8	4.4	5.2	4.7
RC	2012/05/22	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.45	0.82	0.98	0.71
RC	2012/05/22	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.03	< 0.02	< 0.02	< 0.02
RC	2012/05/22	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.9	< 0.5	< 0.5	< 0.5
RC	2012/05/22	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.01	4.67	4.85	3.80
RC	2012/05/22	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.2	1.7	1.8	1.4
RC	2012/05/17	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	53.8	14.2	16.9	14.5

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/22	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	15.9	< 0.5
RC	2012/05/22	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	3.43	< 0.50
RC	2012/05/22	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	< 0.02
RC	2012/05/22	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.7	< 0.5
RC	2012/05/22	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.99	< 0.01
RC	2012/05/22	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	3.0	< 0.5
RC	2012/05/17	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	53.8	< 6.0

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4663	12-4663-D	12-4664	12-4665
					Client ID:	WQ3	WQ3	WQ5	WQ8
					Sample Date:	2012/05/14 0:00	Lab Duplicate	2012/05/14 0:00	2012/05/14 0:00
					MDL				
RC	2012/05/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.5	10.6	13.3	8.5
RC	2012/05/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	10.5	10.6	13.4	8.5

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4666	12-4667	12-4668	12-4669
					Client ID:	WQ9	WQ10	WQ11	WQ12
					Sample Date:	2012/05/14 0:00	2012/05/14 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.8	13.4	20.7	11.8
RC	2012/05/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.8	13.4	20.7	11.9

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63189

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4670	12-4671
					Client ID:	WQ13	Trip Blank
					Sample Date:	2012/05/15 0:00	2012/05/14 0:00
					MDL		
RC	2012/05/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.5	0.1
RC	2012/05/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	9.5	0.1

Quality Control Standard

Project No.

File No. EC-63189

Water Analysis

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/17	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	61	56-77	65.00	QC-ALK/F-46
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH ₃ -G	0.02	0.61	0.47-0.74	0.61	NH3SC-001
RC	2012/05/17	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.78	2.54-2.94	2.79	CC-EC-0.02M-41
SR	2012/05/22	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.52	0.44-0.58	0.50	QC-ALK/F-46
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.72	1.44-1.76	1.60	CC-Anion-117B
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.634	0.54-0.66	0.60	CC-Anion-117B
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.864	0.72-0.88	0.80	CC-Anion-116BL
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	258	225-275	250.00	MS-CCV-HIGH
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	29.2	25.2-30.8	28.00	CC-Anion-117B
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540-d	4	820	628-1059	844.00	QCP-E2-SLD02008
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L(ppm)	APHA 4500N-D	0.08	7.07	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	34	26-36	31.00	QCP-E2-SLD02008
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	9.6	8.5-11.5	10.00	QC-Turb-5
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.3	3.6-4.4	4.00	CC-Anion-117B

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/22	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	47.3	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	99.3	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/22	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	98.2	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/22	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	51.0	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	54.2	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	50.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	50.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	50.8	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	51.8	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	99.0	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/22	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	50.4	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/05/22	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	50.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Mercury-T	µg/L (ppb)	APHA 3112	0.005000	0.263000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/05/22	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	51.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	51.6	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.7	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/05/22	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	49.7	45-55	50.00	MS-CCV-HIGH
RC	2012/05/22	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	245	225-275	250.00	MS-CCV-HIGH
RC	2012/05/22	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	264	225-275	250.00	MS-CCV-HIGH
RC	2012/05/22	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	48.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	99.5	90-110	100.00	MS-CCV-HIGH
RC	2012/05/22	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/22	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.5	45.0-55.0	50.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63189

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/16	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	107	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/16	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	99.0	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/16	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.3	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	49.5	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	50.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	49.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	50.7	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	52.7	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	102	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/16	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	49.9	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/05/16	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Mercury-D	µg/L (ppb)	APHA 3112	0.005000	0.263000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/05/16	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.3	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	49.3	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.3	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/05/16	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	51.4	45-55	50.00	MS-CCV-HIGH
RC	2012/05/16	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	244	225-275	250.00	MS-CCV-HIGH
RC	2012/05/16	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	254	225-275	250.00	MS-CCV-HIGH
RC	2012/05/16	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	104	90-110	100.00	MS-CCV-HIGH
RC	2012/05/16	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/16	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	50.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/17	pH @ 25°C BC-D	pH Units	APHA 4500H	0.01	6.01	5.92-6.08	6.00	QC-pH-3

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/16	Calcium-D	µg/L (ppb)	APHA 3125 B	500.0	24200	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/16	Magnesium-D	µg/L (ppb)	APHA 3125 B	500.00	26300	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/16	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	261	225-275	250.00	MS-CCV-HIGH
RC	2012/05/16	Potassium-D	µg/L (ppb)	APHA 3125 B	500.0	26000	22725-27775	25,250.00	MS-CCV-HIGH
RC	2012/05/16	Silicon-D	µg/L (ppb)	APHA 3125 B	10.00	120	105-129	117.00	MS-CCV-HIGH
RC	2012/05/16	Sodium-D	µg/L (ppb)	APHA 3125 B	500.0	26000	22545-27555	25,050.00	MS-CCV-HIGH

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/22	Calcium-T	µg/L (ppb)	APHA 3125 B	500.0	25000	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/22	Magnesium-T	µg/L (ppb)	APHA 3125 B	500.00	25900	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/22	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	258	225-275	250.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63189

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/22	Potassium-T	µg/L (ppb)	APHA 3125 B	500.0	25800	22725-27775	25,250.00	MS-CCV-HIGH
RC	2012/05/22	Silicon-T	µg/L (ppb)	APHA 3125 B	10.00	127	105-129	117.00	MS-CCV-HIGH
RC	2012/05/22	Sodium-T	µg/L (ppb)	APHA 3125 B	500.0	26100	22545-27555	25,050.00	MS-CCV-HIGH

Nutrient Analysis - Water

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/16	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.7	33.1-42.6	37.90	DMD-TOC-90-Mid
RC	2012/05/16	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.7	33.1-42.6	37.90	DMD-TOC-90-Mid

Analytical Comments

Project No. VE52095

File No. EC-63189

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.

Final Analytical Report

Attention: Bruce Ott
AMEC Environment & Infrastructure
Suite 600, 4445 Lougheed Highway
Burnaby, BC V5C 0E4

Results for File: EC-63191
Project Number: VE52095
Project Name: NewGold Blackwater
Date Received: 2012/05/17
Date of Report: 2012/05/25
Sublet Data: Attached

Report reviewed by:

A handwritten signature in blue ink, appearing to read "Jesse Dang".

Jesse Dang, B.Sc.
Manager
Laboratory Services

A handwritten signature in blue ink, appearing to read "Charlene Rollheiser".

Charlene Rollheiser
Director of QA/QC
Laboratory Services

** All samples will be disposed of after 30 days following analysis. Please contact the lab if you require additional sample storage time. (Samples deemed hazardous will be returned to the client at their own expense or disposal will be arranged.) **

Water Analysis

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
SR	2012/05/24	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	5	5	10	10
SR	2012/05/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.025	0.023	0.044	0.029
SR	2012/05/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.03	0.03	0.05	0.04
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	---	< 0.005	< 0.005
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.003	---	< 0.003	< 0.003
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.8	---	7.1	1.2
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	68	72	28	36
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	3	3	8	4
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	6.1	5.5	16	3.8
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	1.1	---	1.5	1.3

Water Analysis

Project No. VE52095

 Final
 File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
SR	2012/05/24	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	20	54	11	2
SR	2012/05/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	0.042	0.109	0.044	< 0.001
SR	2012/05/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.07	0.09	0.08	0.05
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	< 0.005	< 0.005	< 0.005	0.007
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	< 0.003	0.010	0.012	0.003
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	1.3	3.0	8.2	< 0.5
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540 C	4	28	84	56	8
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	73	2	10	< 2
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	7.7	1.2	15	0.7
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	1.0	1.4	1.9	1.0

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/24	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.612	0.613	0.885	0.388
RC	2012/05/24	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00009	0.00006	0.00021	< 0.00005
RC	2012/05/24	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0007	0.0007	0.0023	0.0007
RC	2012/05/24	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00823	0.00836	0.00839	0.00983
RC	2012/05/24	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/24	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/24	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	0.000035	0.000025	0.000080	< 0.000015
RC	2012/05/24	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0004	0.0003	0.0007	< 0.0003
RC	2012/05/24	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00003	0.00004	0.00005	0.00002
RC	2012/05/24	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0013	0.0016	0.0031	0.0005
RC	2012/05/24	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.4750	0.4780	0.7210	0.3320
RC	2012/05/24	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00045	0.00047	0.00093	0.00012
RC	2012/05/24	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/24	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.01900	0.01920	0.03380	0.01920
RC	2012/05/25	Mercury-T	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/24	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00005	0.00006	< 0.00005	0.00024
RC	2012/05/24	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00042	0.00037	0.00044	0.00037
RC	2012/05/24	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/24	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/24	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.026700	0.026700	0.036300	0.033600
RC	2012/05/24	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/24	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/24	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0111	0.0112	0.0347	0.0061
RC	2012/05/24	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00015	0.00015	0.00007	0.00021
RC	2012/05/24	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0007	0.0006	0.0015	0.0004
RC	2012/05/24	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0094	0.0098	0.0592	0.0031

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/24	Aluminum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.002	0.516	0.034	0.899	< 0.002
RC	2012/05/24	Antimony-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	0.00021	< 0.00005
RC	2012/05/24	Arsenic-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0008	0.0002	0.0023	< 0.0001
RC	2012/05/24	Barium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.01230	0.00920	0.01080	0.00014
RC	2012/05/24	Beryllium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/24	Boron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/24	Cadmium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000015	< 0.000015	< 0.000015	0.000073	< 0.000015
RC	2012/05/24	Chromium -T	mg/L (ppm)	APHA 3030 E/3125 B	0.0003	0.0005	< 0.0003	0.0008	< 0.0003
RC	2012/05/24	Cobalt-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00002	0.00019	< 0.00002	0.00006	< 0.00002
RC	2012/05/24	Copper-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0011	0.0182	0.0006	< 0.0001
RC	2012/05/24	Iron-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.6980	0.1680	0.7360	< 0.0001
RC	2012/05/24	Lead-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00027	0.00069	0.00092	< 0.00005
RC	2012/05/24	Lithium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/24	Manganese-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.05670	0.00796	0.03340	< 0.00005
RC	2012/05/25	Mercury-T	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/24	Molybdenum-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00025	0.00053	< 0.00005	< 0.00005
RC	2012/05/24	Nickel-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00049	0.00034	0.00035	< 0.00005
RC	2012/05/24	Selenium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/24	Silver-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/24	Strontium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.000005	0.039900	0.076000	0.036200	< 0.000005
RC	2012/05/24	Thallium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/24	Tin-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/24	Titanium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0002	0.0129	0.0006	0.0357	< 0.0002
RC	2012/05/24	Uranium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.00005	0.00025	0.00005	0.00007	< 0.00005
RC	2012/05/24	Vanadium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0001	0.0018	0.0001	0.0016	< 0.0001
RC	2012/05/24	Zinc-T	mg/L (ppm)	APHA 3030 E/3125 B	0.0005	0.0038	0.0134	0.0596	< 0.0005

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/23	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.312	0.309	0.214	0.196
RC	2012/05/23	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00019	< 0.00005
RC	2012/05/23	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0004	0.0004	0.0013	0.0003
RC	2012/05/23	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00508	0.00511	0.00264	0.00661
RC	2012/05/23	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/23	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/23	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/05/23	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	0.0004	< 0.0003
RC	2012/05/23	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00003	0.00004	0.00003	0.00002
RC	2012/05/23	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0013	0.0016	0.0031	0.0004
RC	2012/05/23	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.1850	0.1860	0.1460	0.1160
RC	2012/05/23	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00045	0.00047	0.00023	< 0.00005
RC	2012/05/23	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/23	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00980	0.00969	0.01060	0.00484
RC	2012/05/25	Mercury-D	mg/L (ppm)	APHA 3112	0.000005	< 0.000005	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/23	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	0.00008
RC	2012/05/23	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00042	0.00037	0.00044	0.00037
RC	2012/05/23	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/23	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/23	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.025000	0.025400	0.031800	0.030700
RC	2012/05/23	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/23	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/23	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0030	0.0026	0.0030	0.0025
RC	2012/05/23	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00011	< 0.00005	0.00015
RC	2012/05/23	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00019	0.00019	0.00010	0.00012
RC	2012/05/23	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0094	0.0098	0.0534	0.0031
SR	2012/05/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	6.61	6.49	6.94	7.11

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/23	Aluminum-D	mg/L (ppm)	APHA 3125 B	0.002	0.146	0.018	0.206	< 0.002
RC	2012/05/23	Antimony-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	0.00017	< 0.00005
RC	2012/05/23	Arsenic-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0003	0.0001	0.0014	< 0.0001
RC	2012/05/23	Barium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00538	0.00834	0.00277	< 0.00005
RC	2012/05/23	Beryllium-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/23	Boron-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/23	Cadmium-D	mg/L (ppm)	APHA 3125 B	0.000015	< 0.000015	< 0.000015	< 0.000015	< 0.000015
RC	2012/05/23	Chromium-D	mg/L (ppm)	APHA 3125 B	0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
RC	2012/05/23	Cobalt-D	mg/L (ppm)	APHA 3125 B	0.00002	0.00005	< 0.00002	< 0.00002	< 0.00002
RC	2012/05/23	Copper-D	mg/L (ppm)	APHA 3125 B	0.0001	0.0011	0.0182	0.0004	< 0.0001
RC	2012/05/23	Iron-D	mg/L (ppm)	APHA 3125 B	0.0001	0.1390	0.1140	0.1270	< 0.0001
RC	2012/05/23	Lead-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	0.00069	0.00006	< 0.00005
RC	2012/05/23	Lithium-D	mg/L (ppm)	APHA 3125 B	0.001	< 0.001	< 0.001	< 0.001	< 0.001
RC	2012/05/23	Manganese-D	mg/L (ppm)	APHA 3125 B	0.00005	0.01160	0.00318	0.01030	< 0.00005
RC	2012/05/25	Mercury-D	mg/L (ppm)	APHA 3112	0.000005	0.000012	< 0.000005	< 0.000005	< 0.000005
RC	2012/05/23	Molybdenum-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00011	0.00036	< 0.00005	< 0.00005
RC	2012/05/23	Nickel-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00049	0.00034	0.00033	< 0.00005
RC	2012/05/23	Selenium-D	mg/L (ppm)	APHA 3125 B	0.0006	< 0.0006	< 0.0006	< 0.0006	< 0.0006
RC	2012/05/23	Silver-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/23	Strontium-D	mg/L (ppm)	APHA 3125 B	0.000005	0.035600	0.074900	0.031500	0.000007
RC	2012/05/23	Thallium-D	mg/L (ppm)	APHA 3125 B	0.00005	< 0.00005	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/23	Tin-D	mg/L (ppm)	APHA 3125 B	0.0001	< 0.0001	< 0.0001	< 0.0001	< 0.0001
RC	2012/05/23	Titanium-D	mg/L (ppm)	APHA 3125 B	0.0002	0.0019	0.0005	0.0025	< 0.0002
RC	2012/05/23	Uranium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00010	< 0.00005	< 0.00005	< 0.00005
RC	2012/05/23	Vanadium-D	mg/L (ppm)	APHA 3125 B	0.00005	0.00043	0.00011	0.00009	< 0.00005
RC	2012/05/23	Zinc-D	mg/L (ppm)	APHA 3125 B	0.0005	0.0038	0.0134	0.0520	< 0.0005
SR	2012/05/24	pH @ 25°C BC-D	pH units	APHA 4500H	0.01	7.43	7.95	7.06	5.53

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/23	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	2.8	2.8	5.5	3.9
RC	2012/05/23	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	0.61	0.60	0.91	0.65
RC	2012/05/23	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	0.01	0.01	< 0.01
RC	2012/05/23	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	< 0.5	< 0.5	0.5	< 0.5
RC	2012/05/23	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.34	4.24	4.59	4.21
RC	2012/05/23	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	1.7	1.7	2.0	1.5
RC	2012/05/23	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	9.5	9.5	17.6	12.4

Water Analysis - Dissolved Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/23	Calcium-D	mg/L (ppm)	APHA 3125 B	0.5	5.5	14.4	5.5	< 0.5
RC	2012/05/23	Magnesium-D	mg/L (ppm)	APHA 3125 B	0.50	1.20	3.01	0.91	< 0.50
RC	2012/05/23	Phosphorus-D	mg/L (ppm)	APHA 3125 B	0.01	0.01	< 0.01	0.01	< 0.01
RC	2012/05/23	Potassium-D	mg/L (ppm)	APHA 3125 B	0.5	0.5	0.8	0.5	< 0.5
RC	2012/05/23	Silicon-D	mg/L (ppm)	APHA 3125 B	0.01	4.58	5.30	4.52	< 0.01
RC	2012/05/23	Sodium-D	mg/L (ppm)	APHA 3125 B	0.5	2.0	3.0	2.0	< 0.5
RC	2012/05/23	D-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	18.6	48.4	17.4	< 6.0

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/24	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.9	2.9	6.0	4.2
RC	2012/05/24	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	0.69	0.69	1.18	0.72
RC	2012/05/24	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.02	< 0.02	0.03	< 0.02
RC	2012/05/24	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	< 0.5	< 0.5	0.7	< 0.5
RC	2012/05/24	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	4.54	4.43	5.45	4.35
RC	2012/05/24	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	1.8	1.8	2.1	1.5
RC	2012/05/24	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	10.2	10.2	19.8	13.4

Water Analysis - Total Metals

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
RC	2012/05/24	Calcium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	5.9	15.0	5.9	< 0.5
RC	2012/05/24	Magnesium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.50	1.40	3.29	1.20	< 0.50
RC	2012/05/24	Phosphorus-T	mg/L (ppm)	APHA 3030 E/3125 B	0.02	0.04	< 0.02	0.03	< 0.02
RC	2012/05/24	Potassium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	0.5	0.8	0.7	< 0.5
RC	2012/05/24	Silicon-T	mg/L (ppm)	APHA 3030 E/3125 B	0.01	5.02	5.30	5.42	< 0.01
RC	2012/05/24	Sodium-T	mg/L (ppm)	APHA 3030 E/3125 B	0.5	2.0	3.0	2.1	< 0.5
RC	2012/05/24	T-Hardness as CaCO3	mg/L (ppm)	Calculation	6.0	20.5	51.0	19.7	< 6.0

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4678	12-4678-D	12-4679	12-4680
					Client ID:	WQ1	WQ1	WQ4	WQ6
					Sample Date:	2012/05/15 0:00	Lab Duplicate	2012/05/15 0:00	2012/05/15 0:00
					MDL				
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/05/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	19.3	19.4	16.4	13.1
RC	2012/05/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	22.1	22.5	16.5	13.1
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.017	---	0.012	< 0.003
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.007	0.008	0.007	0.002
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.31	---	0.52	0.24

Nutrient Analysis - Water

Project No. VE52095

Final
File No. EC-63191

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	Lab #:	12-4681	12-4682	12-4683	12-4684
					Client ID:	WQ7	WQ14	WQ Duplicate	Field Blank
					Sample Date:	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00	2012/05/15 0:00
					MDL				
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	< 0.02	< 0.02	< 0.02	< 0.02
RC	2012/05/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310 B	0.1	13.5	11.6	16.3	0.1
RC	2012/05/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310 B	0.1	13.5	11.6	16.4	0.1
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	< 0.003	< 0.003	0.015	0.015
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	mg/L (ppm)	APHA 3030 E/3120 B	0.001	0.006	0.005	0.007	< 0.001
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L (ppm)	APHA 4500N-d	0.08	0.21	0.17	0.48	< 0.08

Quality Control Standard

Project No.

File No. EC-63191

Water Analysis

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
SR	2012/05/24	Alkalinity as CaCO ₃	mg/L (ppm)	APHA 2320	1	63	56-77	65.00	QC-ALK/F-46
SR	2012/05/24	Conductivity @ 25°C	mS/cm	APHA 2510 B	0.001	2.79	2.54-2.94	2.79	CC-EC-0.02M-41
SR	2012/05/24	Fluoride-D	mg/L (ppm)	APHA 4500F-c	0.02	0.51	0.44-0.58	0.50	QC-ALK/F-46
SR	2012/05/22	Nitrate-N-D	mg/L (ppm)	APHA 4110	0.005	1.72	1.44-1.76	1.60	CC-Anion-117B
SR	2012/05/22	Nitrite-N-D	mg/L (ppm)	APHA 4110	0.003	0.659	0.54-0.66	0.60	CC-Anion-117B
SR	2012/05/22	Sulphate-D	mg/L (ppm)	APHA 4110	0.5	29.8	25.2-30.8	28.00	CC-Anion-117B
EL	2012/05/22	T-Dissolved Solids180°C	mg/L (ppm)	APHA 2540-d	4	820	628-1059	844.00	OCP-E2-SLD02008
EL	2012/05/23	Total Suspended Solids @105°C	mg/L (ppm)	APHA 2540-d	2	34	26-36	31.00	OCP-E2-SLD02008
RC	2012/05/17	Turbidity	NTU	APHA 2130-b	0.1	9.6	8.5-11.5	10.00	QC-Turb-5
SR	2012/05/22	Chloride-D	mg/L (ppm)	APHA 4110	0.1	4.2	3.6-4.4	4.00	CC-Anion-117B

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/24	Aluminum-T	µg/L (ppb)	APHA 3125 B	2.000	52.8	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Antimony-T	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/24	Arsenic-T	µg/L (ppb)	APHA 3125 B	0.1000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/24	Barium-T	µg/L (ppb)	APHA 3125 B	0.05000	51.5	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Beryllium-T	µg/L (ppb)	APHA 3125 B	0.1000	49.0	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Boron-T	µg/L (ppb)	APHA 3125 B	1.000	51.6	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Cadmium-T	µg/L (ppb)	APHA 3125 B	0.015000	51.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Chromium -T	µg/L (ppb)	APHA 3125 B	0.3000	50.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Cobalt-T	µg/L (ppb)	APHA 3125 B	0.02000	51.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Copper-T	µg/L (ppb)	APHA 3125 B	0.1000	51.3	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Iron-T	µg/L (ppb)	APHA 3125 B	0.1000	48.7	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Lead-T	µg/L (ppb)	APHA 3125 B	0.05000	101	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/24	Lithium-T	µg/L (ppb)	APHA 3125 B	1.000	50.1	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/05/24	Manganese-T	µg/L (ppb)	APHA 3125 B	0.05000	48.4	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/25	Mercury-T	µg/L (ppb)	APHA 3112	0.005000	0.274000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/05/24	Molybdenum-T	µg/L (ppb)	APHA 3125 B	0.05000	51.9	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Nickel-T	µg/L (ppb)	APHA 3125 B	0.05000	52.1	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Selenium-T	µg/L (ppb)	APHA 3125 B	0.6000	50.6	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Silver-T	µg/L (ppb)	APHA 3125 B	0.05000	12.8	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/05/24	Strontium-T	µg/L (ppb)	APHA 3125 B	0.005000	51.4	45-55	50.00	MS-CCV-HIGH
RC	2012/05/24	Thallium-T	µg/L (ppb)	APHA 3125 B	0.05000	246	225-275	250.00	MS-CCV-HIGH
RC	2012/05/24	Tin-T	µg/L (ppb)	APHA 3125 B	0.1000	253	225-275	250.00	MS-CCV-HIGH
RC	2012/05/24	Titanium-T	µg/L (ppb)	APHA 3125 B	0.2000	49.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Uranium-T	µg/L (ppb)	APHA 3125 B	0.05000	99.7	90-110	100.00	MS-CCV-HIGH
RC	2012/05/24	Vanadium-T	µg/L (ppb)	APHA 3125 B	0.0500	50.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/24	Zinc-T	µg/L (ppb)	APHA 3125 B	0.5000	50.9	45.0-55.0	50.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63191

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/23	Aluminum-D	µg/L (ppb)	APHA 3125 B	2.000	50.8	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Antimony-D	µg/L (ppb)	APHA 3125 B	0.05000	105	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/23	Arsenic-D	µg/L (ppb)	APHA 3125 B	0.1000	98.7	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/23	Barium-D	µg/L (ppb)	APHA 3125 B	0.05000	50.2	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Beryllium-D	µg/L (ppb)	APHA 3125 B	0.1000	50.8	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Boron-D	µg/L (ppb)	APHA 3125 B	1.000	53.0	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Cadmium-D	µg/L (ppb)	APHA 3125 B	0.015000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Chromium-D	µg/L (ppb)	APHA 3125 B	0.3000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Cobalt-D	µg/L (ppb)	APHA 3125 B	0.02000	51.2	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Copper-D	µg/L (ppb)	APHA 3125 B	0.1000	50.8	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Iron-D	µg/L (ppb)	APHA 3125 B	0.1000	51.7	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Lead-D	µg/L (ppb)	APHA 3125 B	0.05000	100	90.0-110	100.00	MS-CCV-HIGH
RC	2012/05/23	Lithium-D	µg/L (ppb)	APHA 3125 B	1.000	48.4	45.0-55.5	50.00	MS-CCV-HIGH
RC	2012/05/23	Manganese-D	µg/L (ppb)	APHA 3125 B	0.05000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/25	Mercury-D	µg/L (ppb)	APHA 3112	0.005000	0.274000	0.212-0.340	0.28	C2-QCPHG009
RC	2012/05/23	Molybdenum-D	µg/L (ppb)	APHA 3125 B	0.05000	48.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Nickel-D	µg/L (ppb)	APHA 3125 B	0.05000	51.7	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Selenium-D	µg/L (ppb)	APHA 3125 B	0.6000	50.3	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Silver-D	µg/L (ppb)	APHA 3125 B	0.05000	12.7	11.25-13.75	12.50	MS-CCV-HIGH
RC	2012/05/23	Strontium-D	µg/L (ppb)	APHA 3125 B	0.005000	48.9	45-55	50.00	MS-CCV-HIGH
RC	2012/05/23	Thallium-D	µg/L (ppb)	APHA 3125 B	0.05000	253	225-275	250.00	MS-CCV-HIGH
RC	2012/05/23	Tin-D	µg/L (ppb)	APHA 3125 B	0.1000	258	225-275	250.00	MS-CCV-HIGH
RC	2012/05/23	Titanium-D	µg/L (ppb)	APHA 3125 B	0.2000	49.5	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Uranium-D	µg/L (ppb)	APHA 3125 B	0.05000	102	90-110	100.00	MS-CCV-HIGH
RC	2012/05/23	Vanadium-D	µg/L (ppb)	APHA 3125 B	0.05000	49.6	45.0-55.0	50.00	MS-CCV-HIGH
RC	2012/05/23	Zinc-D	µg/L (ppb)	APHA 3125 B	0.5000	49.7	45.0-55.0	50.00	MS-CCV-HIGH
SR	2012/05/24	pH @ 25°C BC-D	pH Units	APHA 4500H	0.01	6.01	5.92-6.08	6.00	QC-pH-3

Water Analysis - Dissolved Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/23	Calcium-D	µg/L (ppb)	APHA 3125 B	500.0	24800	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/23	Magnesium-D	µg/L (ppb)	APHA 3125 B	500.00	25600	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/23	Phosphorus-D	µg/L (ppb)	APHA 3125 B	10.00	256	225-275	250.00	MS-CCV-HIGH
RC	2012/05/23	Potassium-D	µg/L (ppb)	APHA 3125 B	500.0	24900	22725-27775	25,250.00	MS-CCV-HIGH
RC	2012/05/23	Silicon-D	µg/L (ppb)	APHA 3125 B	10.00	125	105-129	117.00	MS-CCV-HIGH
RC	2012/05/23	Sodium-D	µg/L (ppb)	APHA 3125 B	500.0	25900	22545-27555	25,050.00	MS-CCV-HIGH

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/24	Calcium-T	µg/L (ppb)	APHA 3125 B	500.0	25100	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/24	Magnesium-T	µg/L (ppb)	APHA 3125 B	500.00	26500	22545-27555	25,050.00	MS-CCV-HIGH
RC	2012/05/24	Phosphorus-T	µg/L (ppb)	APHA 3125 B	10.00	245	225-275	250.00	MS-CCV-HIGH

Quality Control Standard

Project No.

File No. EC-63191

Water Analysis - Total Metals

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
RC	2012/05/24	Potassium-T	µg/L (ppb)	APHA 3125 B	500.0	25100	22725-27775	25,250.00	MS-CCV-HIGH
RC	2012/05/24	Silicon-T	µg/L (ppb)	APHA 3125 B	10.00	122	105-129	117.00	MS-CCV-HIGH
RC	2012/05/24	Sodium-T	µg/L (ppb)	APHA 3125 B	500.0	26700	22545-27555	25,050.00	MS-CCV-HIGH

Nutrient Analysis - Water

Analyst	Date of Analysis (yyyy/m/d)	Analytical Parameter	Units	Reference Method	MDL	Analyzed Value	Advisory Range	Target Value	Reference No.
EL	2012/05/23	Ammonia - Nitrogen	mg/L (ppm)	APHA 4500NH3-G	0.02	0.61	0.47-0.74	0.61	NH3SC-001
RC	2012/05/23	Carbon (Dissolved Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.8	33.1-42.6	37.90	DMD-TOC-90-Mid
RC	2012/05/23	Carbon (Total Organic)	mg/L (ppm)	APHA 5310-B	0.1	38.8	33.1-42.6	37.90	DMD-TOC-90-Mid
SR	2012/05/22	Phosphorus-Ortho-DLL	mg/L (ppm)	APHA 4110	0.003	0.858	0.72-0.88	0.80	CC-Anion-116BL
RC	2012/05/22	Phosphorus (Total-Dissolved) LL	µg/L (ppb)	APHA 3125 B	10.000	258	225-275	250.00	MS-CCV-HIGH
EL	2012/05/23	Total Kjeldahl Nitrogen (TKN)	mg/L(ppm)	APHA 4500N-D	0.08	7.07	6.70-11.30	9.00	QC-NUT-2-D2-NUT01114

Analytical Comments

Project No. VE52095

File No. EC-63191

All Analytical results pertain to samples analyzed as received.

APHA: Standard Method for the Examination of Water and Wastewater, 2005. 21st Ed. American Public Health Association.

MDL - Method Detection Limit

Total Alkalinity titration performed to pH endpoint 4.5.



AMEC EARTH & ENVIRONMENTAL
ATTN: KRISTINE CONNOR
5667 - 70 STREET
EDMONTON AB T6B 3P6

Date Received: 16-MAY-12
Report Date: 29-MAY-12 12:52 (MT)
Version: FINAL

Client Phone: 780-436-2152

Certificate of Analysis

Lab Work Order #: L1148378
Project P.O. #: 2220
Job Reference: EC-63189
C of C Numbers:
Legal Site Desc:

Maureen Olinek
Senior Account Manager

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ADDRESS: 9936-67 Avenue, Edmonton, AB T6E 0P5 Canada | Phone: +1 780 413 5227 | Fax: +1 780 437 2311
ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1148378-1 12-4663~WQ3 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-2 12-4664~WQ5 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-3 12-4665~WQ8 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-4 12-4666~WQ9 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-5 12-4667~WQ10 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-6 12-4668~WQ11 Sampled By: CLIENT on 14-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-7 12-4669~WQ12 Sampled By: CLIENT on 15-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-8 12-4670~WQ13 Sampled By: CLIENT on 15-MAY-12 Matrix: WATER Miscellaneous Parameters Cyanide, Total Cyanide, Weak Acid Diss	<0.0050 <0.0050		0.0050 0.0050	mg/L mg/L		25-MAY-12 25-MAY-12	R2372344 R2372345
L1148378-9 12-4671~TRIP BLANK Sampled By: CLIENT on 14-MAY-12 Matrix: WATER							

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
CN-T-CFA-VA	Water	Total Cyanide in water by CFA	ISO 14403:2002
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-VA	Water	Weak Acid Diss. Cyanide in water by CFA	APHA 4500-CN CYANIDE
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.			

** 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

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

- 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*
- mg/L - unit of concentration based on volume, parts per million.*
- < - Less than.*

D.L. - The reporting limit.

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: L1148378

Report Date: 29-MAY-12

Page 1 of 3

Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-T-CFA-VA		Water						
Batch	R2372344							
WG1477861-13	DUP	L1148985-1						
Cyanide, Total		0.0272	0.0272		mg/L	0.0	20	25-MAY-12
WG1477861-16	DUP	L1149757-4						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-MAY-12
WG1477861-3	DUP	L1146732-10						
Cyanide, Total		0.246	0.253		mg/L	2.8	20	25-MAY-12
WG1477861-6	DUP	L1148378-8						
Cyanide, Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-MAY-12
WG1477861-11	LCS							
Cyanide, Total			89.6		%		80-120	25-MAY-12
WG1477861-12	LCS							
Cyanide, Total			89.9		%		80-120	25-MAY-12
WG1477861-15	LCS							
Cyanide, Total			90.5		%		80-120	25-MAY-12
WG1477861-18	LCS							
Cyanide, Total			89.3		%		80-120	25-MAY-12
WG1477861-2	LCS							
Cyanide, Total			90.6		%		80-120	25-MAY-12
WG1477861-5	LCS							
Cyanide, Total			91.8		%		80-120	25-MAY-12
WG1477861-8	LCS							
Cyanide, Total			90.0		%		80-120	25-MAY-12
WG1477861-1	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-MAY-12
WG1477861-19	MB							
Cyanide, Total			<0.0050		mg/L		0.005	25-MAY-12
WG1477861-14	MS	L1148985-1						
Cyanide, Total			97.3		%		70-130	25-MAY-12
WG1477861-17	MS	L1149757-4						
Cyanide, Total			94.2		%		70-130	25-MAY-12
WG1477861-4	MS	L1146732-10						
Cyanide, Total			96.8		%		70-130	25-MAY-12
WG1477861-7	MS	L1148378-8						
Cyanide, Total			98.4		%		70-130	25-MAY-12
CN-WAD-CFA-VA		Water						



Quality Control Report

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Client: AMEC EARTH & ENVIRONMENTAL
5667 - 70 STREET
EDMONTON AB T6B 3P6

Contact: KRISTINE CONNOR

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-CFA-VA								
Water								
Batch	R2372345							
WG1477868-12	DUP	L1148893-12						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-MAY-12
WG1477868-16	DUP	L1149757-4						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-MAY-12
WG1477868-3	DUP	L1146732-10						
Cyanide, Weak Acid Diss		0.0058	0.0057		mg/L	1.0	20	25-MAY-12
WG1477868-6	DUP	L1148378-8						
Cyanide, Weak Acid Diss		<0.0050	<0.0050	RPD-NA	mg/L	N/A	20	25-MAY-12
WG1477868-11	LCS							
Cyanide, Weak Acid Diss			99.5		%		80-120	25-MAY-12
WG1477868-14	LCS							
Cyanide, Weak Acid Diss			99.3		%		80-120	25-MAY-12
WG1477868-15	LCS							
Cyanide, Weak Acid Diss			99.9		%		80-120	25-MAY-12
WG1477868-18	LCS							
Cyanide, Weak Acid Diss			101.1		%		80-120	25-MAY-12
WG1477868-2	LCS							
Cyanide, Weak Acid Diss			102.2		%		80-120	25-MAY-12
WG1477868-5	LCS							
Cyanide, Weak Acid Diss			100.1		%		80-120	25-MAY-12
WG1477868-8	LCS							
Cyanide, Weak Acid Diss			99.4		%		80-120	25-MAY-12
WG1477868-1	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	25-MAY-12
WG1477868-19	MB							
Cyanide, Weak Acid Diss			<0.0050		mg/L		0.005	25-MAY-12
WG1477868-13	MS	L1148893-12						
Cyanide, Weak Acid Diss			96.0		%		70-130	25-MAY-12
WG1477868-17	MS	L1149757-4						
Cyanide, Weak Acid Diss			89.1		%		70-130	25-MAY-12
WG1477868-4	MS	L1146732-10						
Cyanide, Weak Acid Diss			99.7		%		70-130	25-MAY-12
WG1477868-7	MS	L1148378-8						
Cyanide, Weak Acid Diss			97.8		%		70-130	25-MAY-12

Quality Control Report

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Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
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.