ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060058-4 FLB-01							
Sampled By: CLIENT on 15-SEP-11							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	4.5		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	5.5		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	1.38		0.40	umhos/cm		19-SEP-11	R2254103
pH							
pH	6.31		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060058-1	TRB-06	SFPL	Sample was Filtered and Preserved at the laboratory
L1060058-2	TRB-03	SFPL	Sample was Filtered and Preserved at the laboratory
L1060058-3	TRB-04	SFPL	Sample was Filtered and Preserved at the laboratory
L1060058-4	FLB-01	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.

EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060058 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Dissolved Organic Carbon			99		%		80-120	20-SEP-11
WG1352998-2 DUP		**L1060059-1**						
Dissolved Organic Carbon		15.5	15.3		mg/L	1.3	20	21-SEP-11
WG1352998-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	20-SEP-11
Batch R2255889								
WG1353838-2 CVS								
Dissolved Organic Carbon			101		%		80-120	21-SEP-11
Batch R2256631								
WG1354641-2 CVS								
Dissolved Organic Carbon			102		%		80-120	22-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Total Organic Carbon			99		%		80-120	20-SEP-11
WG1353005-1 MB								
Total Organic Carbon			<1.0		mg/L		1	20-SEP-11
Batch R2255889								
WG1353838-2 CVS								
Total Organic Carbon			101		%		80-120	21-SEP-11
WG1353838-3 DUP		**L1060061-1**						
Total Organic Carbon		29.5	29.6		mg/L	0.18	20	21-SEP-11
WG1353838-1 MB								
Total Organic Carbon			<1.0		mg/L		1	21-SEP-11
Batch R2256631								
WG1354641-2 CVS								
Total Organic Carbon			101		%		80-120	22-SEP-11
WG1354641-1 MB								
Total Organic Carbon			<1.0		mg/L		1	22-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-1 CVS								
Chlorophyll a			83		%		65-135	23-SEP-11
WG1354254-2 CVS								
Chlorophyll a			115				65-135	

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-2 CVS								
Chlorophyll a			115		%		65-135	23-SEP-11
WG1354197-2 DUP		**L1059720-3**						
Chlorophyll a		26.9	26.2		ug/L	2.8	35	23-SEP-11
Phaeophytin a		9.76	10.7		ug/L	9.4	35	23-SEP-11
WG1354197-3 DUP		**L1060060-1**						
Chlorophyll a		10.4	11.4		ug/L	8.7	35	23-SEP-11
Phaeophytin a		2.88	3.28		ug/L	13	35	23-SEP-11
WG1354197-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						

Quality Control Report

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Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							
Batch R2254103								
WG1351828-1 CVS								
Conductivity			99		%		90-110	19-SEP-11
WG1351828-2 DUP		**L1060058-2**						
Conductivity		0.98	0.97		umhos/cm	1.0	400	19-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Aluminum (Al)-Total			95		%		80-120	22-SEP-11
Antimony (Sb)-Total			97		%		80-120	22-SEP-11
Arsenic (As)-Total			100		%		80-120	22-SEP-11
Barium (Ba)-Total			100		%		80-120	22-SEP-11
Beryllium (Be)-Total			103		%		80-120	

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Beryllium (Be)-Total			103		%		80-120	22-SEP-11
Bismuth (Bi)-Total			98		%		80-120	22-SEP-11
Boron (B)-Total			99		%		80-120	22-SEP-11
Cadmium (Cd)-Total			97		%		80-120	22-SEP-11
Calcium (Ca)-Total			102		%		80-120	22-SEP-11
Cesium (Cs)-Total			95		%		80-120	22-SEP-11
Chromium (Cr)-Total			95		%		80-120	22-SEP-11
Cobalt (Co)-Total			101		%		80-120	22-SEP-11
Copper (Cu)-Total			96		%		80-120	22-SEP-11
Iron (Fe)-Total			95		%		80-120	22-SEP-11
Lead (Pb)-Total			97		%		80-120	22-SEP-11
Lithium (Li)-Total			98		%		80-120	22-SEP-11
Magnesium (Mg)-Total			100		%		80-120	22-SEP-11
Manganese (Mn)-Total			95		%		80-120	22-SEP-11
Molybdenum (Mo)-Total			98		%		80-120	22-SEP-11
Nickel (Ni)-Total			97		%		80-120	22-SEP-11
Phosphorus (P)-Total			100		%		80-120	22-SEP-11
Potassium (K)-Total			98		%		80-120	22-SEP-11
Rubidium (Rb)-Total			99		%		80-120	22-SEP-11
Selenium (Se)-Total			98		%		80-120	22-SEP-11
Silicon (Si)-Total			96		%		80-120	22-SEP-11
Silver (Ag)-Total			104		%		80-120	22-SEP-11
Sodium (Na)-Total			99		%		80-120	22-SEP-11
Strontium (Sr)-Total			97		%		80-120	22-SEP-11
Tellurium (Te)-Total			99		%		80-120	22-SEP-11
Thallium (Tl)-Total			99		%		80-120	22-SEP-11
Thorium (Th)-Total			97		%		70-130	22-SEP-11
Tin (Sn)-Total			97		%		80-120	22-SEP-11
Titanium (Ti)-Total			97		%		80-120	22-SEP-11
Tungsten (W)-Total			97		%		80-120	22-SEP-11
Uranium (U)-Total			99		%		80-120	22-SEP-11
Vanadium (V)-Total			98		%		80-120	22-SEP-11
Zinc (Zn)-Total			97		%		80-120	22-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Zirconium (Zr)-Total			100		%		80-120	22-SEP-11
WG1354038-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	22-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	22-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	22-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	22-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	22-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	22-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	22-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	22-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	22-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	22-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	22-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	22-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	22-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	22-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	22-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	22-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	22-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	22-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	22-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	22-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	22-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	22-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	22-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	22-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	22-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-1 MB								
Titanium (Ti)-Total			<0.00020		mg/L		0.001	22-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	22-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	22-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	22-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	22-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2254536								
WG1352330-1 CVS								
Total Kjeldahl Nitrogen			99		%		90-110	20-SEP-11
WG1351730-4 DUP		**L1059417-1**						
Total Kjeldahl Nitrogen		0.84	0.82		mg/L	2.5	20	20-SEP-11
WG1351730-6 DUP		**L1059720-6**						
Total Kjeldahl Nitrogen		1.81	1.84		mg/L	1.9	20	20-SEP-11
WG1351730-2 LCS								
Total Kjeldahl Nitrogen			101		%		75-125	20-SEP-11
WG1351730-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	20-SEP-11
WG1351730-3 MS		**L1059417-1**						
Total Kjeldahl Nitrogen			107		%		70-130	20-SEP-11
WG1351730-5 MS		**L1059720-6**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	20-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Dissolved Solids			100		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Dissolved Solids		184	174		mg/L	5.6	20	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Dissolved Solids		344	330		mg/L	4.2	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Dissolved Solids		1390	1380		mg/L	0.72	20	26-SEP-11
WG1356052-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	26-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Suspended Solids			94		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Suspended Solids		<5.0	<5.0	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Suspended Solids		7.0	8.0		mg/L	13	400	26-SEP-11
WG1356052-6 DUP		**L1062836-2**						
Total Suspended Solids		60.0	61.4		mg/L	2.4	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Suspended Solids		500	510		mg/L	2.0	20	26-SEP-11
WG1356052-1 MB								
Total Suspended Solids			<5.0		mg/L		5	26-SEP-11
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060058 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060058 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	2	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	3	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	4	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
Total Suspended Solids							
	1	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	2	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	3	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
	4	15-SEP-11	26-SEP-11 10:07	7	11	days	EHT
pH							
	1	15-SEP-11	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
	2	15-SEP-11	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
	3	15-SEP-11	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
	4	15-SEP-11	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	2	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	3	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	4	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
Colour, True							
	1	15-SEP-11	17-SEP-11 18:52	48	55	hours	EHTL
	2	15-SEP-11	17-SEP-11 18:52	48	55	hours	EHTL
	3	15-SEP-11	17-SEP-11 18:52	48	55	hours	EHTL
	4	15-SEP-11	17-SEP-11 18:52	48	55	hours	EHTL
Nitrate as N							
	1	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	2	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	3	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	4	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
Nitrite as N							
	1	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	2	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	3	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
	4	15-SEP-11	19-SEP-11 14:21	48	98	hours	EHTL
Phosphorus, Total							
	1	15-SEP-11	19-SEP-11 17:44	48	102	hours	EHTL
	2	15-SEP-11	19-SEP-11 17:44	48	102	hours	EHTL
	3	15-SEP-11	19-SEP-11 17:44	48	102	hours	EHTL
	4	15-SEP-11	19-SEP-11 17:44	48	102	hours	EHTL

Legend & Qualifier Definitions:

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

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.

Quality Control Report

Workorder: L1060058 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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 L1060058 were received on 17-SEP-11 10:30.

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

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

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

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Form #1 10-026991

L1060058 Page 1 of 1

Report To		Report Format / Distribution		Service Requested: (Rush subject to availability)
Company:	AECOM 4172	Standard: ____ Other (specify): ____		Regular (Standard Turnaround Times))
Contact:	Cliff Samoil CPF	Select: PDF ____ Excel ____ Digital ____ Fax ____		Priority, Date Req'd: ____ (Surcharges apply)
Address:	99 Commerce Drive	Email 1:		Emergency (1 Business Day) - 100% Surcharge
		Email 2:		For Emergency < 1 Day, ASAP or Weekend - Contact ALS
Phone:	Fax:			Analysis Request
Invoice To	Same as Report ? (circle) Yes or No (if No, provide details)	**Client / Project Information**		(Indicate Filtered or Preserved, F/P)
	Copy of Invoice with Report? (circle) Yes or No	Job #:	6021443-200	
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		**ALS Contact:**	**Sampler:**	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chl-A / Phaeo	Acid, Colours, Turb	Anions, Br	Silica, pH/EC, Alk	NH3, TKN, P, T	CBOD	TSS, TDS	Metals & Hg - Total	Metals + Hg - Diss	TOC, DOC			Number of Containers
1	TRB-06	Sept15/11		Water													
2	TRB-03	↓															
3	TRB-04																
4	FLB-01																

Special Instructions / Regulations / 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 back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
			BLP	Sept 17/11	10:30	10.3 °C				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION — WHITE - LABORATORY COPY — YELLOW - CLIENT COPY — GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 06-OCT-11 15:09 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060059

Project P.O. #: NOT SUBMITTED
Job Reference: 60212443-200
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060059-1 GHL-01							
Sampled By: CLIENT on 14-SEP-11 @ 10:06							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	1.27		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	6.90		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.4		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	23.5		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	15.5		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	52.1		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	50.6		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.012		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.759		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	70.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.87		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	16.5		1.0	mg/L		21-SEP-11	R2255160
Total Suspended Solids	9.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.34		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0222		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00197		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.0177		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	0.000028		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	12.8		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00035		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	0.14		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	<0.000090		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0031		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	4.92		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0769		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881

* 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
L1060059-1 GHL-01							
Sampled By: CLIENT on 14-SEP-11 @ 10:06							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	0.798		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00115		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	0.408		0.050	mg/L	22-SEP-11	23-SEP-11	R2257881
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	1.49		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881
Strontium (Sr)-Total	0.0336		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00051		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	0.0053		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0084		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00180		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0165		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	12.4		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00047		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0027		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	4.80		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00044		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.763		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00110		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.381		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.38		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0322		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060059-1 GHL-01							
Sampled By: CLIENT on 14-SEP-11 @ 10:06							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0047		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	2.74		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.90		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	43.7		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	53.3		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	102		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.82		0.10	pH units		17-SEP-11	R2253785
L1060059-2 GHL-02							
Sampled By: CLIENT on 14-SEP-11 @ 11:03							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	1.26		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	6.99		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.3		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	18.4		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	15.3		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	55.6		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	50.7		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.015		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.745		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	68.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.86		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	16.6		1.0	mg/L		21-SEP-11	R2255160

* 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
L1060059-2 GHL-02							
Sampled By: CLIENT on 14-SEP-11 @ 11:03							
Matrix: WATER							
Total Suspended Solids	5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.63		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0267		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00203		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.0184		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	13.8		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00059		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	0.14		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	0.000190		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0030		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	5.13		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0768		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	0.826		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00123		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	0.447		0.050	mg/L	22-SEP-11	23-SEP-11	R2257881
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	1.50		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881
Strontium (Sr)-Total	0.0348		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00062		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	0.0096		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0092		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00179		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0162		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	12.4		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060059-2 GHL-02							
Sampled By: CLIENT on 14-SEP-11 @ 11:03							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00038		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0035		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	4.83		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00856		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.768		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00109		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.379		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.37		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0327		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0034		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	3.41		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.99		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	43.8		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	53.5		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	102		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.80		0.10	pH units		17-SEP-11	R2253785
L1060059-3 GHL-03							
Sampled By: CLIENT on 14-SEP-11 @ 12:37							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	1.24		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060059-3 GHL-03							
Sampled By: CLIENT on 14-SEP-11 @ 12:37							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	7.41		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.1		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	17.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	15.3		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	50.1		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	52.5		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.011		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.727		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	62.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.87		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	16.6		1.0	mg/L		21-SEP-11	R2255160
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	0.95		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0199		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00183		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.0168		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	12.9		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00031		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	0.11		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	<0.000090		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0031		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	4.93		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0784		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	0.778		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00111		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	0.372		0.050	mg/L	22-SEP-11	23-SEP-11	R2257881
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	1.41		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881

* 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
L1060059-3 GHL-03							
Sampled By: CLIENT on 14-SEP-11 @ 12:37							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	0.0331		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00025		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	0.0123		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0099		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00167		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0153		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	12.2		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00031		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0026		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	4.74		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00170		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.742		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00105		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.374		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.37		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0311		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00025		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0061		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060059-3 GHL-03							
Sampled By: CLIENT on 14-SEP-11 @ 12:37							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	3.39		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.71		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	43.5		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	53.1		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	102		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.86		0.10	pH units		17-SEP-11	R2253785
L1060059-4 DUP-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	1.24		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	7.41		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	15.6		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	15.3		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	55.7		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	49.7		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.011		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.722		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	66.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.91		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	16.6		1.0	mg/L		21-SEP-11	R2255160
Total Suspended Solids	5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.04		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0212		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00198		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.0176		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881

* 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
L1060059-4 DUP-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Total Metals by ICP-MS							
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	13.8		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00029		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	0.12		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	<0.000090		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0027		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	5.19		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0845		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	0.817		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00115		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	0.412		0.050	mg/L	22-SEP-11	23-SEP-11	R2257881
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	1.49		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881
Strontium (Sr)-Total	0.0334		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00026		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	0.0133		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0090		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00164		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0155		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	12.1		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0031		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060059-4 DUP-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	4.74		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00031		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.731		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00103		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.360		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.33		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0312		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0058		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	3.08		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.69		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	43.4		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	53.0		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	102		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.87		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060059-1	GHL-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060059-2	GHL-02	SFPL	Sample was Filtered and Preserved at the laboratory
L1060059-3	GHL-03	SFPL	Sample was Filtered and Preserved at the laboratory
L1060059-4	DUP-01	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.

EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060059 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Dissolved Organic Carbon			99		%		80-120	20-SEP-11
WG1352998-2 DUP		**L1060059-1**						
Dissolved Organic Carbon		15.5	15.3		mg/L	1.3	20	21-SEP-11
WG1352998-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	20-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Total Organic Carbon			99		%		80-120	20-SEP-11
WG1353005-1 MB								
Total Organic Carbon			<1.0		mg/L		1	20-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-1 CVS								
Chlorophyll a			83		%		65-135	23-SEP-11
WG1354254-2 CVS								
Chlorophyll a			115		%		65-135	23-SEP-11
WG1354197-2 DUP		**L1059720-3**						
Chlorophyll a		26.9	26.2		ug/L	2.8	35	23-SEP-11
Phaeophytin a		9.76	10.7		ug/L	9.4	35	23-SEP-11
WG1354197-3 DUP		**L1060060-1**						
Chlorophyll a		10.4	11.4		ug/L	8.7	35	23-SEP-11
Phaeophytin a		2.88	3.28		ug/L	13	35	23-SEP-11
WG1354197-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11

Quality Control Report

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Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11

Quality Control Report

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Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11

Quality Control Report

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Aluminum (Al)-Total			95		%		80-120	22-SEP-11
Antimony (Sb)-Total			97		%		80-120	22-SEP-11
Arsenic (As)-Total			100		%		80-120	22-SEP-11
Barium (Ba)-Total			100		%		80-120	22-SEP-11
Beryllium (Be)-Total			103		%		80-120	22-SEP-11
Bismuth (Bi)-Total			98		%		80-120	22-SEP-11
Boron (B)-Total			99		%		80-120	22-SEP-11
Cadmium (Cd)-Total			97		%		80-120	22-SEP-11
Calcium (Ca)-Total			102		%		80-120	22-SEP-11
Cesium (Cs)-Total			95		%		80-120	22-SEP-11
Chromium (Cr)-Total			95		%		80-120	22-SEP-11
Cobalt (Co)-Total			101		%		80-120	22-SEP-11
Copper (Cu)-Total			96		%		80-120	22-SEP-11
Iron (Fe)-Total			95		%		80-120	22-SEP-11
Lead (Pb)-Total			97		%		80-120	22-SEP-11
Lithium (Li)-Total			98		%		80-120	22-SEP-11
Magnesium (Mg)-Total			100		%		80-120	22-SEP-11
Manganese (Mn)-Total			95		%		80-120	22-SEP-11
Molybdenum (Mo)-Total			98		%		80-120	22-SEP-11
Nickel (Ni)-Total			97		%		80-120	22-SEP-11
Phosphorus (P)-Total			100		%		80-120	22-SEP-11
Potassium (K)-Total			98		%		80-120	22-SEP-11
Rubidium (Rb)-Total			99		%		80-120	22-SEP-11
Selenium (Se)-Total			98		%		80-120	22-SEP-11
Silicon (Si)-Total			96		%		80-120	22-SEP-11
Silver (Ag)-Total			104		%		80-120	22-SEP-11
Sodium (Na)-Total			99		%		80-120	22-SEP-11
Strontium (Sr)-Total			97		%		80-120	

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Strontium (Sr)-Total			97		%		80-120	22-SEP-11
Tellurium (Te)-Total			99		%		80-120	22-SEP-11
Thallium (Tl)-Total			99		%		80-120	22-SEP-11
Thorium (Th)-Total			97		%		70-130	22-SEP-11
Tin (Sn)-Total			97		%		80-120	22-SEP-11
Titanium (Ti)-Total			97		%		80-120	22-SEP-11
Tungsten (W)-Total			97		%		80-120	22-SEP-11
Uranium (U)-Total			99		%		80-120	22-SEP-11
Vanadium (V)-Total			98		%		80-120	22-SEP-11
Zinc (Zn)-Total			97		%		80-120	22-SEP-11
Zirconium (Zr)-Total			100		%		80-120	22-SEP-11
WG1354038-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	22-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	22-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	22-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	22-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	22-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	22-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	22-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	22-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	22-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	22-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	22-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	22-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	22-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	22-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	22-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	22-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	22-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-1 MB								
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	22-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	22-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	22-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	22-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	22-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	22-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	22-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	22-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	22-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	22-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	22-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	22-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	22-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2254536								
WG1352330-1 CVS								
Total Kjeldahl Nitrogen			99		%		90-110	20-SEP-11
WG1351730-4 DUP		**L1059417-1**						
Total Kjeldahl Nitrogen		0.84	0.82		mg/L	2.5	20	20-SEP-11
WG1351730-6 DUP		**L1059720-6**						
Total Kjeldahl Nitrogen		1.81	1.84		mg/L	1.9	20	20-SEP-11
WG1351730-2 LCS								
Total Kjeldahl Nitrogen			101		%		75-125	20-SEP-11
WG1351730-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	20-SEP-11
WG1351730-3 MS		**L1059417-1**						
Total Kjeldahl Nitrogen			107		%		70-130	20-SEP-11
WG1351730-5 MS		**L1059720-6**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	20-SEP-11
NH3-COL-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Dissolved Solids			100		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Dissolved Solids		184	174		mg/L	5.6	20	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Dissolved Solids		344	330		mg/L	4.2	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Dissolved Solids		1390	1380		mg/L	0.72	20	26-SEP-11
WG1356052-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	26-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Suspended Solids			94		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Suspended Solids		<5.0	<5.0	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Suspended Solids		7.0	8.0		mg/L	13	400	26-SEP-11
WG1356052-6 DUP		**L1062836-2**						
Total Suspended Solids		60.0	61.4		mg/L	2.4	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Suspended Solids		500	510		mg/L	2.0	20	26-SEP-11
WG1356052-1 MB								
Total Suspended Solids			<5.0		mg/L		5	26-SEP-11
TURBIDITY-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060059 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060059 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	14-SEP-11 10:06	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 11:03	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 12:37	26-SEP-11 10:07	7	12	days	EHT
	4	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
Total Suspended Solids							
	1	14-SEP-11 10:06	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 11:03	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 12:37	26-SEP-11 10:07	7	12	days	EHT
	4	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
Turbidity							
	1	14-SEP-11 10:06	17-SEP-11 09:12	48	71	hours	EHTR
	2	14-SEP-11 11:03	17-SEP-11 09:12	48	70	hours	EHTR
	3	14-SEP-11 12:37	17-SEP-11 09:12	48	69	hours	EHTR
	4	14-SEP-11 12:00	17-SEP-11 09:12	48	69	hours	EHTR
pH							
	1	14-SEP-11 10:06	17-SEP-11 10:39	0.25	72	hours	EHTR-FM
	2	14-SEP-11 11:03	17-SEP-11 10:39	0.25	72	hours	EHTR-FM
	3	14-SEP-11 12:37	17-SEP-11 10:39	0.25	70	hours	EHTR-FM
	4	14-SEP-11 12:00	17-SEP-11 10:39	0.25	71	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	14-SEP-11 10:06	19-SEP-11 14:41	48	125	hours	EHTR
	2	14-SEP-11 11:03	19-SEP-11 14:41	48	124	hours	EHTR
	3	14-SEP-11 12:37	19-SEP-11 14:41	48	122	hours	EHTR
	4	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Colour, True							
	1	14-SEP-11 10:06	17-SEP-11 18:52	48	81	hours	EHTR
	2	14-SEP-11 11:03	17-SEP-11 18:52	48	80	hours	EHTR
	3	14-SEP-11 12:37	17-SEP-11 18:52	48	78	hours	EHTR
	4	14-SEP-11 12:00	17-SEP-11 18:52	48	79	hours	EHTR
Nitrate as N							
	1	14-SEP-11 10:06	19-SEP-11 14:41	48	125	hours	EHTR
	2	14-SEP-11 11:03	19-SEP-11 14:41	48	124	hours	EHTR
	3	14-SEP-11 12:37	19-SEP-11 14:41	48	122	hours	EHTR
	4	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Nitrite as N							
	1	14-SEP-11 10:06	19-SEP-11 14:41	48	125	hours	EHTR
	2	14-SEP-11 11:03	19-SEP-11 14:41	48	124	hours	EHTR
	3	14-SEP-11 12:37	19-SEP-11 14:41	48	122	hours	EHTR
	4	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Phosphorus, Total							
	1	14-SEP-11 10:06	19-SEP-11 17:44	48	128	hours	EHTR
	2	14-SEP-11 11:03	19-SEP-11 17:44	48	127	hours	EHTR
	3	14-SEP-11 12:37	19-SEP-11 17:44	48	125	hours	EHTR
	4	14-SEP-11 12:00	19-SEP-11 17:44	48	126	hours	EHTR
Aggregate Organics							
Carbonaceous BOD							
	1	14-SEP-11 10:06	17-SEP-11 10:32	48	72	hours	EHTR
	2	14-SEP-11 11:03	17-SEP-11 10:32	48	72	hours	EHTR

Quality Control Report

Workorder: L1060059 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Aggregate Organics							
Carbonaceous BOD							
	3	14-SEP-11 12:37	17-SEP-11 10:32	48	70	hours	EHTR
	4	14-SEP-11 12:00	17-SEP-11 10:32	48	71	hours	EHTR
Organic Parameters							
Chlorophyll a, Pheophytin by fluorometry							
	1	14-SEP-11 10:06	17-SEP-11 10:30	48	72	hours	EHTR
	2	14-SEP-11 11:03	17-SEP-11 10:30	48	72	hours	EHTR
	3	14-SEP-11 12:37	17-SEP-11 10:30	48	70	hours	EHTR
	4	14-SEP-11 12:00	17-SEP-11 10:30	48	71	hours	EHTR

Legend & Qualifier Definitions:

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

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1060059 were received on 17-SEP-11 10:30.

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

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

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

ALS Environmental

COC # 2

L1060059

Page 1 of 1

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☑ Standard		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212443-200	
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT (P)	CBOD	Solids (TSS, TDS)	Metals & HG -Total (P)	Metals & Hg - Dissolved	TOC,DOC (P)				Number of Containers
1	GHL-01	14Sep11	10:06	water	X	X	X	X	X	X	X	X	X				6
2	GHL-02	↓	11:03	↓	X	X	X	X	X	X	X	X	X				6
3	GHL-03	↓	12:37	↓	X	X	X	X	X	X	X	X	X				6
4	DUP-01	↓	12:00	↓	X	X	X	X	X	X	X	X	X				6

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BC	Sept 17, 2011	10:30	10.3 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 06-OCT-11 15:30 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060060

Project P.O. #: NOT SUBMITTED
Job Reference: 60212492-200
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060060-1 SNL-01							
Sampled By: CLIENT on 14-SEP-11 @ 16:17							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	2.30		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	3.03		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	30.1		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	13.8		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	61.3		0.30	mg/L		28-SEP-11	
Hardness (as CaCO3)	61.3		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.029		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.78		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	74.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.76		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	14.7		1.0	mg/L		21-SEP-11	R2255160
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.17		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0501		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00344		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.00974		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	16.0		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00217		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	<0.10		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	0.000116		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0034		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	5.88		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0282		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881

* 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
L1060060-1 SNL-01							
Sampled By: CLIENT on 14-SEP-11 @ 16:17							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	1.36		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00114		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	1.80		0.050	mg/L	22-SEP-11	27-SEP-11	R2259333
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	3.08		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881
Strontium (Sr)-Total	0.0331		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00212		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	0.00036		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0053		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00310		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00869		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	15.4		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00142		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0030		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	5.58		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00036		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00013		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.24		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00104		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.848		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	2.85		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0332		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060060-1 SNL-01							
Sampled By: CLIENT on 14-SEP-11 @ 16:17							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00046		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	10.4		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	2.88		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	58.8		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	71.7		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	120		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.03		0.10	pH units		17-SEP-11	R2253785
L1060060-2 SNL-02							
Sampled By: CLIENT on 14-SEP-11 @ 15:14							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	1.10		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	1.56		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.1		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	27.5		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	14.3		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	54.0		0.30	mg/L		28-SEP-11	
Hardness (as CaCO3)	54.0		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.019		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	3.94		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	54.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.67		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	15.5		1.0	mg/L		21-SEP-11	R2255160

* 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
L1060060-2 SNL-02							
Sampled By: CLIENT on 14-SEP-11 @ 15:14							
Matrix: WATER							
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	0.12		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0323		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	0.00177		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	0.00832		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	13.1		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	0.00096		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	<0.10		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	<0.000090		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	0.0034		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	4.74		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	0.0356		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	1.06		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	0.00108		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	2.91		0.050	mg/L	22-SEP-11	27-SEP-11	R2259333
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	2.25		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881
Strontium (Sr)-Total	0.0295		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	0.00127		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	0.00023		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0043		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00164		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00798		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	13.4		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060060-2 SNL-02							
Sampled By: CLIENT on 14-SEP-11 @ 15:14							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00083		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0031		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	4.98		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00023		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.07		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00100		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.88		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	2.33		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0294		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00026		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.43		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	2.18		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	52.9		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	64.5		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	104		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.87		0.10	pH units		17-SEP-11	R2253785
L1060060-3 TRB-02							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060060-3 TRB-02							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.2		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	<5.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	<1.0		1.0	mg/L		21-SEP-11	R2255160
Hardness (as CaCO3)	<0.20		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	<0.30		0.30	mg/L		28-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.0052		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	<1.0		1.0	mg/L		21-SEP-11	R2255160
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	0.10		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Arsenic (As)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Barium (Ba)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Boron (B)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	22-SEP-11	23-SEP-11	R2257881
Calcium (Ca)-Total	<0.10		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	22-SEP-11	27-SEP-11	R2259295
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Copper (Cu)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Iron (Fe)-Total	<0.10		0.10	mg/L	22-SEP-11	23-SEP-11	R2257881
Lead (Pb)-Total	<0.000090		0.000090	mg/L	22-SEP-11	23-SEP-11	R2257881
Lithium (Li)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Magnesium (Mg)-Total	<0.010		0.010	mg/L	22-SEP-11	23-SEP-11	R2257881
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	22-SEP-11	23-SEP-11	R2257881
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	22-SEP-11	27-SEP-11	R2259295
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	22-SEP-11	23-SEP-11	R2257881
Phosphorus (P)-Total	<0.20		0.20	mg/L	22-SEP-11	23-SEP-11	R2257881
Potassium (K)-Total	<0.020		0.020	mg/L	22-SEP-11	23-SEP-11	R2257881
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Selenium (Se)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Silicon (Si)-Total	<0.050		0.050	mg/L	22-SEP-11	23-SEP-11	R2257881
Silver (Ag)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Sodium (Na)-Total	<0.030		0.030	mg/L	22-SEP-11	23-SEP-11	R2257881

* 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
L1060060-3 TRB-02							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Thorium (Th)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Tin (Sn)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	22-SEP-11	23-SEP-11	R2257881
Tungsten (W)-Total	<0.0010		0.0010	mg/L	22-SEP-11	23-SEP-11	R2257881
Uranium (U)-Total	<0.00010		0.00010	mg/L	22-SEP-11	23-SEP-11	R2257881
Vanadium (V)-Total	<0.00020		0.00020	mg/L	22-SEP-11	27-SEP-11	R2259295
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	22-SEP-11	23-SEP-11	R2257881
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	22-SEP-11	23-SEP-11	R2257881
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	17-SEP-11	27-SEP-11	R2259295
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060060-3 TRB-02							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	4.8		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	5.9		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	0.96		0.40	umhos/cm		19-SEP-11	R2254103
pH							
pH	5.92		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060060-1	SNL-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060060-2	SNL-02	SFPL	Sample was Filtered and Preserved at the laboratory
L1060060-3	TRB-02	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.

EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL

Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL

Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat

Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection
Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-WP	Water	pH	APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2

This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.

SO4-IC-WP	Water	Sulfate	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060060 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Dissolved Organic Carbon			99		%		80-120	20-SEP-11
WG1352998-2 DUP		**L1060059-1**						
Dissolved Organic Carbon		15.5	15.3		mg/L	1.3	20	21-SEP-11
WG1352998-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	20-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2255160								
WG1353005-2 CVS								
Total Organic Carbon			99		%		80-120	20-SEP-11
WG1353005-1 MB								
Total Organic Carbon			<1.0		mg/L		1	20-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-1 CVS								
Chlorophyll a			83		%		65-135	23-SEP-11
WG1354254-2 CVS								
Chlorophyll a			115		%		65-135	23-SEP-11
WG1354197-2 DUP		**L1059720-3**						
Chlorophyll a		26.9	26.2		ug/L	2.8	35	23-SEP-11
Phaeophytin a		9.76	10.7		ug/L	9.4	35	23-SEP-11
WG1354197-3 DUP		**L1060060-1**						
Chlorophyll a		10.4	11.4		ug/L	8.7	35	23-SEP-11
Phaeophytin a		2.88	3.28		ug/L	13	35	23-SEP-11
WG1354197-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
Batch R2254103								
WG1351828-1 CVS								
Conductivity			99		%		90-110	19-SEP-11
WG1351828-2 DUP		**L1060058-2**						
Conductivity		0.98	0.97		umhos/cm	1.0	400	19-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L			23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Aluminum (Al)-Total			95		%		80-120	22-SEP-11
Antimony (Sb)-Total			97		%		80-120	22-SEP-11
Arsenic (As)-Total			100		%		80-120	22-SEP-11
Barium (Ba)-Total			100		%		80-120	22-SEP-11
Beryllium (Be)-Total			103		%		80-120	22-SEP-11
Bismuth (Bi)-Total			98		%		80-120	22-SEP-11
Boron (B)-Total			99		%		80-120	22-SEP-11
Cadmium (Cd)-Total			97		%		80-120	22-SEP-11
Calcium (Ca)-Total			102		%		80-120	22-SEP-11
Cesium (Cs)-Total			95		%		80-120	22-SEP-11
Chromium (Cr)-Total			95		%		80-120	22-SEP-11
Cobalt (Co)-Total			101		%		80-120	22-SEP-11
Copper (Cu)-Total			96		%		80-120	22-SEP-11
Iron (Fe)-Total			95		%		80-120	22-SEP-11
Lead (Pb)-Total			97		%		80-120	22-SEP-11
Lithium (Li)-Total			98		%		80-120	22-SEP-11
Magnesium (Mg)-Total			100		%		80-120	22-SEP-11
Manganese (Mn)-Total			95		%		80-120	22-SEP-11
Molybdenum (Mo)-Total			98		%		80-120	

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-2 LCS								
Molybdenum (Mo)-Total			98		%		80-120	22-SEP-11
Nickel (Ni)-Total			97		%		80-120	22-SEP-11
Phosphorus (P)-Total			100		%		80-120	22-SEP-11
Potassium (K)-Total			98		%		80-120	22-SEP-11
Rubidium (Rb)-Total			99		%		80-120	22-SEP-11
Selenium (Se)-Total			98		%		80-120	22-SEP-11
Silicon (Si)-Total			96		%		80-120	22-SEP-11
Silver (Ag)-Total			104		%		80-120	22-SEP-11
Sodium (Na)-Total			99		%		80-120	22-SEP-11
Strontium (Sr)-Total			97		%		80-120	22-SEP-11
Tellurium (Te)-Total			99		%		80-120	22-SEP-11
Thallium (Tl)-Total			99		%		80-120	22-SEP-11
Thorium (Th)-Total			97		%		70-130	22-SEP-11
Tin (Sn)-Total			97		%		80-120	22-SEP-11
Titanium (Ti)-Total			97		%		80-120	22-SEP-11
Tungsten (W)-Total			97		%		80-120	22-SEP-11
Uranium (U)-Total			99		%		80-120	22-SEP-11
Vanadium (V)-Total			98		%		80-120	22-SEP-11
Zinc (Zn)-Total			97		%		80-120	22-SEP-11
Zirconium (Zr)-Total			100		%		80-120	22-SEP-11
WG1354038-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	22-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	22-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	22-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	22-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	22-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	22-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	22-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	22-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	22-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257881								
WG1354038-1 MB								
Iron (Fe)-Total			<0.10		mg/L		0.1	22-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	22-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	22-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	22-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	22-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	22-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	22-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	22-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	22-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	22-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	22-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	22-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	22-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	22-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	22-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	22-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	22-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	22-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	22-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	22-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	22-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	22-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	22-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2254536								
WG1352330-1 CVS								
Total Kjeldahl Nitrogen			99		%		90-110	20-SEP-11
WG1351730-4 DUP		**L1059417-1**						
Total Kjeldahl Nitrogen		0.84	0.82		mg/L	2.5	20	20-SEP-11
WG1351730-6 DUP		**L1059720-6**						
Total Kjeldahl Nitrogen		1.81	1.84		mg/L	1.9	20	20-SEP-11
WG1351730-2 LCS								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP	**Water**							
Batch R2254536								
WG1351730-2 LCS								
Total Kjeldahl Nitrogen			101		%		75-125	20-SEP-11
WG1351730-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	20-SEP-11
WG1351730-3 MS		**L1059417-1**						
Total Kjeldahl Nitrogen			107		%		70-130	20-SEP-11
WG1351730-5 MS		**L1059720-6**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	20-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Dissolved Solids			100		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Dissolved Solids		184	174		mg/L	5.6	20	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Dissolved Solids		344	330		mg/L	4.2	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Dissolved Solids		1390	1380		mg/L	0.72	20	26-SEP-11
WG1356052-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	26-SEP-11
SOLIDS-TOTSUS-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Suspended Solids			94		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Suspended Solids		<5.0	<5.0	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Suspended Solids		7.0	8.0		mg/L	13	400	26-SEP-11
WG1356052-6 DUP		**L1062836-2**						
Total Suspended Solids		60.0	61.4		mg/L	2.4	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Suspended Solids		500	510		mg/L	2.0	20	26-SEP-11
WG1356052-1 MB								
Total Suspended Solids			<5.0		mg/L		5	26-SEP-11
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060060 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060060 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	14-SEP-11 16:17	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 15:14	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
Total Suspended Solids							
	1	14-SEP-11 16:17	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 15:14	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
Turbidity							
	1	14-SEP-11 16:17	17-SEP-11 09:12	48	65	hours	EHTR
	2	14-SEP-11 15:14	17-SEP-11 09:12	48	66	hours	EHTR
	3	14-SEP-11 12:00	17-SEP-11 09:12	48	69	hours	EHTR
pH							
	1	14-SEP-11 16:17	17-SEP-11 10:39	0.25	66	hours	EHTR-FM
	2	14-SEP-11 15:14	17-SEP-11 10:39	0.25	67	hours	EHTR-FM
	3	14-SEP-11 12:00	17-SEP-11 10:39	0.25	71	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	14-SEP-11 16:17	19-SEP-11 14:41	48	118	hours	EHTR
	2	14-SEP-11 15:14	19-SEP-11 14:41	48	120	hours	EHTR
	3	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Colour, True							
	1	14-SEP-11 16:17	17-SEP-11 18:52	48	75	hours	EHTR
	2	14-SEP-11 15:14	17-SEP-11 18:58	48	76	hours	EHTR
	3	14-SEP-11 12:00	17-SEP-11 18:58	48	79	hours	EHTR
Nitrate as N							
	1	14-SEP-11 16:17	19-SEP-11 14:41	48	118	hours	EHTR
	2	14-SEP-11 15:14	19-SEP-11 14:41	48	120	hours	EHTR
	3	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Nitrite as N							
	1	14-SEP-11 16:17	19-SEP-11 14:41	48	118	hours	EHTR
	2	14-SEP-11 15:14	19-SEP-11 14:41	48	120	hours	EHTR
	3	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
Phosphorus, Total							
	1	14-SEP-11 16:17	19-SEP-11 17:44	48	121	hours	EHTR
	2	14-SEP-11 15:14	19-SEP-11 17:44	48	122	hours	EHTR
	3	14-SEP-11 12:00	19-SEP-11 17:44	48	126	hours	EHTR
Aggregate Organics							
Carbonaceous BOD							
	1	14-SEP-11 16:17	17-SEP-11 10:32	48	66	hours	EHTR
	2	14-SEP-11 15:14	17-SEP-11 10:32	48	67	hours	EHTR
	3	14-SEP-11 12:00	17-SEP-11 10:32	48	71	hours	EHTR
Organic Parameters							
Chlorophyll a, Pheophytin by fluorometry							
	1	14-SEP-11 16:17	17-SEP-11 10:30	48	66	hours	EHTR
	2	14-SEP-11 15:14	17-SEP-11 10:30	48	67	hours	EHTR
	3	14-SEP-11 12:00	17-SEP-11 10:30	48	71	hours	EHTR

Legend & Qualifier Definitions:

Quality Control Report

Workorder: L1060060 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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 L1060060 were received on 17-SEP-11 10:30.

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

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

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

ALS Environmental

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COC # 3

L1060060

Page 1 of 1

Report To					
Company:	AECOM -W172	☑ Standard	☐ Other		
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com		
		Email 2:	shawna.kjartanson@aecom.com		
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com		
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information			
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212492-200		
Company:		PO / AFE:			
Contact:		LSD:			
Address:					
Phone:	Fax:	Quote #:	Q24534		
Lab Work Order # (lab use only)		ALS Contact:	Christine Herrod	Sampler:	

Service Requested (Rush for routine analysis subject to availability)

- ◉ Regular (Standard Turnaround Times - Business Days)
- ○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT (P)	CBOD	Solids (TSS, TDS)	Metals & HG -Total (P)	Metals & Hg - Dissolved	TOC,DOC (P)				Number of Containers
	SNL-01	14Sep11	1617	water	X	X	X	X	X	X	X	X	X				6
	SNL-02	↓	1514	↓	X	X	X	X	X	X	X	X	X				6
	TRB-02	↓	12:00	↓	X	X	X	X	X	X	X	X	X				6

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BLP	Sept 17	10:30	10 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 06-OCT-11 15:10 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060061

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483-300
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060061-1 NTL-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	0.67		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.8		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	0.062		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.4		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	78.3		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	28.0		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	31.5		0.30	mg/L		27-SEP-11	
Hardness (as CaCO3)	25.3		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.011		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.24		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	36.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	1.14		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	29.5		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.28		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0636		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00105		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0122		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	8.49		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00042		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.16		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	2.49		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0373		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060061-1 NTL-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	0.561		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00100		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	1.17		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	0.939		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0137		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00024		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0406		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00098		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0115		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	6.67		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00048		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	2.10		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00250		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.440		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00087		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.556		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	0.770		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0123		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060061-1 NTL-01							
Sampled By: CLIENT on 14-SEP-11 @ 12:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0024		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.87		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	2.68		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	20.6		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	25.1		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	47.0		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.32		0.10	pH units		17-SEP-11	R2253785
L1060061-2 GSL-01							
Sampled By: CLIENT on 14-SEP-11 @ 09:50							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.4		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	85.7		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.7		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	49.9		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	51.8		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.011		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	4.04		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	68.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	0.74		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	22.9		1.0	mg/L		21-SEP-11	R2255889

* 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
L1060061-2 GSL-01							
Sampled By: CLIENT on 14-SEP-11 @ 09:50							
Matrix: WATER							
Total Suspended Solids	<5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	1.05		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0093		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00127		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.00672		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	14.5		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00021		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.51		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0030		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	3.78		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0385		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	0.423		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00057		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	3.32		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	1.12		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0195		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0048		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00123		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00583		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	13.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060061-2 GSL-01							
Sampled By: CLIENT on 14-SEP-11 @ 09:50							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	0.25		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.70		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00104		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.415		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00055		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	2.66		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.11		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0208		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	2.70		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.85		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	46.5		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	56.7		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	88.6		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.79		0.10	pH units		17-SEP-11	R2253785
L1060061-3 UL1-01							
Sampled By: CLIENT on 14-SEP-11 @ 14:15							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060061-3 UL1-01							
Sampled By: CLIENT on 14-SEP-11 @ 14:15							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	1.03		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.6		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	0.128		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	63.2		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	28.0		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	30.2		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	33.4		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.024		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.41		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	44.0		5.0	mg/L		26-SEP-11	R2258740
Total Kjeldahl Nitrogen	1.67		0.20	mg/L	17-SEP-11	20-SEP-11	R2254536
Total Organic Carbon	30.7		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	5.0		5.0	mg/L		26-SEP-11	R2258740
Turbidity	2.41		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0700		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00106		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0208		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	10.4		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00128		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.11		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	0.000120		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0024		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	1.79		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0268		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	0.786		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00157		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	1.32		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	0.848		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060061-3 UL1-01							
Sampled By: CLIENT on 14-SEP-11 @ 14:15							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	0.0174		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00048		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00030		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0418		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00096		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0189		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	9.36		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00099		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	1.66		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00369		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.701		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00145		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.650		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	0.777		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0169		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00023		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060061-3 UL1-01							
Sampled By: CLIENT on 14-SEP-11 @ 14:15							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	7.18		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	3.70		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	26.4		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	32.2		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	58.4		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.45		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060061-1	NTL-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060061-2	GSL-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060061-3	UL1-01	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.

EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL

Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL

Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat

Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection
Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-WP	Water	pH	APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2

This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.

SO4-IC-WP	Water	Sulfate	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060061 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Dissolved Organic Carbon			101		%		80-120	21-SEP-11
WG1353829-2 DUP		**L1060062-5**						
Dissolved Organic Carbon		21.6	21.5		mg/L	0.47	20	21-SEP-11
WG1353829-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	21-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Total Organic Carbon			101		%		80-120	21-SEP-11
WG1353838-3 DUP		**L1060061-1**						
Total Organic Carbon		29.5	29.6		mg/L	0.18	20	21-SEP-11
WG1353838-1 MB								
Total Organic Carbon			<1.0		mg/L		1	21-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-1 CVS								
Chlorophyll a			83		%		65-135	23-SEP-11
WG1354254-2 CVS								
Chlorophyll a			115		%		65-135	23-SEP-11
WG1354197-2 DUP		**L1059720-3**						
Chlorophyll a		26.9	26.2		ug/L	2.8	35	23-SEP-11
Phaeophytin a		9.76	10.7		ug/L	9.4	35	23-SEP-11
WG1354197-3 DUP		**L1060060-1**						
Chlorophyll a		10.4	11.4		ug/L	8.7	35	23-SEP-11
Phaeophytin a		2.88	3.28		ug/L	13	35	23-SEP-11
WG1354197-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Arsenic (As)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Barium (Ba)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11
Calcium (Ca)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Iron (Fe)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11
Lithium (Li)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Magnesium (Mg)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Manganese (Mn)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	400	26-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Potassium (K)-Total		<0.020	<0.020	RPD-NA	mg/L	N/A	400	26-SEP-11
Rubidium (Rb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Silicon (Si)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	400	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	400	26-SEP-11
Strontium (Sr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-6 DUP		**WG1356012-5**						
Aluminum (Al)-Total		0.0800	0.0700		mg/L	13	20	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Arsenic (As)-Total		0.00287	0.00279		mg/L	2.8	20	26-SEP-11
Barium (Ba)-Total		0.0108	0.0108		mg/L	0.27	20	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11
Calcium (Ca)-Total		19.5	19.0		mg/L	2.4	20	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		0.00135	0.00126		mg/L	6.6	20	26-SEP-11
Iron (Fe)-Total		0.12	0.12		mg/L	5.5	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-6 DUP		**WG1356012-5**						
Lithium (Li)-Total		0.0042	0.0040		mg/L	6.1	400	26-SEP-11
Magnesium (Mg)-Total		8.30	8.20		mg/L	1.2	20	26-SEP-11
Manganese (Mn)-Total		0.0401	0.0397		mg/L	0.96	20	26-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11
Potassium (K)-Total		1.40	1.31		mg/L	6.7	20	26-SEP-11
Rubidium (Rb)-Total		0.00142	0.00138		mg/L	2.4	20	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Silicon (Si)-Total		1.98	2.15		mg/L	8.3	20	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		3.77	3.74		mg/L	0.94	20	26-SEP-11
Strontium (Sr)-Total		0.0475	0.0465		mg/L	2.2	20	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		0.00055	0.00050		mg/L	9.0	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-2 LCS								
Aluminum (Al)-Total			98		%		80-120	26-SEP-11
Antimony (Sb)-Total			101		%		80-120	26-SEP-11
Arsenic (As)-Total			97		%		80-120	26-SEP-11
Barium (Ba)-Total			101		%		80-120	26-SEP-11
Beryllium (Be)-Total			102		%		80-120	26-SEP-11
Bismuth (Bi)-Total			97		%		80-120	26-SEP-11
Boron (B)-Total			105		%		80-120	26-SEP-11
Cadmium (Cd)-Total			100		%		80-120	26-SEP-11
Calcium (Ca)-Total			107		%		80-120	26-SEP-11
Cesium (Cs)-Total			93		%		80-120	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-2 LCS								
Chromium (Cr)-Total			102		%		80-120	26-SEP-11
Cobalt (Co)-Total			97		%		80-120	26-SEP-11
Copper (Cu)-Total			97		%		80-120	26-SEP-11
Iron (Fe)-Total			99		%		80-120	26-SEP-11
Lead (Pb)-Total			99		%		80-120	26-SEP-11
Lithium (Li)-Total			112		%		80-120	26-SEP-11
Magnesium (Mg)-Total			106		%		80-120	26-SEP-11
Manganese (Mn)-Total			98		%		80-120	26-SEP-11
Molybdenum (Mo)-Total			101		%		80-120	26-SEP-11
Nickel (Ni)-Total			102		%		80-120	26-SEP-11
Phosphorus (P)-Total			99		%		80-120	26-SEP-11
Potassium (K)-Total			110		%		80-120	26-SEP-11
Rubidium (Rb)-Total			107		%		80-120	26-SEP-11
Selenium (Se)-Total			94		%		80-120	26-SEP-11
Silicon (Si)-Total			113		%		80-120	26-SEP-11
Silver (Ag)-Total			108		%		80-120	26-SEP-11
Sodium (Na)-Total			113		%		80-120	26-SEP-11
Strontium (Sr)-Total			104		%		80-120	26-SEP-11
Tellurium (Te)-Total			99		%		80-120	26-SEP-11
Thallium (Tl)-Total			101		%		80-120	26-SEP-11
Thorium (Th)-Total			95		%		70-130	26-SEP-11
Tin (Sn)-Total			101		%		80-120	26-SEP-11
Titanium (Ti)-Total			109		%		80-120	26-SEP-11
Tungsten (W)-Total			97		%		80-120	26-SEP-11
Uranium (U)-Total			94		%		80-120	26-SEP-11
Vanadium (V)-Total			105		%		80-120	26-SEP-11
Zinc (Zn)-Total			99		%		80-120	26-SEP-11
Zirconium (Zr)-Total			103		%		80-120	26-SEP-11
WG1356012-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	26-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	26-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	26-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-1 MB								
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	26-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	26-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	26-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	26-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	26-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	26-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	26-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	26-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	26-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	26-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	26-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	26-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	26-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	26-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	26-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	26-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	26-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	26-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	26-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	26-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	26-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	26-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	26-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	26-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	26-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP	**Water**							
Batch R2254536								
WG1352330-1 CVS								
Total Kjeldahl Nitrogen			99		%		90-110	20-SEP-11
WG1351730-4 DUP		**L1059417-1**						
Total Kjeldahl Nitrogen		0.84	0.82		mg/L	2.5	20	20-SEP-11
WG1351730-6 DUP		**L1059720-6**						
Total Kjeldahl Nitrogen		1.81	1.84		mg/L	1.9	20	20-SEP-11
WG1351730-2 LCS								
Total Kjeldahl Nitrogen			101		%		75-125	20-SEP-11
WG1351730-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	20-SEP-11
WG1351730-3 MS		**L1059417-1**						
Total Kjeldahl Nitrogen			107		%		70-130	20-SEP-11
WG1351730-5 MS		**L1059720-6**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	20-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WP	**Water**							
Batch R2253785								
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Dissolved Solids			100		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Dissolved Solids		184	174		mg/L	5.6	20	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Dissolved Solids		344	330		mg/L	4.2	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TDS-WP	**Water**							
Batch R2258740								
WG1356052-7 DUP		**L1063094-1**						
Total Dissolved Solids		1390	1380		mg/L	0.72	20	26-SEP-11
WG1356052-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	26-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2258740								
WG1356052-2 CVS								
Total Suspended Solids			94		%		85-115	26-SEP-11
WG1356052-3 DUP		**L1059318-1**						
Total Suspended Solids		<5.0	<5.0	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356052-4 DUP		**L1060044-1**						
Total Suspended Solids		7.0	8.0		mg/L	13	400	26-SEP-11
WG1356052-6 DUP		**L1062836-2**						
Total Suspended Solids		60.0	61.4		mg/L	2.4	20	26-SEP-11
WG1356052-7 DUP		**L1063094-1**						
Total Suspended Solids		500	510		mg/L	2.0	20	26-SEP-11
WG1356052-1 MB								
Total Suspended Solids			<5.0		mg/L		5	26-SEP-11
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060061 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060061 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 09:50	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 14:15	26-SEP-11 10:07	7	12	days	EHT
Total Suspended Solids							
	1	14-SEP-11 12:00	26-SEP-11 10:07	7	12	days	EHT
	2	14-SEP-11 09:50	26-SEP-11 10:07	7	12	days	EHT
	3	14-SEP-11 14:15	26-SEP-11 10:07	7	12	days	EHT
Turbidity							
	1	14-SEP-11 12:00	17-SEP-11 09:12	48	69	hours	EHTR
	2	14-SEP-11 09:50	17-SEP-11 09:12	48	71	hours	EHTR
	3	14-SEP-11 14:15	17-SEP-11 09:12	48	67	hours	EHTR
pH							
	1	14-SEP-11 12:00	17-SEP-11 10:39	0.25	71	hours	EHTR-FM
	2	14-SEP-11 09:50	17-SEP-11 10:39	0.25	73	hours	EHTR-FM
	3	14-SEP-11 14:15	17-SEP-11 10:39	0.25	68	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
	2	14-SEP-11 09:50	19-SEP-11 14:41	48	125	hours	EHTR
	3	14-SEP-11 14:15	19-SEP-11 14:41	48	120	hours	EHTR
Colour, True							
	1	14-SEP-11 12:00	17-SEP-11 18:58	48	79	hours	EHTR
	2	14-SEP-11 09:50	17-SEP-11 18:58	48	81	hours	EHTR
	3	14-SEP-11 14:15	17-SEP-11 18:58	48	77	hours	EHTR
Nitrate as N							
	1	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
	2	14-SEP-11 09:50	19-SEP-11 14:41	48	125	hours	EHTR
	3	14-SEP-11 14:15	19-SEP-11 14:41	48	120	hours	EHTR
Nitrite as N							
	1	14-SEP-11 12:00	19-SEP-11 14:41	48	123	hours	EHTR
	2	14-SEP-11 09:50	19-SEP-11 14:41	48	125	hours	EHTR
	3	14-SEP-11 14:15	19-SEP-11 14:41	48	120	hours	EHTR
Phosphorus, Total							
	1	14-SEP-11 12:00	19-SEP-11 17:44	48	126	hours	EHTR
	2	14-SEP-11 09:50	19-SEP-11 17:44	48	128	hours	EHTR
	3	14-SEP-11 14:15	19-SEP-11 17:44	48	124	hours	EHTR
Aggregate Organics							
Carbonaceous BOD							
	1	14-SEP-11 12:00	17-SEP-11 10:32	48	71	hours	EHTR
	2	14-SEP-11 09:50	17-SEP-11 10:32	48	73	hours	EHTR
	3	14-SEP-11 14:15	17-SEP-11 10:32	48	68	hours	EHTR
Organic Parameters							
Chlorophyll a, Pheophytin by fluorometry							
	1	14-SEP-11 12:00	17-SEP-11 10:30	48	71	hours	EHTR
	2	14-SEP-11 09:50	17-SEP-11 10:30	48	73	hours	EHTR
	3	14-SEP-11 14:15	17-SEP-11 10:30	48	68	hours	EHTR

Legend & Qualifier Definitions:

Quality Control Report

Workorder: L1060061 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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 L1060061 were received on 17-SEP-11 10:30.

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

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

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

ALS Environmental

COC # 4

L1060061

Page 1 of 1

Report To		Report Format / Distribution				
Company:	AECOM -W172	☑ Standard	☐ Other			
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			
		Email 2:	shawna.kjartanson@aecom.com			
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483-300			
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:	Christine Herrod	Sampler:		

Service Requested (Rush for routine analysis subject to availability)

- ◉ Regular (Standard Turnaround Times - Business Days)
- ○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT	CBOD	Solids (TSS, TDS)	Metals & HG -Total	Metals & Hg - Dissolved	TOC,DOC				Number of Containers
								P			P		P				
1	NTL-01	14Sep11	1200	water	X	X	X	X	X	X	X	X	X				6
2	GSL-01	↓	950	↓	X	X	X	X	X	X	X	X	X				6
3	ULI-01	↓	1415	↓	X	X	X	X	X	X	X	X	X				6

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BLP	Sep 17	10:30	8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 06-OCT-11 15:33 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060062

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483-300
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060062-1 ARL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:45							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.4		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.3		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	82.6		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	22.9		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	36.6		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	37.6		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	2.33		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	46.0		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.95		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	24.9		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	0.83		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0203		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00139		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.00807		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	9.38		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.11		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	3.43		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0139		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-1 ARL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:45							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	0.299		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00051		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	1.40		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	1.08		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0173		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0167		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00145		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00677		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	9.31		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00023		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.26		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00420		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.293		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00053		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.07		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.04		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0179		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-1 ARL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:45							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00021		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	1.85		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.75		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	34.4		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	41.9		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	68.0		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.60		0.10	pH units		17-SEP-11	R2253785
L1060062-2 ANB-01							
Sampled By: CLIENT on 15-SEP-11 @ 14:15							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	14.2		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.21		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	134		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.3		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.4		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	23.2		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	12.8		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	206		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	209		0.20	mg/L		28-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.018		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.20		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	270		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.67		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	14.0		1.0	mg/L		21-SEP-11	R2255889

* 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
L1060062-2 ANB-01							
Sampled By: CLIENT on 15-SEP-11 @ 14:15							
Matrix: WATER							
Total Suspended Solids	5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	1.49		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0393		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	0.00578		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00225		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0247		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.020		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.000015		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	64.9		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.00111		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.16		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0048		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	10.7		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0191		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	0.00052		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	5.30		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00287		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.910		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	10.0		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.153		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00185		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	0.00034		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	0.0131		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0038		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00516		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00190		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0191		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.019		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	69.8		0.050	mg/L	17-SEP-11	27-SEP-11	R2259333
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-2 ANB-01							
Sampled By: CLIENT on 15-SEP-11 @ 14:15							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00125		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0048		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	8.47		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00281		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00058		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	4.21		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00275		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.580		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	8.35		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.141		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00049		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00039		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0091		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	2.56		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	1.90		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	67.1		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	81.8		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	432		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.93		0.10	pH units		17-SEP-11	R2253785
L1060062-3 ANB-02							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	8.27		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.12		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060062-3 ANB-02							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	52.8		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.1		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	36.2		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	13.2		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	141		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	128		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.036		0.010	mg/L		22-SEP-11	R2256465
Silica, Reactive (as SiO2)	0.472		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	160		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.83		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	14.4		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	1.52		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0140		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	0.00191		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00214		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0162		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.014		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	39.5		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.00042		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	<0.10		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0037		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	10.2		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0257		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	0.00023		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	2.55		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00174		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.270		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	6.71		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-3 ANB-02							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	0.0911		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00058		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	0.00048		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0060		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00198		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00207		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0136		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.013		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	35.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00067		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0040		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	9.24		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00373		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00025		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	2.36		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00187		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.213		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	6.16		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0904		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00023		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00054		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060062-3 ANB-02							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	6.25		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	3.13		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	79.6		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	30.6		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	31.5		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	247		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	9.67		0.10	pH units		17-SEP-11	R2253785
L1060062-4 ANB-05							
Sampled By: CLIENT on 15-SEP-11 @ 16:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	5.39		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	14.5		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.7		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	24.7		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	12.2		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	82.8		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	96.9		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.024		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	2.62		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	104		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.66		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	13.5		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	8.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	3.10		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0580		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	0.00052		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00245		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0140		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-4 ANB-05							
Sampled By: CLIENT on 15-SEP-11 @ 16:00							
Matrix: WATER							
Total Metals by ICP-MS							
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.011		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	23.8		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.00036		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	<0.10		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0033		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	9.13		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0488		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	1.61		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00146		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	1.71		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	4.61		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0548		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00223		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	0.00049		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0036		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00053		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00103		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00990		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	20.3		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00036		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0032		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-4 ANB-05							
Sampled By: CLIENT on 15-SEP-11 @ 16:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	7.78		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00053		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00015		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.32		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00131		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.24		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	4.00		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0541		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00070		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	9.80		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
Phaeophytin a	2.37		0.10	ug/L	22-SEP-11	23-SEP-11	R2256760
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	79.6		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	75.4		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	9.49		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	180		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.78		0.10	pH units		17-SEP-11	R2253785
L1060062-5 THL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:25							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.0		1.0	mg/L		21-SEP-11	R2256906

* 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
L1060062-5 THL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:25							
Matrix: WATER							
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.2		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	44.8		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.6		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	43.0		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	38.2		0.20	mg/L		28-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.47		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	56.0		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.95		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	23.7		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	2.07		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0121		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00147		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.00993		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	11.5		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.14		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	3.50		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0557		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	0.578		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00087		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.970		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	1.19		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0225		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-5 THL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:25							
Matrix: WATER							
Total Metals by ICP-MS							
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0062		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00132		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00698		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	10.3		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.03		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00079		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.524		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00083		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.670		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.08		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0204		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	3.58		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.44		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	38.8		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	47.4		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785

* 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
L1060062-5 THL-01							
Sampled By: CLIENT on 15-SEP-11 @ 09:25							
Matrix: WATER							
Alkalinity							
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	76.0		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.82		0.10	pH units		17-SEP-11	R2253785
L1060062-6 THL-02							
Sampled By: CLIENT on 15-SEP-11 @ 10:30							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.1		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.6		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	40.8		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.2		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	40.5		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	42.6		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.013		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.35		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	54.0		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	1.00		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	23.7		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	2.59		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0116		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00148		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0103		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	11.5		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-6 THL-02							
Sampled By: CLIENT on 15-SEP-11 @ 10:30							
Matrix: WATER							
Total Metals by ICP-MS							
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.18		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	3.38		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0582		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	0.566		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00089		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.845		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	1.19		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0213		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0056		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00137		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00719		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	10.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.24		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00029		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.572		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00089		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-6 THL-02							
Sampled By: CLIENT on 15-SEP-11 @ 10:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.627		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.14		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0214		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00022		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.21		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.84		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	38.9		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	47.5		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	76.3		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.85		0.10	pH units		17-SEP-11	R2253785
L1060062-7 THL-03							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	39.8		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.7		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	35.7		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	40.4		0.20	mg/L		28-SEP-11	

* 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
L1060062-7 THL-03							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.013		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.38		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	48.0		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	1.00		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	24.1		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	2.21		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0091		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00120		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.00929		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	9.55		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.11		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	2.87		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0462		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	0.700		0.020	mg/L	23-SEP-11	27-SEP-11	R2259333
Rubidium (Rb)-Total	0.00077		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.860		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	1.02		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0184		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0066		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-7 THL-03							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Arsenic (As)-Dissolved	0.00135		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00812		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	10.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.22		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00327		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.587		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00092		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.632		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.13		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0220		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.52		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.88		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	38.3		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	46.7		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	75.2		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.84		0.10	pH units		17-SEP-11	R2253785

* 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
L1060062-8 DUP-02							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.1		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	5.9		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	40.5		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.6		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	40.7		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	43.3		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.013		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.41		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	54.0		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.99		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	24.0		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	2.42		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0117		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00149		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0107		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	11.7		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.14		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	3.45		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0570		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060062-8 DUP-02							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	0.597		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00089		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	1.09		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	1.24		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.0221		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0059		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00135		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00810		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	10.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	3.24		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00042		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	0.554		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00090		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.636		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	1.16		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0219		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-8 DUP-02							
Sampled By: CLIENT on 15-SEP-11 @ 11:30							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.91		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	2.30		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	38.4		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	46.8		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	75.4		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.84		0.10	pH units		17-SEP-11	R2253785
L1060062-9 ANC-01							
Sampled By: CLIENT on 15-SEP-11 @ 13:50							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	17.2		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.25		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	179		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.4		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.1		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	10.2		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	10.5		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	241		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	234		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.016		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	0.957		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	332		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.59		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	11.5		1.0	mg/L		21-SEP-11	R2255889

* 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
L1060062-9 ANC-01							
Sampled By: CLIENT on 15-SEP-11 @ 13:50							
Matrix: WATER							
Total Suspended Solids	11.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	2.93		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.103		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	0.00754		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00263		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0276		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.024		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.000027		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	78.2		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	0.00022		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.00179		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.24		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	0.000144		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0058		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	9.52		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.0232		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	0.00069		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	6.15		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00375		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	0.897		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	10.5		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.181		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00499		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	0.00049		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	0.0340		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0030		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00733		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00225		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0239		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.021		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	0.000014		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	82.1		0.050	mg/L	17-SEP-11	27-SEP-11	R2259333
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060062-9 ANC-01							
Sampled By: CLIENT on 15-SEP-11 @ 13:50							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00156		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0053		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	8.68		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00530		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00046		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259333
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	5.91		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00371		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.439		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	10.2		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.184		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00066		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00026		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0272		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	1.46		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.21		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	53.5		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	65.3		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	498		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.93		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060062-1	ARL-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-2	ANB-01	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-3	ANB-02	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-4	ANB-05	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-6	THL-02	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-7	THL-03	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-8	DUP-02	SFPL	Sample was Filtered and Preserved at the laboratory
L1060062-9	ANC-01	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B
Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide. The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide. The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-IC-WP	Water	Chloride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C
True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.			
CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
		A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.	
EC-WP	Water	Conductivity	APHA 2510B
		Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.	
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC
		This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".	
HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0
		Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.	
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
		Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.	
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
		Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.	
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
		Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.	
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
		Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.	
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
		Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.	
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
		This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.	
PH-WP	Water	pH	APHA 4500H
		The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.	
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060062 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Dissolved Organic Carbon			101		%		80-120	21-SEP-11
WG1353829-2 DUP		**L1060062-5**						
Dissolved Organic Carbon		21.6	21.5		mg/L	0.47	20	21-SEP-11
WG1353829-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	21-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Total Organic Carbon			101		%		80-120	21-SEP-11
WG1353838-3 DUP		**L1060061-1**						
Total Organic Carbon		29.5	29.6		mg/L	0.18	20	21-SEP-11
WG1353838-1 MB								
Total Organic Carbon			<1.0		mg/L		1	21-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256760								
WG1354254-1 CVS								
Chlorophyll a			83		%		65-135	23-SEP-11
WG1354254-2 CVS								
Chlorophyll a			115		%		65-135	23-SEP-11
WG1354197-2 DUP		**L1059720-3**						
Chlorophyll a		26.9	26.2		ug/L	2.8	35	23-SEP-11
Phaeophytin a		9.76	10.7		ug/L	9.4	35	23-SEP-11
WG1354197-3 DUP		**L1060060-1**						
Chlorophyll a		10.4	11.4		ug/L	8.7	35	23-SEP-11
Phaeophytin a		2.88	3.28		ug/L	13	35	23-SEP-11
WG1354197-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
Batch R2256774								
WG1354255-1 CVS								
Chlorophyll a			82		%		65-135	23-SEP-11
WG1354255-2 CVS								
Chlorophyll a			112		%		65-135	23-SEP-11
WG1354200-2 DUP		**L1060065-1**						
Chlorophyll a		11.5	10.6		ug/L	8.0	35	23-SEP-11
Phaeophytin a		1.89	2.29		ug/L	19	35	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354200-3 DUP		**L1060067-1**						
Chlorophyll a		2.84	2.88		ug/L	1.4	35	23-SEP-11
Phaeophytin a		1.88	1.95		ug/L	3.7	35	23-SEP-11
WG1354200-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11

Quality Control Report

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Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-4 DUP		**WG1354838-3**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Arsenic (As)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Barium (Ba)-Total		0.00067	0.00068		mg/L	1.6	400	23-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Boron (B)-Total		0.059	0.060		mg/L	2.2	20	23-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-4 DUP		**WG1354838-3**						
Calcium (Ca)-Total		0.81	0.80		mg/L	0.98	20	23-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Copper (Cu)-Total		0.0345	0.0344		mg/L	0.19	20	23-SEP-11
Iron (Fe)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	23-SEP-11
Lead (Pb)-Total		0.000105	0.000120		mg/L	13	400	23-SEP-11
Lithium (Li)-Total		0.0032	0.0033		mg/L	2.9	400	23-SEP-11
Magnesium (Mg)-Total		0.176	0.182		mg/L	2.9	20	23-SEP-11
Manganese (Mn)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	400	23-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	23-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	23-SEP-11
Potassium (K)-Total		0.712	0.710		mg/L	0.18	20	23-SEP-11
Rubidium (Rb)-Total		0.00068	0.00064		mg/L	5.3	400	23-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Silicon (Si)-Total		0.198	0.192		mg/L	2.7	400	23-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Sodium (Na)-Total		14.6	15.6		mg/L	6.5	20	23-SEP-11
Strontium (Sr)-Total		0.00182	0.00183		mg/L	0.11	20	23-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	23-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	23-SEP-11
WG1354838-6 DUP		**WG1354838-5**						
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Arsenic (As)-Total		0.00128	0.00122		mg/L	4.6	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-6 DUP		**WG1354838-5**						
Barium (Ba)-Total		0.0992	0.102		mg/L	2.9	20	23-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Boron (B)-Total		0.233	0.234		mg/L	0.33	20	23-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	23-SEP-11
Calcium (Ca)-Total		63.8	65.8		mg/L	3.0	20	23-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Copper (Cu)-Total		0.00160	0.00140		mg/L	13	20	23-SEP-11
Iron (Fe)-Total		0.27	0.22		mg/L	19	400	23-SEP-11
Lead (Pb)-Total		0.000144	0.000131		mg/L	9.5	400	23-SEP-11
Lithium (Li)-Total		0.0337	0.0336		mg/L	0.35	20	23-SEP-11
Magnesium (Mg)-Total		71.6	71.3		mg/L	0.45	20	23-SEP-11
Molybdenum (Mo)-Total		0.00353	0.00355		mg/L	0.31	20	23-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	23-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	23-SEP-11
Potassium (K)-Total		7.22	7.02		mg/L	2.8	20	23-SEP-11
Rubidium (Rb)-Total		0.00442	0.00448		mg/L	1.5	20	23-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Silicon (Si)-Total		5.96	5.91		mg/L	0.80	20	23-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Sodium (Na)-Total		11.7	11.8		mg/L	0.77	20	23-SEP-11
Strontium (Sr)-Total		0.459	0.472		mg/L	2.8	20	23-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	23-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Uranium (U)-Total		0.00150	0.00154		mg/L	2.7	20	23-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050		mg/L			23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-6 DUP		**WG1354838-5**						
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	23-SEP-11
WG1354838-2 LCS								
Aluminum (Al)-Total			106		%		80-120	23-SEP-11
Antimony (Sb)-Total			93		%		80-120	23-SEP-11
Arsenic (As)-Total			98		%		80-120	23-SEP-11
Barium (Ba)-Total			105		%		80-120	23-SEP-11
Beryllium (Be)-Total			101		%		80-120	23-SEP-11
Bismuth (Bi)-Total			113		%		80-120	23-SEP-11
Boron (B)-Total			104		%		80-120	23-SEP-11
Cadmium (Cd)-Total			101		%		80-120	23-SEP-11
Calcium (Ca)-Total			102		%		80-120	23-SEP-11
Cesium (Cs)-Total			97		%		80-120	23-SEP-11
Chromium (Cr)-Total			104		%		80-120	23-SEP-11
Cobalt (Co)-Total			103		%		80-120	23-SEP-11
Copper (Cu)-Total			104		%		80-120	23-SEP-11
Iron (Fe)-Total			109		%		80-120	23-SEP-11
Lead (Pb)-Total			96		%		80-120	23-SEP-11
Lithium (Li)-Total			100		%		80-120	23-SEP-11
Magnesium (Mg)-Total			104		%		80-120	23-SEP-11
Manganese (Mn)-Total			108		%		80-120	23-SEP-11
Molybdenum (Mo)-Total			106		%		80-120	23-SEP-11
Nickel (Ni)-Total			104		%		80-120	23-SEP-11
Phosphorus (P)-Total			103		%		80-120	23-SEP-11
Potassium (K)-Total			104		%		80-120	23-SEP-11
Rubidium (Rb)-Total			103		%		80-120	23-SEP-11
Selenium (Se)-Total			99		%		80-120	23-SEP-11
Silicon (Si)-Total			111		%		80-120	23-SEP-11
Silver (Ag)-Total			108		%		80-120	23-SEP-11
Sodium (Na)-Total			106		%		80-120	23-SEP-11
Strontium (Sr)-Total			103		%		80-120	23-SEP-11
Tellurium (Te)-Total			99		%		80-120	23-SEP-11
Thallium (Tl)-Total			106		%		80-120	23-SEP-11
Thorium (Th)-Total			84		%		70-130	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-2 LCS								
Tin (Sn)-Total			102		%		80-120	23-SEP-11
Titanium (Ti)-Total			99		%		80-120	23-SEP-11
Tungsten (W)-Total			99		%		80-120	23-SEP-11
Uranium (U)-Total			111		%		80-120	23-SEP-11
Vanadium (V)-Total			102		%		80-120	23-SEP-11
Zinc (Zn)-Total			103		%		80-120	23-SEP-11
Zirconium (Zr)-Total			104		%		80-120	23-SEP-11
WG1354838-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	23-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	23-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	23-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	23-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	23-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	23-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-1 MB								
Sodium (Na)-Total			<0.030		mg/L		0.05	23-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	23-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	23-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2255224								
WG1353102-1 CVS								
Total Kjeldahl Nitrogen			95		%		90-110	21-SEP-11
WG1352408-4 DUP		**L1060071-2**						
Total Kjeldahl Nitrogen		1.61	1.68		mg/L	4.1	20	21-SEP-11
WG1352408-6 DUP		**L1060073-3**						
Total Kjeldahl Nitrogen		1.31	1.26		mg/L	3.9	20	21-SEP-11
WG1352408-2 LCS								
Total Kjeldahl Nitrogen			105		%		75-125	21-SEP-11
WG1352408-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	21-SEP-11
WG1352408-3 MS		**L1060071-2**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
WG1352408-5 MS		**L1060073-3**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2259447								
WG1356855-2 CVS								
Total Dissolved Solids			100		%		85-115	27-SEP-11
WG1356855-3 DUP		**L1060736-1**						
Total Dissolved Solids		3260	3330		mg/L	2.4	20	27-SEP-11
WG1356855-8 DUP		**L1063648-1**						
Total Dissolved Solids		640	670		mg/L	4.6	20	27-SEP-11
WG1356855-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	27-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2259447								
WG1356855-2 CVS								
Total Suspended Solids			102		%		85-115	27-SEP-11
WG1356855-3 DUP		**L1060736-1**						
Total Suspended Solids		24.0	25.0		mg/L	4.1	400	27-SEP-11
WG1356855-5 DUP		**L1063117-1**						
Total Suspended Solids		7.0	7.0		mg/L	0.0	400	27-SEP-11
WG1356855-6 DUP		**L1063120-1**						
Total Suspended Solids		5.0	5.0		mg/L	0.0	400	27-SEP-11
WG1356855-8 DUP		**L1063648-1**						
Total Suspended Solids		100	97.1		mg/L	2.9	20	27-SEP-11
WG1356855-1 MB								
Total Suspended Solids			<5.0		mg/L		5	27-SEP-11
TURBIDITY-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060062 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060062 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	15-SEP-11 09:45	27-SEP-11 09:51	7	12	days	EHT
	2	15-SEP-11 14:15	27-SEP-11 09:51	7	12	days	EHT
	3	15-SEP-11 15:00	27-SEP-11 09:51	7	12	days	EHT
	4	15-SEP-11 16:00	27-SEP-11 09:51	7	12	days	EHT
	5	15-SEP-11 09:25	27-SEP-11 09:51	7	12	days	EHT
	6	15-SEP-11 10:30	27-SEP-11 09:51	7	12	days	EHT
	7	15-SEP-11 11:30	27-SEP-11 09:51	7	12	days	EHT
	8	15-SEP-11 11:30	27-SEP-11 09:51	7	12	days	EHT
	9	15-SEP-11 13:50	27-SEP-11 09:51	7	12	days	EHT
Total Suspended Solids							
	1	15-SEP-11 09:45	27-SEP-11 09:51	7	12	days	EHT
	2	15-SEP-11 14:15	27-SEP-11 09:51	7	12	days	EHT
	3	15-SEP-11 15:00	27-SEP-11 09:51	7	12	days	EHT
	4	15-SEP-11 16:00	27-SEP-11 09:51	7	12	days	EHT
	5	15-SEP-11 09:25	27-SEP-11 09:51	7	12	days	EHT
	6	15-SEP-11 10:30	27-SEP-11 09:51	7	12	days	EHT
	7	15-SEP-11 11:30	27-SEP-11 09:51	7	12	days	EHT
	8	15-SEP-11 11:30	27-SEP-11 09:51	7	12	days	EHT
	9	15-SEP-11 13:50	27-SEP-11 09:51	7	12	days	EHT
pH							
	1	15-SEP-11 09:45	17-SEP-11 10:39	0.25	49	hours	EHTR-FM
	2	15-SEP-11 14:15	17-SEP-11 10:39	0.25	44	hours	EHTR-FM
	3	15-SEP-11 15:00	17-SEP-11 10:39	0.25	44	hours	EHTR-FM
	4	15-SEP-11 16:00	17-SEP-11 10:39	0.25	43	hours	EHTR-FM
	5	15-SEP-11 09:25	17-SEP-11 10:39	0.25	49	hours	EHTR-FM
	6	15-SEP-11 10:30	17-SEP-11 10:39	0.25	48	hours	EHTR-FM
	7	15-SEP-11 11:30	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
	8	15-SEP-11 11:30	17-SEP-11 10:39	0.25	47	hours	EHTR-FM
	9	15-SEP-11 13:50	17-SEP-11 10:39	0.25	45	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	15-SEP-11 09:45	19-SEP-11 14:41	48	101	hours	EHTR
	2	15-SEP-11 14:15	19-SEP-11 14:41	48	96	hours	EHTL
	3	15-SEP-11 15:00	19-SEP-11 14:41	48	96	hours	EHTL
	4	15-SEP-11 16:00	19-SEP-11 14:41	48	95	hours	EHTL
	5	15-SEP-11 09:25	19-SEP-11 14:41	48	101	hours	EHTR
	6	15-SEP-11 10:30	19-SEP-11 14:41	48	100	hours	EHTL
	7	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	8	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	9	15-SEP-11 13:50	19-SEP-11 14:41	48	97	hours	EHTL
Colour, True							
	1	15-SEP-11 09:45	17-SEP-11 18:58	48	57	hours	EHTR
	2	15-SEP-11 14:15	17-SEP-11 18:58	48	53	hours	EHTL
	3	15-SEP-11 15:00	17-SEP-11 18:58	48	52	hours	EHTL
	4	15-SEP-11 16:00	17-SEP-11 18:58	48	51	hours	EHTL
	5	15-SEP-11 09:25	17-SEP-11 18:59	48	58	hours	EHTR
	6	15-SEP-11 10:30	17-SEP-11 18:59	48	56	hours	EHTL
	7	15-SEP-11 11:30	17-SEP-11 18:59	48	55	hours	EHTL
	8	15-SEP-11 11:30	17-SEP-11 18:59	48	55	hours	EHTL
	9	15-SEP-11 13:50	17-SEP-11 18:41	48	53	hours	EHTL
Nitrate as N							

Quality Control Report

Workorder: L1060062 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrate as N							
	1	15-SEP-11 09:45	19-SEP-11 14:41	48	101	hours	EHTR
	2	15-SEP-11 14:15	19-SEP-11 14:41	48	96	hours	EHTL
	3	15-SEP-11 15:00	19-SEP-11 14:41	48	96	hours	EHTL
	4	15-SEP-11 16:00	19-SEP-11 14:41	48	95	hours	EHTL
	5	15-SEP-11 09:25	19-SEP-11 14:41	48	101	hours	EHTR
	6	15-SEP-11 10:30	19-SEP-11 14:41	48	100	hours	EHTL
	7	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	8	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	9	15-SEP-11 13:50	19-SEP-11 14:41	48	97	hours	EHTL
Nitrite as N							
	1	15-SEP-11 09:45	19-SEP-11 14:41	48	101	hours	EHTR
	2	15-SEP-11 14:15	19-SEP-11 14:41	48	96	hours	EHTL
	3	15-SEP-11 15:00	19-SEP-11 14:41	48	96	hours	EHTL
	4	15-SEP-11 16:00	19-SEP-11 14:41	48	95	hours	EHTL
	5	15-SEP-11 09:25	19-SEP-11 14:41	48	101	hours	EHTR
	6	15-SEP-11 10:30	19-SEP-11 14:41	48	100	hours	EHTL
	7	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	8	15-SEP-11 11:30	19-SEP-11 14:41	48	99	hours	EHTL
	9	15-SEP-11 13:50	19-SEP-11 14:41	48	97	hours	EHTL
Phosphorus, Total							
	1	15-SEP-11 09:45	19-SEP-11 17:44	48	104	hours	EHTR
	2	15-SEP-11 14:15	19-SEP-11 17:44	48	100	hours	EHTL
	3	15-SEP-11 15:00	19-SEP-11 17:44	48	99	hours	EHTL
	4	15-SEP-11 16:00	19-SEP-11 17:44	48	98	hours	EHTL
	5	15-SEP-11 09:25	19-SEP-11 17:44	48	104	hours	EHTR
	6	15-SEP-11 10:30	19-SEP-11 17:44	48	103	hours	EHTL
	7	15-SEP-11 11:30	19-SEP-11 17:44	48	102	hours	EHTL
	8	15-SEP-11 11:30	19-SEP-11 17:44	48	102	hours	EHTL
	9	15-SEP-11 13:50	19-SEP-11 17:44	48	100	hours	EHTL
Aggregate Organics							
Carbonaceous BOD							
	1	15-SEP-11 09:45	17-SEP-11 10:32	48	49	hours	EHTR
	5	15-SEP-11 09:25	17-SEP-11 10:32	48	49	hours	EHTR
Organic Parameters							
Chlorophyll a, Pheophytin by fluorometry							
	1	15-SEP-11 09:45	17-SEP-11 10:30	48	49	hours	EHTR
	5	15-SEP-11 09:25	17-SEP-11 10:30	48	49	hours	EHTR

Legend & Qualifier Definitions:

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

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1060062 were received on 17-SEP-11 10:30.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7

Contact: Clifton Samoiloff

requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

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

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

ALS Environmental

C

COC # 5

L1060062

Page 1 of —

Report To		Report		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☑ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483-300	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT (P)	CBOD	Solids (TSS, TDS)	Metals & HG -Total (P)	Metals & Hg - Dissolved	TOC,DOC (P)	Number of Containers
1	ARL-01	15Sep11	9415	water	X	X	X	X	X	X	X	X	X	6
2	ANB-01		1415		X	X	X	X	X	X	X	X	X	6
3	ANB-02		1500		X	X	X	X	X	X	X	X	X	6
4	ANB-05		16:00		X	X	X	X	X	X	X	X	X	6
5	THL-01		9:25		X	X	X	X	X	X	X	X	X	6
6	THL-02		1030		X	X	X	X	X	X	X	X	X	6
7	THL-03		1130		X	X	X	X	X	X	X	X	X	6
8	DUP-02		1130		X	X	X	X	X	X	X	X	X	6
9	ANC-01		1350		X	X	X	X	X	X	X	X	X	6
10														
11														
12														

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BH	Sept 17	10:30	8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 07-OCT-11 14:17 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060063

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435-300
C of C Numbers:
Legal Site Desc:

Robert S. Kitlar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060063-1 STC03							
Sampled By: CLIENT on 15-SEP-11 @ 14:40							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	2.93		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	2.89		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	4.4		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	0.325		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	141		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	30.9		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	145		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	142		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.081		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	13.5		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	190		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	1.14		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	32.5		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	14.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	1.32		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0925		0.0050	mg/L	23-SEP-11	23-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Arsenic (As)-Total	0.00121		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Barium (Ba)-Total	0.0156		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Boron (B)-Total	0.015		0.010	mg/L	23-SEP-11	23-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	23-SEP-11	R2257780
Calcium (Ca)-Total	32.6		0.10	mg/L	23-SEP-11	23-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Cobalt (Co)-Total	0.00036		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Iron (Fe)-Total	1.43		0.10	mg/L	23-SEP-11	23-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	23-SEP-11	R2257780
Lithium (Li)-Total	0.0036		0.0020	mg/L	23-SEP-11	23-SEP-11	R2257780
Magnesium (Mg)-Total	15.5		0.010	mg/L	23-SEP-11	23-SEP-11	R2257780
Manganese (Mn)-Total	0.469		0.00030	mg/L	23-SEP-11	23-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	23-SEP-11	R2257780

* 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
L1060063-1 STC03							
Sampled By: CLIENT on 15-SEP-11 @ 14:40							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	23-SEP-11	R2257780
Potassium (K)-Total	1.41		0.020	mg/L	23-SEP-11	23-SEP-11	R2257780
Rubidium (Rb)-Total	0.00083		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Silicon (Si)-Total	6.56		0.050	mg/L	23-SEP-11	23-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Sodium (Na)-Total	9.46		0.030	mg/L	23-SEP-11	23-SEP-11	R2257780
Strontium (Sr)-Total	0.0913		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Titanium (Ti)-Total	0.00445		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Vanadium (V)-Total	0.00052		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	23-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	23-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0121		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00107		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0102		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.013		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	31.0		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00022		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	0.75		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0042		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	15.8		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.120		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.32		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00072		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	5.62		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	9.85		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0938		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060063-1 STC03							
Sampled By: CLIENT on 15-SEP-11 @ 14:40							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	0.00070		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00045		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	4.54		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	3.76		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	150		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	183		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	256		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	7.90		0.10	pH units		17-SEP-11	R2253785
L1060063-2 STC02							
Sampled By: CLIENT on 15-SEP-11 @ 16:12							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	5.10		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	31.7		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	2.7		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	3.9		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	130		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	34.8		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	176		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	170		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.047		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	5.56		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	230		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	1.39		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	36.3		1.0	mg/L		22-SEP-11	R2256631

* 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
L1060063-2 STC02							
Sampled By: CLIENT on 15-SEP-11 @ 16:12							
Matrix: WATER							
Total Suspended Solids	30.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	1.73		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0593		0.0050	mg/L	23-SEP-11	23-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Arsenic (As)-Total	0.00071		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Barium (Ba)-Total	0.0284		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Boron (B)-Total	0.018		0.010	mg/L	23-SEP-11	23-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	23-SEP-11	R2257780
Calcium (Ca)-Total	42.4		0.10	mg/L	23-SEP-11	23-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Cobalt (Co)-Total	0.00022		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Copper (Cu)-Total	0.00053		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Iron (Fe)-Total	0.17		0.10	mg/L	23-SEP-11	23-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	23-SEP-11	R2257780
Lithium (Li)-Total	0.0049		0.0020	mg/L	23-SEP-11	23-SEP-11	R2257780
Magnesium (Mg)-Total	17.0		0.010	mg/L	23-SEP-11	23-SEP-11	R2257780
Manganese (Mn)-Total	0.0289		0.00030	mg/L	23-SEP-11	23-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	23-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	23-SEP-11	R2257780
Potassium (K)-Total	1.21		0.020	mg/L	23-SEP-11	23-SEP-11	R2257780
Rubidium (Rb)-Total	0.00115		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Silicon (Si)-Total	2.97		0.050	mg/L	23-SEP-11	23-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Sodium (Na)-Total	9.66		0.030	mg/L	23-SEP-11	23-SEP-11	R2257780
Strontium (Sr)-Total	0.126		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Titanium (Ti)-Total	0.00278		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	23-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	23-SEP-11	R2257780
Vanadium (V)-Total	0.00025		0.00020	mg/L	23-SEP-11	23-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	23-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	23-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0081		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00072		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0213		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.018		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	39.8		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060063-2 STC02							
Sampled By: CLIENT on 15-SEP-11 @ 16:12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00024		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0053		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	17.2		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00613		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.16		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00106		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	2.57		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	9.67		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.125		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00037		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00052		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	11.4		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	9.98		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	149		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	181		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	307		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.07		0.10	pH units		17-SEP-11	R2253785
L1060063-3 STC01							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	5.17		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.16		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060063-3 STC01							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	37.2		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.6		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	49.7		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	21.9		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	215		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	223		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	7.77		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	264		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	0.73		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	23.1		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	0.27		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0308		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00106		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0285		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.031		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.000014		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	54.4		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	0.00219		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.00957		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	0.23		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0031		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	21.2		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	0.318		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	0.00021		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	0.0021		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	3.66		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.00135		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	4.84		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	9.73		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060063-3 STC01							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	0.134		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00086		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	0.00035		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	0.0178		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0150		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00106		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0227		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.032		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	0.000016		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	51.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	0.00128		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00915		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0044		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	20.8		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.205		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00023		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	0.0018		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	3.53		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00144		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	3.50		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	9.98		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.130		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00024		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	0.00031		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Zinc (Zn)-Dissolved	0.0143		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060063-3 STC01							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	0.35		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	0.52		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	193		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	235		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	419		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.14		0.10	pH units		17-SEP-11	R2253785
L1060063-4 STL01							
Sampled By: CLIENT on 16-SEP-11 @ 14:40							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	54.2		2.5	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	1.06		0.50	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.25		0.25	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.25		0.25	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	964		2.5	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	235		25	mg/L		23-SEP-11	R2256873
Ammonia as N	4.29	DLA	0.50	mg/L		03-OCT-11	R2262851
Bromide (Br)	<0.50		0.50	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	<5.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	<1.0		1.0	mg/L		23-SEP-11	R2257774
Hardness (as CaCO3)	723		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	785		0.20	mg/L		28-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.35		0.35	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	8.41		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	1290		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	4.31		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	<1.0		1.0	mg/L		23-SEP-11	R2257774
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	0.16		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	21.0		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00099		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0197		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060063-4 STL01							
Sampled By: CLIENT on 16-SEP-11 @ 14:40							
Matrix: WATER							
Total Metals by ICP-MS							
Beryllium (Be)-Total	0.00027		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.039		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.00555		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	147		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	0.00019		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	0.283		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.180		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	9.32		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	0.00290		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0451		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	86.5		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	3.45		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	0.0380		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	7.62		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.0120		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	0.0011		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	3.52		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	22.6		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.276		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00688		0.00020	mg/L	23-SEP-11	27-SEP-11	R2259333
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	0.00019		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	6.71		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	25.3		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Antimony (Sb)-Dissolved	0.00030		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00072		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0155		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	0.00041		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.033		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	0.00520		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	162		0.050	mg/L	17-SEP-11	27-SEP-11	R2259333
Cesium (Cs)-Dissolved	0.00016		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	0.271		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Copper (Cu)-Dissolved	0.203		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Iron (Fe)-Dissolved	8.50		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	0.00306		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0458		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060063-4 STL01							
Sampled By: CLIENT on 16-SEP-11 @ 14:40							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	92.5		0.010	mg/L	17-SEP-11	27-SEP-11	R2259333
Manganese (Mn)-Dissolved	3.55		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259333
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	0.0416		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	6.14		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.0124		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	3.05		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	21.4		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.276		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	0.00702		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	0.00018		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	6.80		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	0.16		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	<1.0		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	<2.0		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	1770		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	2.95		0.10	pH units		17-SEP-11	R2253785
L1060063-5 STL02							
Sampled By: CLIENT on 16-SEP-11 @ 13:10							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	53.9		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.94		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	920		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	236		25	mg/L		23-SEP-11	R2256873

* 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
L1060063-5 STL02							
Sampled By: CLIENT on 16-SEP-11 @ 13:10							
Matrix: WATER							
Ammonia as N	4.39	DLA	0.50	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	<5.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	752		0.30	mg/L		26-SEP-11	
Hardness (as CaCO3)	783		0.20	mg/L		28-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.012		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	7.98		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	1350		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	4.51		0.20	mg/L	30-SEP-11	04-OCT-11	R2262878
Total Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	0.20		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	21.3		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00100		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0192		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	0.00021		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.040		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.00528		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	152		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	0.00018		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	0.278		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.175		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	9.21		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	0.00279		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0462		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	90.6		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	3.62		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	0.0374		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	7.35		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.0112		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	0.0012		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	3.48		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	24.5		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.263		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060063-5 STL02							
Sampled By: CLIENT on 16-SEP-11 @ 13:10							
Matrix: WATER							
Total Metals by ICP-MS							
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	0.00018		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	6.71		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	24.6		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Antimony (Sb)-Dissolved	0.00026		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00070		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0153		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	0.00039		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.032		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	0.00529		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	161		0.050	mg/L	17-SEP-11	27-SEP-11	R2259333
Cesium (Cs)-Dissolved	0.00016		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	0.280		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Copper (Cu)-Dissolved	0.204		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Iron (Fe)-Dissolved	8.18		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	0.00308		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0439		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	92.5		0.010	mg/L	17-SEP-11	27-SEP-11	R2259333
Manganese (Mn)-Dissolved	3.67		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259333
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	0.0410		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	6.06		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.0127		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	2.91		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	19.9		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.289		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	0.00018		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	6.54		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	0.15		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	<1.0		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	<2.0		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785

* 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
L1060063-5 STL02							
Sampled By: CLIENT on 16-SEP-11 @ 13:10							
Matrix: WATER							
Alkalinity							
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	1760		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	2.95		0.10	pH units		17-SEP-11	R2253785
L1060063-6 STL03							
Sampled By: CLIENT on 16-SEP-11 @ 11:45							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	55.0		2.5	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.98		0.50	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.25		0.25	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.25		0.25	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	976		2.5	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	236		25	mg/L		23-SEP-11	R2256873
Ammonia as N	4.28	DLA	0.50	mg/L		03-OCT-11	R2262851
Bromide (Br)	<0.50		0.50	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	<5.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	790		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	715		0.30	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.35		0.35	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.011		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	8.23		0.0050	mg/L		28-SEP-11	R2260561
Total Dissolved Solids	1320		5.0	mg/L		27-SEP-11	R2259447
Total Kjeldahl Nitrogen	4.31		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	<5.0		5.0	mg/L		27-SEP-11	R2259447
Turbidity	0.17		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	21.4		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	0.00100		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	0.0197		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	0.00034		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	0.040		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	0.00555		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	144		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	0.00019		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780

* 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
L1060063-6 STL03							
Sampled By: CLIENT on 16-SEP-11 @ 11:45							
Matrix: WATER							
Total Metals by ICP-MS							
Cobalt (Co)-Total	0.282		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	0.177		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	9.55		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	0.00285		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	0.0457		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	86.3		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	3.35		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	0.0382		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	7.45		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	0.0120		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	0.0013		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	3.34		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	24.4		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	0.283		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	0.00031		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	0.00019		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	6.56		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	24.1		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Antimony (Sb)-Dissolved	0.00024		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00069		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0153		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	0.00037		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.030		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	0.00529		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	163		0.050	mg/L	17-SEP-11	27-SEP-11	R2259333
Cesium (Cs)-Dissolved	0.00016		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	0.268		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Copper (Cu)-Dissolved	0.205		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Iron (Fe)-Dissolved	8.28		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	0.00299		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0447		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	92.9		0.010	mg/L	17-SEP-11	27-SEP-11	R2259333
Manganese (Mn)-Dissolved	3.55		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259333
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	0.0403		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	5.90		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.0123		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060063-6 STL03							
Sampled By: CLIENT on 16-SEP-11 @ 11:45							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	2.86		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	19.2		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.283		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259333
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	0.00018		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	6.96		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259333
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	0.27		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	<1.0		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	<2.0		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	1760		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	2.95		0.10	pH units		17-SEP-11	R2253785
L1060063-7 FLB02							
Sampled By: CLIENT on 16-SEP-11 @ 13:15							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.5		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	<5.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	<0.20		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	0.38		0.30	mg/L		26-SEP-11	

* 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
L1060063-7 FLB02							
Sampled By: CLIENT on 16-SEP-11 @ 13:15							
Matrix: WATER							
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	<5.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	<1.0		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	<5.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	<0.10		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Arsenic (As)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Barium (Ba)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Boron (B)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	23-SEP-11	24-SEP-11	R2257780
Calcium (Ca)-Total	0.15		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Copper (Cu)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Iron (Fe)-Total	<0.10		0.10	mg/L	23-SEP-11	24-SEP-11	R2257780
Lead (Pb)-Total	<0.000090		0.000090	mg/L	23-SEP-11	24-SEP-11	R2257780
Lithium (Li)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Magnesium (Mg)-Total	<0.010		0.010	mg/L	23-SEP-11	24-SEP-11	R2257780
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	23-SEP-11	24-SEP-11	R2257780
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	23-SEP-11	24-SEP-11	R2257780
Phosphorus (P)-Total	<0.20		0.20	mg/L	23-SEP-11	24-SEP-11	R2257780
Potassium (K)-Total	<0.020		0.020	mg/L	23-SEP-11	24-SEP-11	R2257780
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Selenium (Se)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Silicon (Si)-Total	<0.050		0.050	mg/L	23-SEP-11	24-SEP-11	R2257780
Silver (Ag)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Sodium (Na)-Total	<0.030		0.030	mg/L	23-SEP-11	24-SEP-11	R2257780
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Thorium (Th)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Tin (Sn)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Tungsten (W)-Total	<0.0010		0.0010	mg/L	23-SEP-11	24-SEP-11	R2257780
Uranium (U)-Total	<0.00010		0.00010	mg/L	23-SEP-11	24-SEP-11	R2257780
Vanadium (V)-Total	<0.00020		0.00020	mg/L	23-SEP-11	24-SEP-11	R2257780
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	23-SEP-11	24-SEP-11	R2257780
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	23-SEP-11	24-SEP-11	R2257780
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259295
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295

* 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
L1060063-7 FLB02							
Sampled By: CLIENT on 16-SEP-11 @ 13:15							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	27-SEP-11	R2259295
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	27-SEP-11	R2259295
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	17-SEP-11	27-SEP-11	R2259295
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259295
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	27-SEP-11	R2259295
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	27-SEP-11	R2259295
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259295
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	27-SEP-11	R2259295
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	27-SEP-11	R2259295
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	27-SEP-11	R2259295
Potassium (K)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	27-SEP-11	R2259295
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	27-SEP-11	R2259295
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	17-SEP-11	27-SEP-11	R2259295
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	17-SEP-11	27-SEP-11	R2259295
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	27-SEP-11	R2259295
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	27-SEP-11	R2259295
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	27-SEP-11	R2259295
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	27-SEP-11	R2259295
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	5.6		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	6.8		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	1.41		0.40	umhos/cm		19-SEP-11	R2254103
pH							
pH	6.19		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060063-4	STL01	LPM	Lab Preserved for Metals. Received with pH > 2, preserved at the lab and held for 16 hours in accordance with EPA 200.8

Sample Parameter Qualifier Key:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-8.3-PCT-WP	Water	Acidity (as CaCO3)	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
WP			
A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0
Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.			
MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL
Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL
Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.			
N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat
Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.			
NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F
Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.			
NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2
This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.			
SO4-IC-WP	Water	Sulfate	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060063 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-8.3-PCT-WP	**Water**							
Batch R2256873								
WG1354937-3 DUP		**L1060063-6**						
Acidity (as CaCO3)		236	237		mg/L	0.56	25	23-SEP-11
WG1354937-2 LCS								
Acidity (as CaCO3)			102		%		70-130	23-SEP-11
WG1354937-1 MB								
Acidity (as CaCO3)			<25		mg/L		25	23-SEP-11
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							
Batch R2256631								
WG1354641-2 CVS								
Dissolved Organic Carbon			102		%		80-120	22-SEP-11
WG1354639-2 DUP		**L1060063-1**						
Dissolved Organic Carbon		30.9	30.9		mg/L	0.12	20	22-SEP-11
WG1354639-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	22-SEP-11
Batch R2257774								
WG1355953-2 CVS								
Dissolved Organic Carbon			99		%		80-120	23-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2256631								
WG1354641-2 CVS								
Total Organic Carbon			101		%		80-120	22-SEP-11
WG1354641-1 MB								
Total Organic Carbon			<1.0		mg/L		1	22-SEP-11
Batch R2257774								
WG1355953-2 CVS								
Total Organic Carbon			100		%		80-120	23-SEP-11
WG1355953-1 MB								
Total Organic Carbon			<1.0		mg/L		1	23-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354255-1 CVS								
Chlorophyll a			82		%		65-135	23-SEP-11
WG1354255-2 CVS								
Chlorophyll a			112		%		65-135	23-SEP-11
WG1354200-2 DUP		**L1060065-1**						
Chlorophyll a		11.5	10.6		ug/L	8.0	35	23-SEP-11
Phaeophytin a		1.89	2.29		ug/L	19	35	23-SEP-11
WG1354200-3 DUP		**L1060067-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354200-3 DUP		**L1060067-1**						
Chlorophyll a		2.84	2.88		ug/L	1.4	35	23-SEP-11
Phaeophytin a		1.88	1.95		ug/L	3.7	35	23-SEP-11
WG1354200-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-5 DUP		**L1060065-2**						
BOD Carbonaceous		1.3	1.4		mg/L	7.4	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
Batch R2254103								
WG1351828-1 CVS								
Conductivity			99		%		90-110	19-SEP-11
WG1351828-2 DUP		**L1060058-2**						
Conductivity		0.98	0.97		umhos/cm	1.0	400	19-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-4 DUP		**WG1354838-3**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Arsenic (As)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-4 DUP		**WG1354838-3**						
Barium (Ba)-Total		0.00067	0.00068		mg/L	1.6	400	23-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Boron (B)-Total		0.059	0.060		mg/L	2.2	20	23-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	23-SEP-11
Calcium (Ca)-Total		0.81	0.80		mg/L	0.98	20	23-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Copper (Cu)-Total		0.0345	0.0344		mg/L	0.19	20	23-SEP-11
Iron (Fe)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	23-SEP-11
Lead (Pb)-Total		0.000105	0.000120		mg/L	13	400	23-SEP-11
Lithium (Li)-Total		0.0032	0.0033		mg/L	2.9	400	23-SEP-11
Magnesium (Mg)-Total		0.176	0.182		mg/L	2.9	20	23-SEP-11
Manganese (Mn)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	400	23-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	23-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	23-SEP-11
Potassium (K)-Total		0.712	0.710		mg/L	0.18	20	23-SEP-11
Rubidium (Rb)-Total		0.00068	0.00064		mg/L	5.3	400	23-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Silicon (Si)-Total		0.198	0.192		mg/L	2.7	400	23-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Sodium (Na)-Total		14.6	15.6		mg/L	6.5	20	23-SEP-11
Strontium (Sr)-Total		0.00182	0.00183		mg/L	0.11	20	23-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	23-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020		mg/L			23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-4 DUP		**WG1354838-3**						
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	23-SEP-11
WG1354838-6 DUP		**WG1354838-5**						
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Arsenic (As)-Total		0.00128	0.00122		mg/L	4.6	20	23-SEP-11
Barium (Ba)-Total		0.0992	0.102		mg/L	2.9	20	23-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Boron (B)-Total		0.233	0.234		mg/L	0.33	20	23-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	23-SEP-11
Calcium (Ca)-Total		63.8	65.8		mg/L	3.0	20	23-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Copper (Cu)-Total		0.00160	0.00140		mg/L	13	20	23-SEP-11
Iron (Fe)-Total		0.27	0.22		mg/L	19	400	23-SEP-11
Lead (Pb)-Total		0.000144	0.000131		mg/L	9.5	400	23-SEP-11
Lithium (Li)-Total		0.0337	0.0336		mg/L	0.35	20	23-SEP-11
Magnesium (Mg)-Total		71.6	71.3		mg/L	0.45	20	23-SEP-11
Molybdenum (Mo)-Total		0.00353	0.00355		mg/L	0.31	20	23-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	23-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	23-SEP-11
Potassium (K)-Total		7.22	7.02		mg/L	2.8	20	23-SEP-11
Rubidium (Rb)-Total		0.00442	0.00448		mg/L	1.5	20	23-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Silicon (Si)-Total		5.96	5.91		mg/L	0.80	20	23-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Sodium (Na)-Total		11.7	11.8		mg/L	0.77	20	23-SEP-11
Strontium (Sr)-Total		0.459	0.472		mg/L	2.8	20	23-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	23-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-6 DUP		**WG1354838-5**						
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	23-SEP-11
Uranium (U)-Total		0.00150	0.00154		mg/L	2.7	20	23-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	23-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	23-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	23-SEP-11
WG1354838-2 LCS								
Aluminum (Al)-Total			106		%		80-120	23-SEP-11
Antimony (Sb)-Total			93		%		80-120	23-SEP-11
Arsenic (As)-Total			98		%		80-120	23-SEP-11
Barium (Ba)-Total			105		%		80-120	23-SEP-11
Beryllium (Be)-Total			101		%		80-120	23-SEP-11
Bismuth (Bi)-Total			113		%		80-120	23-SEP-11
Boron (B)-Total			104		%		80-120	23-SEP-11
Cadmium (Cd)-Total			101		%		80-120	23-SEP-11
Calcium (Ca)-Total			102		%		80-120	23-SEP-11
Cesium (Cs)-Total			97		%		80-120	23-SEP-11
Chromium (Cr)-Total			104		%		80-120	23-SEP-11
Cobalt (Co)-Total			103		%		80-120	23-SEP-11
Copper (Cu)-Total			104		%		80-120	23-SEP-11
Iron (Fe)-Total			109		%		80-120	23-SEP-11
Lead (Pb)-Total			96		%		80-120	23-SEP-11
Lithium (Li)-Total			100		%		80-120	23-SEP-11
Magnesium (Mg)-Total			104		%		80-120	23-SEP-11
Manganese (Mn)-Total			108		%		80-120	23-SEP-11
Molybdenum (Mo)-Total			106		%		80-120	23-SEP-11
Nickel (Ni)-Total			104		%		80-120	23-SEP-11
Phosphorus (P)-Total			103		%		80-120	23-SEP-11
Potassium (K)-Total			104		%		80-120	23-SEP-11
Rubidium (Rb)-Total			103		%		80-120	23-SEP-11
Selenium (Se)-Total			99		%		80-120	23-SEP-11
Silicon (Si)-Total			111		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-2 LCS								
Silver (Ag)-Total			108		%		80-120	23-SEP-11
Sodium (Na)-Total			106		%		80-120	23-SEP-11
Strontium (Sr)-Total			103		%		80-120	23-SEP-11
Tellurium (Te)-Total			99		%		80-120	23-SEP-11
Thallium (Tl)-Total			106		%		80-120	23-SEP-11
Thorium (Th)-Total			84		%		70-130	23-SEP-11
Tin (Sn)-Total			102		%		80-120	23-SEP-11
Titanium (Ti)-Total			99		%		80-120	23-SEP-11
Tungsten (W)-Total			99		%		80-120	23-SEP-11
Uranium (U)-Total			111		%		80-120	23-SEP-11
Vanadium (V)-Total			102		%		80-120	23-SEP-11
Zinc (Zn)-Total			103		%		80-120	23-SEP-11
Zirconium (Zr)-Total			104		%		80-120	23-SEP-11
WG1354838-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	23-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	23-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	23-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	23-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2257780								
WG1354838-1 MB								
Phosphorus (P)-Total			<0.20		mg/L		0.5	23-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	23-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	23-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	23-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2255224								
WG1353102-1 CVS								
Total Kjeldahl Nitrogen			95		%		90-110	21-SEP-11
WG1352408-4 DUP		**L1060071-2**						
Total Kjeldahl Nitrogen		1.61	1.68		mg/L	4.1	20	21-SEP-11
WG1352408-6 DUP		**L1060073-3**						
Total Kjeldahl Nitrogen		1.31	1.26		mg/L	3.9	20	21-SEP-11
WG1352408-2 LCS								
Total Kjeldahl Nitrogen			105		%		75-125	21-SEP-11
WG1352408-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	21-SEP-11
WG1352408-3 MS		**L1060071-2**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
WG1352408-5 MS		**L1060073-3**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP	**Water**							
Batch R2262878								
WG1361609-1 CVS								
Total Kjeldahl Nitrogen			97		%		90-110	04-OCT-11
WG1360034-4 DUP		**L1065092-1**						
Total Kjeldahl Nitrogen		0.57	0.59		mg/L	3.6	20	04-OCT-11
WG1360034-6 DUP		**L1065114-1**						
Total Kjeldahl Nitrogen		0.83	0.87		mg/L	4.6	20	04-OCT-11
WG1360034-2 LCS								
Total Kjeldahl Nitrogen			102		%		75-125	04-OCT-11
WG1360034-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	04-OCT-11
WG1360034-3 MS		**L1065092-1**						
Total Kjeldahl Nitrogen			104		%		70-130	04-OCT-11
WG1360034-5 MS		**L1065114-1**						
Total Kjeldahl Nitrogen			106		%		70-130	04-OCT-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
Batch R2262851								
WG1361524-11 DUP		**L1064532-1**						
Ammonia as N		0.207	0.207		mg/L	0.053	20	03-OCT-11
WG1361524-13 DUP		**L1066645-3**						
Ammonia as N		0.063	0.063		mg/L	0.54	20	04-OCT-11
WG1361524-3 DUP		**L1062167-2**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP	**Water**							
Batch R2262851								
WG1361524-3 DUP		**L1062167-2**						
Ammonia as N		13.0	12.8	DLA	mg/L	1.9	20	03-OCT-11
WG1361524-5 DUP		**L1062349-1**						
Ammonia as N		8.6	8.6	DLA	mg/L	0.10	20	03-OCT-11
WG1361524-7 DUP		**L1062678-1**						
Ammonia as N		0.438	0.439		mg/L	0.27	20	03-OCT-11
WG1361524-9 DUP		**L1064387-1**						
Ammonia as N		0.500	0.501		mg/L	0.12	20	03-OCT-11
WG1361524-2 LCS								
Ammonia as N			101		%		85-115	03-OCT-11
WG1361524-1 MB								
Ammonia as N			<0.050		mg/L		0.05	03-OCT-11
WG1361524-10 MS		**L1063709-1**						
Ammonia as N			110		%		75-125	03-OCT-11
WG1361524-12 MS		**L1065626-2**						
Ammonia as N			108		%		75-125	03-OCT-11
WG1361524-4 MS		**L1062501-1**						
Ammonia as N			100		%		75-125	03-OCT-11
WG1361524-6 MS		**L1062828-4**						
Ammonia as N			104		%		75-125	03-OCT-11
WG1361524-8 MS		**L1063310-1**						
Ammonia as N			96		%		75-125	03-OCT-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
Batch R2260561								
WG1358086-4 DUP		**L1059348-1**						
Silica, Reactive (as SiO2)		1.54	1.52		mg/L	1.4	20	28-SEP-11
WG1358086-2 LCS								
Silica, Reactive (as SiO2)			101		%		85-115	28-SEP-11
WG1358086-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	28-SEP-11
WG1358086-3 MS		**L1059348-16**						
Silica, Reactive (as SiO2)			98		%		75-125	28-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2259447								
WG1356855-2 CVS								
Total Dissolved Solids			100		%		85-115	27-SEP-11
WG1356855-3 DUP		**L1060736-1**						
Total Dissolved Solids		3260	3330		mg/L	2.4	20	27-SEP-11
WG1356855-8 DUP		**L1063648-1**						
Total Dissolved Solids		640	670		mg/L	4.6	20	27-SEP-11
WG1356855-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	27-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TDS-WP	**Water**							
Batch R2260332								
WG1357759-2 CVS								
Total Dissolved Solids			100		%		85-115	28-SEP-11
WG1357759-3 DUP		**L1060941-1**						
Total Dissolved Solids		190	212		mg/L	11	20	28-SEP-11
WG1357759-4 DUP		**L1061337-1**						
Total Dissolved Solids		10.0	10.0		mg/L	0.0	400	28-SEP-11
WG1357759-5 DUP		**L1061337-2**						
Total Dissolved Solids		18.0	16.0		mg/L	12	400	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Dissolved Solids		1480	1510		mg/L	2.0	20	28-SEP-11
WG1357759-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	28-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2259447								
WG1356855-2 CVS								
Total Suspended Solids			102		%		85-115	27-SEP-11
WG1356855-3 DUP		**L1060736-1**						
Total Suspended Solids		24.0	25.0		mg/L	4.1	400	27-SEP-11
WG1356855-5 DUP		**L1063117-1**						
Total Suspended Solids		7.0	7.0		mg/L	0.0	400	27-SEP-11
WG1356855-6 DUP		**L1063120-1**						
Total Suspended Solids		5.0	5.0		mg/L	0.0	400	27-SEP-11
WG1356855-8 DUP		**L1063648-1**						
Total Suspended Solids		100	97.1		mg/L	2.9	20	27-SEP-11
WG1356855-1 MB								
Total Suspended Solids			<5.0		mg/L		5	27-SEP-11
Batch R2260332								
WG1357759-2 CVS								
Total Suspended Solids			96		%		85-115	28-SEP-11
WG1357759-6 DUP		**L1063827-1**						
Total Suspended Solids		90.0	85.0		mg/L	5.7	20	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Suspended Solids		330	320		mg/L	3.1	20	28-SEP-11
WG1357759-1 MB								
Total Suspended Solids			<5.0		mg/L		5	28-SEP-11
TURBIDITY-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060063 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060063 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	15-SEP-11 14:40	27-SEP-11 09:51	7	12	days	EHT
	2	15-SEP-11 16:12	27-SEP-11 09:51	7	12	days	EHT
	3	16-SEP-11 10:10	27-SEP-11 09:51	7	11	days	EHT
	4	16-SEP-11 14:40	27-SEP-11 09:51	7	11	days	EHT
	5	16-SEP-11 13:10	27-SEP-11 09:51	7	11	days	EHT
	6	16-SEP-11 11:45	27-SEP-11 09:51	7	11	days	EHT
	7	16-SEP-11 13:15	28-SEP-11 10:40	7	12	days	EHT
Total Suspended Solids							
	1	15-SEP-11 14:40	27-SEP-11 09:51	7	12	days	EHT
	2	15-SEP-11 16:12	27-SEP-11 09:51	7	12	days	EHT
	3	16-SEP-11 10:10	27-SEP-11 09:51	7	11	days	EHT
	4	16-SEP-11 14:40	27-SEP-11 09:51	7	11	days	EHT
	5	16-SEP-11 13:10	27-SEP-11 09:51	7	11	days	EHT
	6	16-SEP-11 11:45	27-SEP-11 09:51	7	11	days	EHT
	7	16-SEP-11 13:15	28-SEP-11 10:40	7	12	days	EHT
pH							
	1	15-SEP-11 14:40	17-SEP-11 10:39	0.25	44	hours	EHTR-FM
	2	15-SEP-11 16:12	17-SEP-11 10:39	0.25	42	hours	EHTR-FM
	3	16-SEP-11 10:10	17-SEP-11 10:39	0.25	24	hours	EHTR-FM
	4	16-SEP-11 14:40	17-SEP-11 10:39	0.25	20	hours	EHTR-FM
	5	16-SEP-11 13:10	17-SEP-11 10:39	0.25	22	hours	EHTR-FM
	6	16-SEP-11 11:45	17-SEP-11 10:39	0.25	23	hours	EHTR-FM
	7	16-SEP-11 13:15	17-SEP-11 10:39	0.25	21	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	15-SEP-11 14:40	19-SEP-11 14:41	48	96	hours	EHTL
	2	15-SEP-11 16:12	19-SEP-11 14:41	48	95	hours	EHTL
	3	16-SEP-11 10:10	19-SEP-11 14:41	48	77	hours	EHTL
	4	16-SEP-11 14:40	19-SEP-11 14:41	48	72	hours	EHT
	5	16-SEP-11 13:10	19-SEP-11 14:41	48	73	hours	EHT
	6	16-SEP-11 11:45	19-SEP-11 14:41	48	75	hours	EHT
	7	16-SEP-11 13:15	19-SEP-11 14:41	48	73	hours	EHT
Colour, True							
	1	15-SEP-11 14:40	17-SEP-11 18:41	48	52	hours	EHTL
	2	15-SEP-11 16:12	17-SEP-11 18:41	48	50	hours	EHTL
Nitrate as N							
	1	15-SEP-11 14:40	19-SEP-11 14:41	48	96	hours	EHTL
	2	15-SEP-11 16:12	19-SEP-11 14:41	48	95	hours	EHTL
	3	16-SEP-11 10:10	19-SEP-11 14:41	48	77	hours	EHTL
	4	16-SEP-11 14:40	19-SEP-11 14:41	48	72	hours	EHT
	5	16-SEP-11 13:10	19-SEP-11 14:41	48	73	hours	EHT
	6	16-SEP-11 11:45	19-SEP-11 14:41	48	75	hours	EHT
	7	16-SEP-11 13:15	19-SEP-11 14:41	48	73	hours	EHT
Nitrite as N							
	1	15-SEP-11 14:40	19-SEP-11 14:41	48	96	hours	EHTL
	2	15-SEP-11 16:12	19-SEP-11 14:41	48	95	hours	EHTL
	3	16-SEP-11 10:10	19-SEP-11 14:41	48	77	hours	EHTL
	4	16-SEP-11 14:40	19-SEP-11 14:41	48	72	hours	EHT
	5	16-SEP-11 13:10	19-SEP-11 14:41	48	73	hours	EHT
	6	16-SEP-11 11:45	19-SEP-11 14:41	48	75	hours	EHT

Quality Control Report

Workorder: L1060063 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Anions and Nutrients							
Nitrite as N							
	7	16-SEP-11 13:15	19-SEP-11 14:41	48	73	hours	EHT
Phosphorus, Total							
	1	15-SEP-11 14:40	19-SEP-11 17:44	48	99	hours	EHTL
	2	15-SEP-11 16:12	19-SEP-11 17:44	48	97	hours	EHTL
	3	16-SEP-11 10:10	19-SEP-11 17:44	48	80	hours	EHTL
	4	16-SEP-11 14:40	19-SEP-11 17:44	48	75	hours	EHT
	5	16-SEP-11 13:10	19-SEP-11 17:44	48	77	hours	EHT
	6	16-SEP-11 11:45	19-SEP-11 17:44	48	78	hours	EHT
	7	16-SEP-11 13:15	19-SEP-11 17:44	48	77	hours	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 L1060063 were received on 17-SEP-11 10:30.

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

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

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

ALS Environmental

COC # 6

L1060063

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Report To			
Company:	AECOM -W172	☑ Standard ☐ Other	
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	
Address:	99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	
		Email 2: shawna.kjartanson@aecom.com	
Phone:	Fax:	Email 3: mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 60212435-300	
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q24534	
Lab Work Order # (lab use only)		ALS Contact: Christine Herrod	Sampler:

Service Requested (Rush for routine analysis subject to availability)

- ◉ Regular (Standard Turnaround Times - Business Days)
- ○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT (P)	CBOD	Solids (TSS, TDS)	Metals & HG -Total (P)	Metals & Hg - Dissolved	TOC,DOC (P)	Metals & HG - Dissolved (F/P)			Number of Containers
1	STC03	15 SEP 11	1440	water	X	X	X	X	X	X	X	X	X	●			6
2	STC02	15 SEP 11	1012	water	X	X	X	X	X	X	X	X	X				6
3	STC01	16 SEP 11	1010		X	X	X	X	X	X	X	X	X				6
4	STL01		1440		X	X	X	X	X	X	X	X	X	X			7
5	STL02		1310		X	X	X	X	b	X	X	X	X	X			7
6	STL03		1145		X	X	b	X	X	X	X	X	X	X			7
7	FLB02	16 SEP 11	1315		X	X	b	D	b	X	X	X	X	X			7

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BLB	Sept 17, 2011	10:30	7.1 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 17-SEP-11
Report Date: 07-OCT-11 14:23 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060065

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483-300
C of C Numbers:
Legal Site Desc:

Robert S. Kitlar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060065-1 ANB-10							
Sampled By: CLIENT on 16-SEP-11 @ 09:57							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.41		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	3.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.1		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	11.4		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	10.0		1.0	mg/L		22-SEP-11	R2256631
Hardness (as CaCO3)	77.3		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	82.8		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.028		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	2.53		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	80.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.66		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	11.3		1.0	mg/L		22-SEP-11	R2256631
Total Suspended Solids	8.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	2.32		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0838		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00287		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0108		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	19.5		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00135		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.12		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0042		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.30		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0401		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060065-1 ANB-10							
Sampled By: CLIENT on 16-SEP-11 @ 09:57							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.40		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00142		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	1.98		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	3.77		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0475		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00393		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00055		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0022		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00228		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00903		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	18.0		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00057		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0035		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	7.83		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00020		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.18		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00116		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.21		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	3.49		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0457		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060065-1 ANB-10							
Sampled By: CLIENT on 16-SEP-11 @ 09:57							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00042		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	11.5		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.89		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	76.9		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	93.8		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	151		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.26		0.10	pH units		17-SEP-11	R2253785
L1060065-2 ANB-09							
Sampled By: CLIENT on 16-SEP-11 @ 10:49							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.32		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	3.75		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.3		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	17.0		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	10.8		1.0	mg/L		23-SEP-11	R2256631
Hardness (as CaCO3)	82.0		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	82.0		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.027		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	3.63		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	90.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.67		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	11.9		1.0	mg/L		22-SEP-11	R2256631

* 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
L1060065-2 ANB-09							
Sampled By: CLIENT on 16-SEP-11 @ 10:49							
Matrix: WATER							
Total Suspended Solids	<5.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	2.83		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.150		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00275		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0123		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	19.6		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00134		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.19		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	0.000130		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0048		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.02		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0386		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.33		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00158		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	2.63		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	3.66		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0476		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00671		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00070		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0041		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00092		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0104		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	19.1		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060065-2 ANB-09							
Sampled By: CLIENT on 16-SEP-11 @ 10:49							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00064		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0029		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	8.31		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00022		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00012		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.26		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00123		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.77		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	3.71		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0473		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00061		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	11.0		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.73		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	77.2		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	94.2		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	<0.60		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	153		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.24		0.10	pH units		17-SEP-11	R2253785
L1060065-3 ANB-08							
Sampled By: CLIENT on 16-SEP-11 @ 11:35							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.43		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553

* 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
L1060065-3 ANB-08							
Sampled By: CLIENT on 16-SEP-11 @ 11:35							
Matrix: WATER							
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	3.83		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.5		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	10.5		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	9.9		1.0	mg/L		23-SEP-11	R2256631
Hardness (as CaCO3)	71.1		0.20	mg/L		26-SEP-11	
Hardness (as CaCO3)	81.6		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.029		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	2.66		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	88.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.64		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	10.6		1.0	mg/L		23-SEP-11	R2256631
Total Suspended Solids	6.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	2.08		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.137		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00276		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0110		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	19.5		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00103		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.21		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	0.000103		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0034		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.01		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0381		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.27		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00142		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	2.10		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	3.51		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060065-3 ANB-08							
Sampled By: CLIENT on 16-SEP-11 @ 11:35							
Matrix: WATER							
Total Metals by ICP-MS							
Strontium (Sr)-Total	0.0464		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00423		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00054		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	0.0068		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0030		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00200		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00815		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	16.4		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00055		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0030		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	7.33		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00021		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.09		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00101		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.29		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	3.30		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0405		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00045		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							

* 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
L1060065-3 ANB-08							
Sampled By: CLIENT on 16-SEP-11 @ 11:35							
Matrix: WATER							
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	10.3		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.96		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	76.9		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	88.6		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	1.44		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	154		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.32		0.10	pH units		17-SEP-11	R2253785
L1060065-4 ANB-07							
Sampled By: CLIENT on 16-SEP-11 @ 12:19							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.48		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	5.03		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.3		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	13.5		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	10.8		1.0	mg/L		23-SEP-11	R2257774
Hardness (as CaCO3)	83.3		0.30	mg/L		27-SEP-11	
Hardness (as CaCO3)	80.4		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.030		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	3.04		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	92.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.62		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	11.4		1.0	mg/L		23-SEP-11	R2257774
Total Suspended Solids	7.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	1.44		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0727		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00279		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0111		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060065-4 ANB-07							
Sampled By: CLIENT on 16-SEP-11 @ 12:19							
Matrix: WATER							
Total Metals by ICP-MS							
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	19.9		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00095		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	0.11		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0047		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.16		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0349		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.29		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00143		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	2.19		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	3.80		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0486		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00331		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00055		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	0.0054		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0033		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00120		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00958		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	18.9		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00062		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0031		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060065-4 ANB-07							
Sampled By: CLIENT on 16-SEP-11 @ 12:19							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Magnesium (Mg)-Dissolved	8.10		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00023		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.26		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00118		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.50		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	3.68		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0467		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00044		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	10.3		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.60		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	77.0		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	87.8		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	1.90		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	157		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.34		0.10	pH units		17-SEP-11	R2253785
L1060065-5 ANB-06							
Sampled By: CLIENT on 16-SEP-11 @ 14:13							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.40		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	4.03		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906

* 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
L1060065-5 ANB-06							
Sampled By: CLIENT on 16-SEP-11 @ 14:13							
Matrix: WATER							
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.9		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	15.7		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	11.5		1.0	mg/L		23-SEP-11	R2257774
Hardness (as CaCO3)	83.8		0.30	mg/L		27-SEP-11	
Hardness (as CaCO3)	83.7		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.030		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	3.42		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	90.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.78		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	11.9		1.0	mg/L		23-SEP-11	R2257774
Total Suspended Solids	7.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	4.56		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0468		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00283		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0116		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	20.1		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00120		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0040		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.17		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0378		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.32		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00133		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	2.05		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	3.78		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0499		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00210		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060065-5 ANB-06							
Sampled By: CLIENT on 16-SEP-11 @ 14:13							
Matrix: WATER							
Total Metals by ICP-MS							
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00058		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0055		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00095		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0101		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	19.6		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00065		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0033		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	8.44		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00027		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.27		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00127		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	1.71		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	3.79		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0503		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00065		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	10.4		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	2.04		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	77.3		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	88.3		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	1.83		0.60	mg/L		17-SEP-11	R2253785

* 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
L1060065-5 ANB-06							
Sampled By: CLIENT on 16-SEP-11 @ 14:13							
Matrix: WATER							
Alkalinity							
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	155		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	8.34		0.10	pH units		17-SEP-11	R2253785
L1060065-6 ANB-04							
Sampled By: CLIENT on 16-SEP-11 @ 14:29							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	4.84		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	7.83		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	2.2		1.0	mg/L	17-SEP-11	22-SEP-11	R2255920
Colour, True	25.3		5.0	CU		17-SEP-11	R2253828
Dissolved Organic Carbon	12.2		1.0	mg/L		24-SEP-11	R2257774
Hardness (as CaCO3)	92.4		0.30	mg/L		27-SEP-11	
Hardness (as CaCO3)	85.8		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.030		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.65		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	112		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.78		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	12.3		1.0	mg/L		24-SEP-11	R2257774
Total Suspended Solids	7.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	2.13		0.10	NTU		17-SEP-11	R2254943
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0656		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	0.00031		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00274		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0113		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	22.4		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060065-6 ANB-04							
Sampled By: CLIENT on 16-SEP-11 @ 14:29							
Matrix: WATER							
Total Metals by ICP-MS							
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00062		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0042		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	8.88		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0381		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	1.35		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00151		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	2.16		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	4.39		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.0555		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00197		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00051		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0131		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00030		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00112		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.00904		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.010		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	17-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	20.3		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00050		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	17-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0041		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	8.54		0.010	mg/L	17-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00126		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00011		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	17-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	1.25		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00122		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942

* 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
L1060065-6 ANB-04							
Sampled By: CLIENT on 16-SEP-11 @ 14:29							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	17-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.857		0.050	mg/L	17-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	4.24		0.020	mg/L	17-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.0509		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	17-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00051		0.00020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	17-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	17-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	10.7		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	2.99		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	80.9		1.0	mg/L		17-SEP-11	R2253785
Bicarbonate (HCO3)	57.7		2.0	mg/L		17-SEP-11	R2253785
Carbonate (CO3)	19.0		0.60	mg/L		17-SEP-11	R2253785
Hydroxide (OH)	<0.40		0.40	mg/L		17-SEP-11	R2253785
Conductivity							
Conductivity	165		0.40	umhos/cm		17-SEP-11	R2253785
pH							
pH	9.23		0.10	pH units		17-SEP-11	R2253785

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060065-1	ANB-10	SFPL	Sample was Filtered and Preserved at the laboratory
L1060065-2	ANB-09	SFPL	Sample was Filtered and Preserved at the laboratory
L1060065-3	ANB-08	SFPL	Sample was Filtered and Preserved at the laboratory
L1060065-4	ANB-07	SFPL	Sample was Filtered and Preserved at the laboratory
L1060065-5	ANB-06	SFPL	Sample was Filtered and Preserved at the laboratory
L1060065-6	ANB-04	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B

Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3

ALK-TOT-WP	Water	Alkalinity	APHA 2320B

Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.

BR-IC-WP	Water	Bromide	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0

Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.

CL-IC-WP	Water	Chloride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C

True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.

CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode

A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.

ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL

Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL

Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat

Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection
Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-WP	Water	pH	APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2

This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.

SO4-IC-WP	Water	Sulfate	EPA 300.1 IC

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C
The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060065 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2253785								
WG1351525-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	17-SEP-11
WG1351525-4 DUP		**L1059370-11**						
Alkalinity, Total (as CaCO3)		5.1	5.9		mg/L	14	20	17-SEP-11
Bicarbonate (HCO3)		6.3	7.2		mg/L	14	25	17-SEP-11
Carbonate (CO3)		<0.60	<0.60	RPD-NA	mg/L	N/A	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Alkalinity, Total (as CaCO3)		246	247		mg/L	0.25	20	17-SEP-11
Bicarbonate (HCO3)		274	270		mg/L	1.3	25	17-SEP-11
Carbonate (CO3)		9.36	11.5		mg/L	20	25	17-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	17-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-DIS-ORG-WP	**Water**							
Batch R2256631								
WG1354641-2 CVS								
Dissolved Organic Carbon			102		%		80-120	22-SEP-11
WG1354639-2 DUP		**L1060063-1**						
Dissolved Organic Carbon		30.9	30.9		mg/L	0.12	20	22-SEP-11
WG1354639-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	22-SEP-11
Batch R2257774								
WG1355953-2 CVS								
Dissolved Organic Carbon			99		%		80-120	23-SEP-11
WG1355939-2 DUP		**L1060065-5**						
Dissolved Organic Carbon		11.5	11.5		mg/L	0.027	20	23-SEP-11
WG1355939-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	23-SEP-11
C-TOT-ORG-WP	**Water**							
Batch R2256631								
WG1354641-2 CVS								
Total Organic Carbon			101		%		80-120	22-SEP-11
WG1354641-1 MB								
Total Organic Carbon			<1.0		mg/L		1	22-SEP-11
Batch R2257774								
WG1355953-2 CVS								
Total Organic Carbon			100		%		80-120	23-SEP-11
WG1355953-1 MB								
Total Organic Carbon			<1.0		mg/L		1	23-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354255-1 CVS								
Chlorophyll a			82		%		65-135	23-SEP-11
WG1354255-2 CVS								
Chlorophyll a			112		%		65-135	23-SEP-11
WG1354200-2 DUP		**L1060065-1**						
Chlorophyll a		11.5	10.6		ug/L	8.0	35	23-SEP-11
Phaeophytin a		1.89	2.29		ug/L	19	35	23-SEP-11
WG1354200-3 DUP		**L1060067-1**						
Chlorophyll a		2.84	2.88		ug/L	1.4	35	23-SEP-11
Phaeophytin a		1.88	1.95		ug/L	3.7	35	23-SEP-11
WG1354200-1 MB								

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354200-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2253828								
WG1351569-3 DUP		**L1059499-2**						
Colour, True		23.3	24.9		CU	6.6	400	17-SEP-11
WG1351569-4 DUP		**L1060060-2**						
Colour, True		27.5	32.7		CU	17	20	17-SEP-11
WG1351569-2 LCS								
Colour, True			100		%		85-115	17-SEP-11
WG1351569-1 MB								
Colour, True			<5.0		CU		5	17-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2255920								
WG1351515-3 DUP		**L1060060-2**						
WG1351515-4 DUP		**L1060062-7**						
BOD Carbonaceous		2.0	2.1		mg/L	4.9	400	22-SEP-11
WG1351515-5 DUP		**L1060065-2**						
BOD Carbonaceous		1.3	1.4		mg/L	7.4	400	22-SEP-11
WG1351515-2 IRM		**61-GG**						
BOD Carbonaceous			93		%		85-115	22-SEP-11
WG1351515-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	22-SEP-11
EC-WP	**Water**							

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WP	**Water**							
Batch R2253785								
WG1351525-1 CVS								
Conductivity			96		%		90-110	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
Conductivity		799	798		umhos/cm	0.15	10	17-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Arsenic (As)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Barium (Ba)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Calcium (Ca)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Iron (Fe)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11
Lithium (Li)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Magnesium (Mg)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Manganese (Mn)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	400	26-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11
Potassium (K)-Total		<0.020	<0.020	RPD-NA	mg/L	N/A	400	26-SEP-11
Rubidium (Rb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Silicon (Si)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	400	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	400	26-SEP-11
Strontium (Sr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-6 DUP		**WG1356012-5**						
Aluminum (Al)-Total		0.0800	0.0700		mg/L	13	20	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-6 DUP		**WG1356012-5**						
Arsenic (As)-Total		0.00287	0.00279		mg/L	2.8	20	26-SEP-11
Barium (Ba)-Total		0.0108	0.0108		mg/L	0.27	20	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11
Calcium (Ca)-Total		19.5	19.0		mg/L	2.4	20	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		0.00135	0.00126		mg/L	6.6	20	26-SEP-11
Iron (Fe)-Total		0.12	0.12		mg/L	5.5	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11
Lithium (Li)-Total		0.0042	0.0040		mg/L	6.1	400	26-SEP-11
Magnesium (Mg)-Total		8.30	8.20		mg/L	1.2	20	26-SEP-11
Manganese (Mn)-Total		0.0401	0.0397		mg/L	0.96	20	26-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11
Potassium (K)-Total		1.40	1.31		mg/L	6.7	20	26-SEP-11
Rubidium (Rb)-Total		0.00142	0.00138		mg/L	2.4	20	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Silicon (Si)-Total		1.98	2.15		mg/L	8.3	20	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		3.77	3.74		mg/L	0.94	20	26-SEP-11
Strontium (Sr)-Total		0.0475	0.0465		mg/L	2.2	20	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		0.00055	0.00050		mg/L			26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-6 DUP		**WG1356012-5**						
Vanadium (V)-Total		0.00055	0.00050		mg/L	9.0	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-2 LCS								
Aluminum (Al)-Total			98		%		80-120	26-SEP-11
Antimony (Sb)-Total			101		%		80-120	26-SEP-11
Arsenic (As)-Total			97		%		80-120	26-SEP-11
Barium (Ba)-Total			101		%		80-120	26-SEP-11
Beryllium (Be)-Total			102		%		80-120	26-SEP-11
Bismuth (Bi)-Total			97		%		80-120	26-SEP-11
Boron (B)-Total			105		%		80-120	26-SEP-11
Cadmium (Cd)-Total			100		%		80-120	26-SEP-11
Calcium (Ca)-Total			107		%		80-120	26-SEP-11
Cesium (Cs)-Total			93		%		80-120	26-SEP-11
Chromium (Cr)-Total			102		%		80-120	26-SEP-11
Cobalt (Co)-Total			97		%		80-120	26-SEP-11
Copper (Cu)-Total			97		%		80-120	26-SEP-11
Iron (Fe)-Total			99		%		80-120	26-SEP-11
Lead (Pb)-Total			99		%		80-120	26-SEP-11
Lithium (Li)-Total			112		%		80-120	26-SEP-11
Magnesium (Mg)-Total			106		%		80-120	26-SEP-11
Manganese (Mn)-Total			98		%		80-120	26-SEP-11
Molybdenum (Mo)-Total			101		%		80-120	26-SEP-11
Nickel (Ni)-Total			102		%		80-120	26-SEP-11
Phosphorus (P)-Total			99		%		80-120	26-SEP-11
Potassium (K)-Total			110		%		80-120	26-SEP-11
Rubidium (Rb)-Total			107		%		80-120	26-SEP-11
Selenium (Se)-Total			94		%		80-120	26-SEP-11
Silicon (Si)-Total			113		%		80-120	26-SEP-11
Silver (Ag)-Total			108		%		80-120	26-SEP-11
Sodium (Na)-Total			113		%		80-120	26-SEP-11
Strontium (Sr)-Total			104		%		80-120	26-SEP-11
Tellurium (Te)-Total			99		%		80-120	26-SEP-11
Thallium (Tl)-Total			101				80-120	

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-2 LCS								
Thallium (Tl)-Total			101		%		80-120	26-SEP-11
Thorium (Th)-Total			95		%		70-130	26-SEP-11
Tin (Sn)-Total			101		%		80-120	26-SEP-11
Titanium (Ti)-Total			109		%		80-120	26-SEP-11
Tungsten (W)-Total			97		%		80-120	26-SEP-11
Uranium (U)-Total			94		%		80-120	26-SEP-11
Vanadium (V)-Total			105		%		80-120	26-SEP-11
Zinc (Zn)-Total			99		%		80-120	26-SEP-11
Zirconium (Zr)-Total			103		%		80-120	26-SEP-11
WG1356012-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	26-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	26-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	26-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	26-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	26-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	26-SEP-11
Calcium (Ca)-Total			<0.10		mg/L		0.2	26-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	26-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	26-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	26-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	26-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	26-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	26-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	26-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	26-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	26-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	26-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-1 MB								
Silicon (Si)-Total			<0.050		mg/L		0.3	26-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	26-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	26-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	26-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	26-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	26-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	26-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	26-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	26-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	26-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	26-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	26-SEP-11
N-TOTKJ-WP	**Water**							
Batch R2255224								
WG1353102-1 CVS								
Total Kjeldahl Nitrogen			95		%		90-110	21-SEP-11
WG1352408-4 DUP		**L1060071-2**						
Total Kjeldahl Nitrogen		1.61	1.68		mg/L	4.1	20	21-SEP-11
WG1352408-6 DUP		**L1060073-3**						
Total Kjeldahl Nitrogen		1.31	1.26		mg/L	3.9	20	21-SEP-11
WG1352408-2 LCS								
Total Kjeldahl Nitrogen			105		%		75-125	21-SEP-11
WG1352408-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	21-SEP-11
WG1352408-3 MS		**L1060071-2**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
WG1352408-5 MS		**L1060073-3**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2253785								
WG1351525-4 DUP		**L1059370-11**						
pH		6.40	6.29	J	pH units	0.11	0.2	17-SEP-11
WG1351525-5 DUP		**L1059720-7**						
pH		8.56	8.61	J	pH units	0.05	0.2	17-SEP-11
WG1351525-2 LCS								
pH			7.41		pH units		7.3-7.5	17-SEP-11
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2260332								
WG1357759-2 CVS								
Total Dissolved Solids			100		%		85-115	28-SEP-11
WG1357759-3 DUP		**L1060941-1**						
Total Dissolved Solids		190	212		mg/L	11	20	28-SEP-11
WG1357759-4 DUP		**L1061337-1**						
Total Dissolved Solids		10.0	10.0		mg/L	0.0	400	28-SEP-11
WG1357759-5 DUP		**L1061337-2**						
Total Dissolved Solids		18.0	16.0		mg/L	12	400	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Dissolved Solids		1480	1510		mg/L	2.0	20	28-SEP-11
WG1357759-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	28-SEP-11
SOLIDS-TOTSUS-WP	**Water**							
Batch R2260332								
WG1357759-2 CVS								
Total Suspended Solids			96		%		85-115	28-SEP-11
WG1357759-6 DUP		**L1063827-1**						
Total Suspended Solids		90.0	85.0		mg/L	5.7	20	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Suspended Solids		330	320		mg/L	3.1	20	28-SEP-11
WG1357759-1 MB								
Total Suspended Solids			<5.0		mg/L		5	28-SEP-11
TURBIDITY-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TURBIDITY-WP	**Water**							
Batch R2254943								
WG1352212-3 DUP		**L1059370-5**						
Turbidity		0.63	0.63		NTU	0.32	15	17-SEP-11
WG1352212-4 DUP		**L1060062-7**						
Turbidity		2.21	2.20		NTU	0.45	15	17-SEP-11
WG1352212-2 LCS								
Turbidity			98		%		85-115	17-SEP-11
WG1352212-1 MB								
Turbidity			<0.10		NTU		0.1	17-SEP-11

Quality Control Report

Workorder: L1060065 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060065 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	16-SEP-11 09:57	28-SEP-11 10:40	7	12	days	EHT
	2	16-SEP-11 10:49	28-SEP-11 10:40	7	12	days	EHT
	3	16-SEP-11 11:35	28-SEP-11 10:40	7	12	days	EHT
	4	16-SEP-11 12:19	28-SEP-11 10:40	7	12	days	EHT
	5	16-SEP-11 14:13	28-SEP-11 10:40	7	12	days	EHT
	6	16-SEP-11 14:29	28-SEP-11 10:40	7	12	days	EHT
Total Suspended Solids							
	1	16-SEP-11 09:57	28-SEP-11 10:40	7	12	days	EHT
	2	16-SEP-11 10:49	28-SEP-11 10:40	7	12	days	EHT
	3	16-SEP-11 11:35	28-SEP-11 10:40	7	12	days	EHT
	4	16-SEP-11 12:19	28-SEP-11 10:40	7	12	days	EHT
	5	16-SEP-11 14:13	28-SEP-11 10:40	7	12	days	EHT
	6	16-SEP-11 14:29	28-SEP-11 10:40	7	12	days	EHT
pH							
	1	16-SEP-11 09:57	17-SEP-11 10:39	0.25	25	hours	EHTR-FM
	2	16-SEP-11 10:49	17-SEP-11 10:39	0.25	24	hours	EHTR-FM
	3	16-SEP-11 11:35	17-SEP-11 10:39	0.25	23	hours	EHTR-FM
	4	16-SEP-11 12:19	17-SEP-11 10:39	0.25	22	hours	EHTR-FM
	5	16-SEP-11 14:13	17-SEP-11 10:39	0.25	20	hours	EHTR-FM
	6	16-SEP-11 14:29	17-SEP-11 10:39	0.25	20	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	16-SEP-11 09:57	19-SEP-11 14:41	48	77	hours	EHTL
	2	16-SEP-11 10:49	19-SEP-11 14:41	48	76	hours	EHT
	3	16-SEP-11 11:35	19-SEP-11 14:41	48	75	hours	EHT
	4	16-SEP-11 12:19	19-SEP-11 14:41	48	74	hours	EHT
	5	16-SEP-11 14:13	19-SEP-11 14:41	48	72	hours	EHT
	6	16-SEP-11 14:29	19-SEP-11 14:41	48	72	hours	EHT
Nitrate as N							
	1	16-SEP-11 09:57	19-SEP-11 14:41	48	77	hours	EHTL
	2	16-SEP-11 10:49	19-SEP-11 14:41	48	76	hours	EHT
	3	16-SEP-11 11:35	19-SEP-11 14:41	48	75	hours	EHT
	4	16-SEP-11 12:19	19-SEP-11 14:41	48	74	hours	EHT
	5	16-SEP-11 14:13	19-SEP-11 14:41	48	72	hours	EHT
	6	16-SEP-11 14:29	19-SEP-11 14:41	48	72	hours	EHT
Nitrite as N							
	1	16-SEP-11 09:57	19-SEP-11 14:41	48	77	hours	EHTL
	2	16-SEP-11 10:49	19-SEP-11 14:41	48	76	hours	EHT
	3	16-SEP-11 11:35	19-SEP-11 14:41	48	75	hours	EHT
	4	16-SEP-11 12:19	19-SEP-11 14:41	48	74	hours	EHT
	5	16-SEP-11 14:13	19-SEP-11 14:41	48	72	hours	EHT
	6	16-SEP-11 14:29	19-SEP-11 14:41	48	72	hours	EHT
Phosphorus, Total							
	1	16-SEP-11 09:57	19-SEP-11 17:44	48	80	hours	EHTL
	2	16-SEP-11 10:49	19-SEP-11 17:44	48	79	hours	EHT
	3	16-SEP-11 11:35	19-SEP-11 17:44	48	78	hours	EHT
	4	16-SEP-11 12:19	19-SEP-11 17:44	48	78	hours	EHT
	5	16-SEP-11 14:13	19-SEP-11 17:44	48	76	hours	EHT
	6	16-SEP-11 14:29	19-SEP-11 17:44	48	75	hours	EHT

Quality Control Report

Workorder: L1060065 Report Date: 07-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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 L1060065 were received on 17-SEP-11 10:30.

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

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

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

ALS Environmental

Form — COC # 7

L1060065 — Page 1 of 1

L1060065-COFC

Report To	
Company:	AECOM -W172
Contact:	Cliff Samoiloff
Address:	99 Commerce Dr
Phone:	Fax:
Invoice To Same as Report ?	[x] Yes [ ] No
Hardcopy of Invoice with Report?	[ ] Yes [ ] No
Company:	
Contact:	
Address:	
Phone:	Fax:
Lab Work Order # (lab use only)	

[x] Standard [ ] Other
[x] PDF [x] Excel [ ] Digital [ ] Fax

Email 1: cliff.samoiloff@aecom.com
Email 2: shawna.kjartanson@aecom.com
Email 3: mark.hadfield@aecom.com

Client / Project Information

Job #: 60213483-300
PO / AFE:
LSD:
Quote #: Q24534
ALS Contact: Christine Herrod
Sampler:

Service Requested (Rush for routine analysis subject to availability)

- (●) Regular (Standard Turnaround Times - Business Days)
- ( ) Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ( ) Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ( ) Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT (P)	CBOD	Solids (TSS, TDS)	Metals & HG -Total (P)	Metals & Hg - Dissolved	TOC,DOC (P)				Number of Containers
1	ANB-~~10~~ 10	16Sep	9:57	water	X	X	X	X	X	X	X	X	X				6
2	ANB-09	↓	10:49	↓	X	X	X	X	X	X	X	X	X				6
3	ANB-08		11:35		X	X	X	X	X	X	X	X	X				6
4	ANB-07		12:19		X	X	X	X	X	X	X	X	X				6
5	ANB-06 ← Carbon missing		14~~13~~		X	X	X	X	X	X	X	X	X				6
6	ANB-04 ABM 17-Sept-11		1429		X	X	X	X	X	X	X	X	X				6
	~~ANB-03~~				~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~				6
	~~DUP~~ ~~Dup 01~~				~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~				

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
			BLP	Sept 17	10:30	8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 19-SEP-11
Report Date: 06-OCT-11 15:33 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060067

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483-300
C of C Numbers:
Legal Site Desc:

Gail Hill
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060067-1 ANB - 03							
Sampled By: CLIENT on 17-SEP-11 @ 10:12							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	9.14		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	0.13		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	60.9		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	<1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	1.2		1.0	mg/L	19-SEP-11	24-SEP-11	R2257791
Colour, True	23.6		5.0	CU		19-SEP-11	R2254446
Dissolved Organic Carbon	13.6		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	164		0.30	mg/L		27-SEP-11	
Hardness (as CaCO3)	146		0.20	mg/L		26-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	0.019		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	1.10		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	198		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	0.77		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	14.4		1.0	mg/L		21-SEP-11	R2255889
Total Suspended Solids	5.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	2.36		0.10	NTU		20-SEP-11	R2255191
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0674		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	0.00226		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	0.00206		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	0.0151		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	0.013		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	48.3		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	0.00094		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	0.0039		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	10.6		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	0.0213		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	0.00032		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458

* 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
L1060067-1 ANB - 03							
Sampled By: CLIENT on 17-SEP-11 @ 10:12							
Matrix: WATER							
Total Metals by ICP-MS							
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	3.39		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	0.00225		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	1.89		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	7.84		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	0.111		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	0.00325		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	0.00047		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	0.0073		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	0.0043		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	0.00237		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	0.00186		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	0.0146		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	0.014		0.010	mg/L	19-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	19-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	41.9		0.050	mg/L	19-SEP-11	23-SEP-11	R2257942
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	0.00083		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	19-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	19-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	0.0039		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	10.0		0.010	mg/L	19-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	0.00131		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	0.00030		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	19-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	19-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	3.01		0.020	mg/L	19-SEP-11	23-SEP-11	R2257942
Rubidium (Rb)-Dissolved	0.00197		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	19-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	0.560		0.050	mg/L	19-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	7.38		0.020	mg/L	19-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	0.100		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942

* 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
L1060067-1 ANB - 03							
Sampled By: CLIENT on 17-SEP-11 @ 10:12							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Titanium (Ti)-Dissolved	0.00033		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	0.00040		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	0.0039		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	19-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	2.84		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	1.88		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	79.9		1.0	mg/L		19-SEP-11	R2254119
Bicarbonate (HCO3)	89.5		2.0	mg/L		19-SEP-11	R2254119
Carbonate (CO3)	2.75		0.60	mg/L		19-SEP-11	R2254119
Hydroxide (OH)	<0.40		0.40	mg/L		19-SEP-11	R2254119
Conductivity							
Conductivity	274		0.40	umhos/cm		19-SEP-11	R2254119
pH							
pH	8.42		0.10	pH units		19-SEP-11	R2254119
L1060067-2 TRB - 05							
Sampled By: CLIENT on 17-SEP-11 @ 12:00							
Matrix: WATER							
Anions by IC							
Chloride							
Chloride	<0.50		0.50	mg/L		19-SEP-11	R2255553
Fluoride							
Fluoride	<0.10		0.10	mg/L		19-SEP-11	R2255553
Nitrate as N							
Nitrate-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Nitrite as N							
Nitrite-N	<0.050		0.050	mg/L		19-SEP-11	R2255553
Sulfate							
Sulfate	<0.50		0.50	mg/L		19-SEP-11	R2255553
Miscellaneous Parameters							
Acidity (as CaCO3)	1.0		1.0	mg/L		21-SEP-11	R2256906
Ammonia as N	<0.050		0.050	mg/L		29-SEP-11	R2260877
Bromide (Br)	<0.10		0.10	mg/L		19-SEP-11	R2255553
BOD Carbonaceous	<1.0		1.0	mg/L	19-SEP-11	24-SEP-11	R2257791
Colour, True	<5.0		5.0	CU		19-SEP-11	R2254446
Dissolved Organic Carbon	<1.0		1.0	mg/L		21-SEP-11	R2255889
Hardness (as CaCO3)	<0.20		0.20	mg/L		28-SEP-11	
Hardness (as CaCO3)	<0.30		0.30	mg/L		27-SEP-11	
Mercury (Hg)-Dissolved	<0.000050		0.000050	mg/L	05-OCT-11	05-OCT-11	R2264510
Mercury (Hg)-Total	<0.000050		0.000050	mg/L	30-SEP-11	30-SEP-11	R2263097
Nitrate and Nitrite as N	<0.071		0.071	mg/L		19-SEP-11	
Phosphorus (P)-Total	<0.010		0.010	mg/L		20-SEP-11	R2254917
Silica, Reactive (as SiO2)	<0.0050		0.0050	mg/L		24-SEP-11	R2258513
Total Dissolved Solids	<5.0		5.0	mg/L		28-SEP-11	R2260332
Total Kjeldahl Nitrogen	<0.20		0.20	mg/L	19-SEP-11	21-SEP-11	R2255224
Total Organic Carbon	<1.0		1.0	mg/L		21-SEP-11	R2255889

* 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
L1060067-2 TRB - 05							
Sampled By: CLIENT on 17-SEP-11 @ 12:00							
Matrix: WATER							
Total Suspended Solids	<5.0		5.0	mg/L		28-SEP-11	R2260332
Turbidity	<0.10		0.10	NTU		20-SEP-11	R2255191
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Antimony (Sb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Arsenic (As)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Barium (Ba)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Beryllium (Be)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Bismuth (Bi)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Boron (B)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-11	26-SEP-11	R2258458
Calcium (Ca)-Total	<0.10		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Cesium (Cs)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Copper (Cu)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Iron (Fe)-Total	<0.10		0.10	mg/L	26-SEP-11	26-SEP-11	R2258458
Lead (Pb)-Total	<0.000090		0.000090	mg/L	26-SEP-11	26-SEP-11	R2258458
Lithium (Li)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Magnesium (Mg)-Total	<0.010		0.010	mg/L	26-SEP-11	26-SEP-11	R2258458
Manganese (Mn)-Total	<0.00030		0.00030	mg/L	26-SEP-11	26-SEP-11	R2258458
Molybdenum (Mo)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	26-SEP-11	26-SEP-11	R2258458
Phosphorus (P)-Total	<0.20		0.20	mg/L	26-SEP-11	26-SEP-11	R2258458
Potassium (K)-Total	<0.020		0.020	mg/L	26-SEP-11	26-SEP-11	R2258458
Rubidium (Rb)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Selenium (Se)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Silicon (Si)-Total	<0.050		0.050	mg/L	26-SEP-11	26-SEP-11	R2258458
Silver (Ag)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Sodium (Na)-Total	<0.030		0.030	mg/L	26-SEP-11	26-SEP-11	R2258458
Strontium (Sr)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tellurium (Te)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Thallium (Tl)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Thorium (Th)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Tin (Sn)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Titanium (Ti)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Tungsten (W)-Total	<0.0010		0.0010	mg/L	26-SEP-11	26-SEP-11	R2258458
Uranium (U)-Total	<0.00010		0.00010	mg/L	26-SEP-11	26-SEP-11	R2258458
Vanadium (V)-Total	<0.00020		0.00020	mg/L	26-SEP-11	26-SEP-11	R2258458
Zinc (Zn)-Total	<0.0050		0.0050	mg/L	26-SEP-11	26-SEP-11	R2258458
Zirconium (Zr)-Total	<0.00040		0.00040	mg/L	26-SEP-11	26-SEP-11	R2258458
Dissolved Metals by ICP-MS							
Aluminum (Al)-Dissolved	<0.0020		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Antimony (Sb)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Arsenic (As)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Barium (Ba)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Beryllium (Be)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Bismuth (Bi)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Boron (B)-Dissolved	<0.010		0.010	mg/L	19-SEP-11	23-SEP-11	R2257942
Cadmium (Cd)-Dissolved	<0.000010		0.000010	mg/L	19-SEP-11	23-SEP-11	R2257942
Calcium (Ca)-Dissolved	<0.050		0.050	mg/L	19-SEP-11	27-SEP-11	R2259295
Cesium (Cs)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942

* 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
L1060067-2 TRB - 05							
Sampled By: CLIENT on 17-SEP-11 @ 12:00							
Matrix: WATER							
Dissolved Metals by ICP-MS							
Chromium (Cr)-Dissolved	<0.0020		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Cobalt (Co)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Copper (Cu)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Iron (Fe)-Dissolved	<0.10		0.10	mg/L	19-SEP-11	23-SEP-11	R2257942
Lead (Pb)-Dissolved	<0.000090		0.000090	mg/L	19-SEP-11	23-SEP-11	R2257942
Lithium (Li)-Dissolved	<0.0020		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Magnesium (Mg)-Dissolved	<0.010		0.010	mg/L	19-SEP-11	23-SEP-11	R2257942
Manganese (Mn)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Molybdenum (Mo)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Nickel (Ni)-Dissolved	<0.0010		0.0010	mg/L	19-SEP-11	23-SEP-11	R2257942
Phosphorus (P)-Dissolved	<0.10		0.10	mg/L	19-SEP-11	23-SEP-11	R2257942
Potassium (K)-Dissolved	<0.020		0.020	mg/L	19-SEP-11	27-SEP-11	R2259295
Rubidium (Rb)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Selenium (Se)-Dissolved	<0.0010		0.0010	mg/L	19-SEP-11	23-SEP-11	R2257942
Silicon (Si)-Dissolved	<0.050		0.050	mg/L	19-SEP-11	23-SEP-11	R2257942
Silver (Ag)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Sodium (Na)-Dissolved	<0.020		0.020	mg/L	19-SEP-11	23-SEP-11	R2257942
Strontium (Sr)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Tellurium (Te)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Thallium (Tl)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Thorium (Th)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Tin (Sn)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Titanium (Ti)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Tungsten (W)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Uranium (U)-Dissolved	<0.00010		0.00010	mg/L	19-SEP-11	23-SEP-11	R2257942
Vanadium (V)-Dissolved	<0.00020		0.00020	mg/L	19-SEP-11	23-SEP-11	R2257942
Zinc (Zn)-Dissolved	<0.0020		0.0020	mg/L	19-SEP-11	23-SEP-11	R2257942
Zirconium (Zr)-Dissolved	<0.00040		0.00040	mg/L	19-SEP-11	23-SEP-11	R2257942
Chlorophyll a, Pheophytin by fluorometry							
Chlorophyll a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
Phaeophytin a	<0.10		0.10	ug/L	22-SEP-11	23-SEP-11	R2256774
pH, Conductivity and Total Alkalinity							
Alkalinity							
Alkalinity, Total (as CaCO3)	4.5		1.0	mg/L		19-SEP-11	R2254119
Bicarbonate (HCO3)	5.5		2.0	mg/L		19-SEP-11	R2254119
Carbonate (CO3)	<0.60		0.60	mg/L		19-SEP-11	R2254119
Hydroxide (OH)	<0.40		0.40	mg/L		19-SEP-11	R2254119
Conductivity							
Conductivity	0.88		0.40	umhos/cm		19-SEP-11	R2254103
pH							
pH	6.08		0.10	pH units		19-SEP-11	R2254119

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

Reference Information

Qualifiers for Individual Samples Listed:

Sample Numbe	Client ID	Qualifier	Description
L1060067-1	ANB - 03	SFPL	Sample was Filtered and Preserved at the laboratory

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ACY-L-8.3-PCT-WP	Water	Acidity	APHA 2310 B
Acidity is measured using auto-titration with sodium hydroxide to an endpoint of pH 8.3			
ALK-TOT-WP	Water	Alkalinity	APHA 2320B
Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. It is determined by titration with a standard solution of strong mineral acid to the successive HCO3- and H2CO3 endpoints indicated electrometrically.			
BR-IC-WP	Water	Bromide	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
C-DIS-ORG-WP	Water	Dissolved Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide. The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
C-TOT-ORG-WP	Water	Total Organic Carbon	APHA 5310 B-INSTRUMENTAL-WP
This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide. The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC. TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.			
CHL,PHEO-FLUORO-WP	Water	Chlorophyll a, Pheophytin by fluorometry	EPA 445.0
Chlorophyll a is filtered from the sample and extracted with 90% (v/v) acetone. The sample is analyzed fluorometrically. The extract is then acidified, converting chlorophyll a to pheophytin a. The sample is analyzed fluorometrically again after acidification. The chlorophyll a concentration is determined from the decrease upon acidification.			
CL-IC-WP	Water	Chloride	EPA 300.1 IC
This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".			
COLOUR-TRUE-WP	Water	Colour, True	APHA 2120C
True colour in water is analyzed by discrete analyzer using the platinum-cobalt colourimetric method. Colour is pH dependant; unless otherwise indicated, reported colour results pertain to the pH of the sample as received to within +/- 1 pH unit.			
CONSULT-BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B-5 day Incub.-O2 electrode
A sample of water is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at beginning and end of incubation provides a measure of Biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis.			
EC-WP	Water	Conductivity	APHA 2510B
Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.			
ETL-HARDNESS-DIS-WP	Water	Hardness Calculated	HARDNESS CALCULATED

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ETL-HARDNESS-TOT-WP	Water	Hardness Calculated	HARDNESS CALCULATED
F-IC-WP	Water	Fluoride	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

HG-D-CVAF-WP	Water	Mercury Dissolved	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

HG-T-CVAF-WP	Water	Mercury Total	EPA245.7 V2.0

Mercury in filtered and unfiltered waters is oxidized with Bromine monochloride and analyzed by cold-vapour atomic fluorescence spectrometry.

MET-D-L-MS-WP	Water	Dissolved Metals by ICP-MS	U.S. EPA 200.8-DL

Dissolved Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the Examination of Water and Wastewater method 3030B for filtration through a 0.45 um filter and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

MET-T-L-MS-WP	Water	Total Metals by ICP-MS	U.S. EPA 200.8-TL

Total Metals by ICP-MS: This analysis is carried out using sample preparation procedures adapted from Standard Methods for the examination of Water and Wastewater Method 3030E and analytical procedures adapted from U.S EPA Method 200.8 for analyis of metals by inductively coupled-mass spectrometery.

N-TOTKJ-WP	Water	Total Kjeldahl Nitrogen	Quickchem method 10-107-06-2-E Lachat

Samples are digested with a sulphuric acid solution, cooled, diluted with water, and analyzed for ammonia. Total Kjeldahl nitrogen is the sum of free-ammonia and organic nitrogen compounds which are converted to ammonium sulphate through this digestion process. Analysis is performed by Flow Injection
Analysis (FIA). The pH of the digested sample is raised to a known, basic pH by neutralization with a concentrated buffer solution. This neutralization converts the ammonium cation to ammonia. The ammonia produced is heated with saliclyate and hypochlorite to produce blue colour which is proportional to the ammonia concentration.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-WP	Water	Nitrite as N	EPA 300.1 IC
NO3-IC-WP	Water	Nitrate as N	EPA 300.1 IC
P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS

This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorous is determined colourimetrically after persulphate digestion of the sample.

PH-WP	Water	pH	APHA 4500H

The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.

SIO2-L-COL-WP	Water	Reactive Silica by colour	APHA 4500 SIO2

This analysis is carried out using procedures adapted from APHA Method 4500-SiO2 "Silica". Molybdate Reactive Silica is determined by analysis of the sample using the heteropoly blue colourimetric method.

SO4-IC-WP	Water	Sulfate	EPA 300.1 IC

This analysis is carried out using procedures adapted from EPA Method 300.1 "Determination of Inorganic Anions in Drinking Water by Ion Chromatography".

SOLIDS-TDS-WP	Water	Total Dissolved Solids	APHA 2540C

The residue remaining in a prepared casserole after passing the sample through a 1.2 um Whatman GF/C glass microfibre filter and drying at 180 degrees C. Samples may be dried at 105 degrees C if the client specifically requests this drying temperature.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540D
The residue retained by a prepared 1.5 um Whatman 934-AH glass microfibre filter dried at 105 degrees C.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060067 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ACY-L-8.3-PCT-WP	**Water**							
Batch R2256906								
WG1355010-3 DUP		**L1060044-1**						
Acidity (as CaCO3)		2.8	2.7		mg/L	6.0	25	21-SEP-11
WG1355010-4 DUP		**L1060061-1**						
Acidity (as CaCO3)		1.8	1.8		mg/L	0.13	25	21-SEP-11
WG1355010-5 DUP		**L1060062-5**						
Acidity (as CaCO3)		1.0	1.1		mg/L	4.0	25	21-SEP-11
WG1355010-6 DUP		**L1060063-7**						
Acidity (as CaCO3)		1.5	1.5		mg/L	2.4	25	21-SEP-11
WG1355010-2 LCS								
Acidity (as CaCO3)			106		%		70-130	21-SEP-11
WG1355010-1 MB								
Acidity (as CaCO3)			<1.0		mg/L		1	21-SEP-11
ALK-TOT-WP	**Water**							
Batch R2254119								
WG1351848-3 CVS								
Alkalinity, Total (as CaCO3)			103		%		85-115	19-SEP-11
WG1351848-4 DUP		**L1060067-1**						
Alkalinity, Total (as CaCO3)		79.9	79.7		mg/L	0.21	20	19-SEP-11
Bicarbonate (HCO3)		89.5	89.0		mg/L	0.52	25	19-SEP-11
Carbonate (CO3)		2.75	2.88		mg/L	4.7	25	19-SEP-11
Hydroxide (OH)		<0.40	<0.40	RPD-NA	mg/L	N/A	25	19-SEP-11
BR-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Bromide (Br)			96		%		85-115	19-SEP-11
WG1353456-1 MB								
Bromide (Br)			<0.10		mg/L		0.1	19-SEP-11
C-DIS-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Dissolved Organic Carbon			101		%		80-120	21-SEP-11
WG1353829-2 DUP		**L1060062-5**						
Dissolved Organic Carbon		21.6	21.5		mg/L	0.47	20	21-SEP-11
WG1353829-1 MB								
Dissolved Organic Carbon			<1.0		mg/L		1	21-SEP-11
C-TOT-ORG-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOT-ORG-WP	**Water**							
Batch R2255889								
WG1353838-2 CVS								
Total Organic Carbon			101		%		80-120	21-SEP-11
WG1353838-3 DUP		**L1060061-1**						
Total Organic Carbon		29.5	29.6		mg/L	0.18	20	21-SEP-11
WG1353838-1 MB								
Total Organic Carbon			<1.0		mg/L		1	21-SEP-11
CHL,PHEO-FLUORO-WP	**Water**							
Batch R2256774								
WG1354255-1 CVS								
Chlorophyll a			82		%		65-135	23-SEP-11
WG1354255-2 CVS								
Chlorophyll a			112		%		65-135	23-SEP-11
WG1354200-2 DUP		**L1060065-1**						
Chlorophyll a		11.5	10.6		ug/L	8.0	35	23-SEP-11
Phaeophytin a		1.89	2.29		ug/L	19	35	23-SEP-11
WG1354200-3 DUP		**L1060067-1**						
Chlorophyll a		2.84	2.88		ug/L	1.4	35	23-SEP-11
Phaeophytin a		1.88	1.95		ug/L	3.7	35	23-SEP-11
WG1354200-1 MB								
Chlorophyll a			<0.10		ug/L		0.1	23-SEP-11
Phaeophytin a			<0.10		ug/L		0.1	23-SEP-11
CL-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Chloride		1.58	1.58		mg/L	0.22	20	19-SEP-11
WG1353456-2 LCS								
Chloride			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Chloride			<0.50		mg/L		0.5	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Chloride			107		%		75-125	19-SEP-11
COLOUR-TRUE-WP	**Water**							
Batch R2254446								
WG1352182-3 DUP		**L1060171-1**						
Colour, True		25.5	25.3		CU	0.98	20	19-SEP-11
WG1352182-2 LCS								
Colour, True			100		%		85-115	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COLOUR-TRUE-WP	**Water**							
Batch R2254446								
WG1352182-1 MB								
Colour, True			<5.0		CU		5	19-SEP-11
CONSULT-BOD-CBOD-WP	**Water**							
Batch R2257791								
WG1351552-3 DUP		**L1060044-1**						
BOD Carbonaceous		1.2	1.3		mg/L	7.8	400	24-SEP-11
WG1351552-2 IRM		**61-GG**						
BOD Carbonaceous			99		%		85-115	24-SEP-11
WG1351552-1 MB								
BOD Carbonaceous			<1.0		mg/L		1	24-SEP-11
EC-WP	**Water**							
Batch R2254103								
WG1351828-1 CVS								
Conductivity			99		%		90-110	19-SEP-11
WG1351828-2 DUP		**L1060058-2**						
Conductivity		0.98	0.97		umhos/cm	1.0	400	19-SEP-11
Batch R2254119								
WG1351848-1 CVS								
Conductivity			96		%		90-110	19-SEP-11
WG1351848-4 DUP		**L1060067-1**						
Conductivity		274	273		umhos/cm	0.22	10	19-SEP-11
F-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Fluoride			101		%		85-115	19-SEP-11
WG1353456-1 MB								
Fluoride			<0.10		mg/L		0.1	19-SEP-11
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-5 DUP		**L1060062-2**						
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
Mercury (Hg)-Dissolved		N/A	<0.000050	RPD-NA	mg/L	N/A	20	05-OCT-11
WG1363399-2 LCS								
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
Mercury (Hg)-Dissolved			103		%		80-120	05-OCT-11
WG1363399-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-D-CVAF-WP	**Water**							
Batch R2264510								
WG1363399-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363406-1 MB								
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
Mercury (Hg)-Dissolved			<0.000050		mg/L		0.00005	05-OCT-11
WG1363399-6 MS		**L1060062-2**						
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
Mercury (Hg)-Dissolved			107		%		70-130	05-OCT-11
HG-T-CVAF-WP	**Water**							
Batch R2263097								
WG1361800-3 DUP		**L1060044-1**						
Mercury (Hg)-Total		<0.000050	<0.000050	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-5 DUP		**L1060062-5**						
Mercury (Hg)-Total		<0.000050	0.000070	RPD-NA	mg/L	N/A	20	30-SEP-11
WG1361800-2 LCS								
Mercury (Hg)-Total			100		%		80-120	30-SEP-11
WG1361800-1 MB								
Mercury (Hg)-Total			<0.000050		mg/L		0.00005	30-SEP-11
WG1361800-4 MS		**L1060044-1**						
Mercury (Hg)-Total			93		%		70-130	30-SEP-11
WG1361800-6 MS		**L1060062-5**						
Mercury (Hg)-Total			85		%		70-130	30-SEP-11
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Aluminum (Al)-Dissolved		2.03	1.99		mg/L	1.8	20	23-SEP-11
Antimony (Sb)-Dissolved		1.02	1.01		mg/L	1.2	20	23-SEP-11
Arsenic (As)-Dissolved		1.00	1.01		mg/L	0.34	20	23-SEP-11
Barium (Ba)-Dissolved		0.256	0.252		mg/L	1.3	20	23-SEP-11
Beryllium (Be)-Dissolved		0.105	0.101		mg/L	3.4	20	23-SEP-11
Bismuth (Bi)-Dissolved		1.02	1.03		mg/L	0.20	20	23-SEP-11
Boron (B)-Dissolved		1.03	1.00		mg/L	2.9	20	23-SEP-11
Cadmium (Cd)-Dissolved		0.103	0.106		mg/L	2.7	20	23-SEP-11
Calcium (Ca)-Dissolved		50.2	50.5		mg/L	0.69	20	23-SEP-11
Cesium (Cs)-Dissolved		0.0493	0.0489		mg/L	0.70	20	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-4 DUP		**WG1356177-3**						
Chromium (Cr)-Dissolved		0.249	0.251		mg/L	1.1	20	23-SEP-11
Cobalt (Co)-Dissolved		0.257	0.256		mg/L	0.20	20	23-SEP-11
Copper (Cu)-Dissolved		0.250	0.252		mg/L	1.1	20	23-SEP-11
Iron (Fe)-Dissolved		1.00	1.01		mg/L	0.49	20	23-SEP-11
Lead (Pb)-Dissolved		0.514	0.503		mg/L	2.3	20	23-SEP-11
Lithium (Li)-Dissolved		0.263	0.254		mg/L	3.7	20	23-SEP-11
Magnesium (Mg)-Dissolved		50.5	50.9		mg/L	0.73	20	23-SEP-11
Manganese (Mn)-Dissolved		0.247	0.252		mg/L	2.3	20	23-SEP-11
Molybdenum (Mo)-Dissolved		0.255	0.261		mg/L	2.2	20	23-SEP-11
Nickel (Ni)-Dissolved		0.513	0.520		mg/L	1.4	20	23-SEP-11
Phosphorus (P)-Dissolved		2.61	2.67		mg/L	2.4	20	23-SEP-11
Potassium (K)-Dissolved		51.8	50.9		mg/L	1.8	20	23-SEP-11
Rubidium (Rb)-Dissolved		0.101	0.103		mg/L	2.2	20	23-SEP-11
Selenium (Se)-Dissolved		1.01	1.01		mg/L	0.29	20	23-SEP-11
Silicon (Si)-Dissolved		1.01	1.00		mg/L	0.38	20	23-SEP-11
Silver (Ag)-Dissolved		0.108	0.113		mg/L	4.5	20	23-SEP-11
Sodium (Na)-Dissolved		51.4	51.9		mg/L	1.1	20	23-SEP-11
Strontium (Sr)-Dissolved		0.254	0.262		mg/L	2.9	20	23-SEP-11
Tellurium (Te)-Dissolved		0.103	0.105		mg/L	1.9	20	23-SEP-11
Thallium (Tl)-Dissolved		1.04	1.03		mg/L	1.3	20	23-SEP-11
Thorium (Th)-Dissolved		0.0988	0.101		mg/L	2.2	25	23-SEP-11
Tin (Sn)-Dissolved		0.523	0.540		mg/L	3.1	20	23-SEP-11
Titanium (Ti)-Dissolved		0.252	0.258		mg/L	2.3	20	23-SEP-11
Tungsten (W)-Dissolved		0.101	0.0999		mg/L	1.0	20	23-SEP-11
Uranium (U)-Dissolved		0.00518	0.00498		mg/L	3.9	20	23-SEP-11
Vanadium (V)-Dissolved		0.511	0.519		mg/L	1.6	20	23-SEP-11
Zinc (Zn)-Dissolved		0.510	0.516		mg/L	1.2	20	23-SEP-11
Zirconium (Zr)-Dissolved		0.0994	0.103		mg/L	3.9	20	23-SEP-11
WG1356177-2 LCS								
Aluminum (Al)-Dissolved			101		%		80-120	23-SEP-11
Antimony (Sb)-Dissolved			102		%		80-120	23-SEP-11
Arsenic (As)-Dissolved			100		%		80-120	23-SEP-11
Barium (Ba)-Dissolved			102		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Beryllium (Be)-Dissolved			105		%		80-120	23-SEP-11
Bismuth (Bi)-Dissolved			102		%		80-120	23-SEP-11
Boron (B)-Dissolved			103		%		80-120	23-SEP-11
Cadmium (Cd)-Dissolved			103		%		80-120	23-SEP-11
Calcium (Ca)-Dissolved			100		%		80-120	23-SEP-11
Cesium (Cs)-Dissolved			99		%		80-120	23-SEP-11
Chromium (Cr)-Dissolved			99		%		80-120	23-SEP-11
Cobalt (Co)-Dissolved			103		%		80-120	23-SEP-11
Copper (Cu)-Dissolved			100		%		80-120	23-SEP-11
Iron (Fe)-Dissolved			100		%		80-120	23-SEP-11
Lead (Pb)-Dissolved			103		%		80-120	23-SEP-11
Lithium (Li)-Dissolved			105		%		80-120	23-SEP-11
Magnesium (Mg)-Dissolved			101		%		80-120	23-SEP-11
Manganese (Mn)-Dissolved			99		%		80-120	23-SEP-11
Molybdenum (Mo)-Dissolved			102		%		80-120	23-SEP-11
Nickel (Ni)-Dissolved			103		%		80-120	23-SEP-11
Phosphorus (P)-Dissolved			104		%		80-120	23-SEP-11
Potassium (K)-Dissolved			104		%		80-120	23-SEP-11
Rubidium (Rb)-Dissolved			101		%		80-120	23-SEP-11
Selenium (Se)-Dissolved			101		%		80-120	23-SEP-11
Silicon (Si)-Dissolved			101		%		80-120	23-SEP-11
Silver (Ag)-Dissolved			108		%		80-120	23-SEP-11
Sodium (Na)-Dissolved			103		%		80-120	23-SEP-11
Strontium (Sr)-Dissolved			102		%		80-120	23-SEP-11
Tellurium (Te)-Dissolved			103		%		80-120	23-SEP-11
Thallium (Tl)-Dissolved			104		%		80-120	23-SEP-11
Thorium (Th)-Dissolved			99		%		80-120	23-SEP-11
Tin (Sn)-Dissolved			105		%		80-120	23-SEP-11
Titanium (Ti)-Dissolved			101		%		80-120	23-SEP-11
Tungsten (W)-Dissolved			101		%		80-120	23-SEP-11
Uranium (U)-Dissolved			104		%		80-120	23-SEP-11
Vanadium (V)-Dissolved			102		%		80-120	23-SEP-11
Zinc (Zn)-Dissolved			102		%		80-120	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-2 LCS								
Zirconium (Zr)-Dissolved			99		%		80-120	23-SEP-11
WG1356177-1 MB								
Aluminum (Al)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Antimony (Sb)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Arsenic (As)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Barium (Ba)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Beryllium (Be)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Bismuth (Bi)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Boron (B)-Dissolved			<0.010		mg/L		0.03	23-SEP-11
Cadmium (Cd)-Dissolved			<0.000010		mg/L		0.0002	23-SEP-11
Calcium (Ca)-Dissolved			<0.050		mg/L		0.2	23-SEP-11
Cesium (Cs)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Chromium (Cr)-Dissolved			<0.0020		mg/L		0.002	23-SEP-11
Cobalt (Co)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Copper (Cu)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Iron (Fe)-Dissolved			<0.10		mg/L		0.1	23-SEP-11
Lead (Pb)-Dissolved			<0.000090		mg/L		0.001	23-SEP-11
Lithium (Li)-Dissolved			<0.0020		mg/L		0.01	23-SEP-11
Magnesium (Mg)-Dissolved			<0.010		mg/L		0.05	23-SEP-11
Manganese (Mn)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Molybdenum (Mo)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Nickel (Ni)-Dissolved			<0.0010		mg/L		0.002	23-SEP-11
Phosphorus (P)-Dissolved			<0.10		mg/L		0.5	23-SEP-11
Potassium (K)-Dissolved			<0.020		mg/L		0.1	23-SEP-11
Rubidium (Rb)-Dissolved			<0.00020		mg/L		0.0005	23-SEP-11
Selenium (Se)-Dissolved			<0.0010		mg/L		0.005	23-SEP-11
Silicon (Si)-Dissolved			<0.050		mg/L		0.3	23-SEP-11
Silver (Ag)-Dissolved			<0.00010		mg/L		0.001	23-SEP-11
Sodium (Na)-Dissolved			<0.020		mg/L		0.05	23-SEP-11
Strontium (Sr)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Tellurium (Te)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Thallium (Tl)-Dissolved			<0.00010		mg/L		0.005	23-SEP-11
Thorium (Th)-Dissolved			<0.00010		mg/L		0.0001	23-SEP-11
Tin (Sn)-Dissolved			<0.00020		mg/L		0.0006	23-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-L-MS-WP	**Water**							
Batch R2257942								
WG1356177-1 MB								
Titanium (Ti)-Dissolved			<0.00020		mg/L		0.001	23-SEP-11
Tungsten (W)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Uranium (U)-Dissolved			<0.00010		mg/L		0.0005	23-SEP-11
Vanadium (V)-Dissolved			<0.00020		mg/L		0.002	23-SEP-11
Zinc (Zn)-Dissolved			<0.0020		mg/L		0.02	23-SEP-11
Zirconium (Zr)-Dissolved			<0.00040		mg/L		0.001	23-SEP-11
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Aluminum (Al)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Arsenic (As)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Barium (Ba)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11
Calcium (Ca)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Iron (Fe)-Total		<0.10	<0.10	RPD-NA	mg/L	N/A	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11
Lithium (Li)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Magnesium (Mg)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Manganese (Mn)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	400	26-SEP-11
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11
Potassium (K)-Total		<0.020	<0.020	RPD-NA	mg/L	N/A	400	26-SEP-11
Rubidium (Rb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-4 DUP		**WG1356012-3**						
Silicon (Si)-Total		<0.050	<0.050	RPD-NA	mg/L	N/A	400	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		<0.030	<0.030	RPD-NA	mg/L	N/A	400	26-SEP-11
Strontium (Sr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Titanium (Ti)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-6 DUP		**WG1356012-5**						
Aluminum (Al)-Total		0.0800	0.0700		mg/L	13	20	26-SEP-11
Antimony (Sb)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Arsenic (As)-Total		0.00287	0.00279		mg/L	2.8	20	26-SEP-11
Barium (Ba)-Total		0.0108	0.0108		mg/L	0.27	20	26-SEP-11
Beryllium (Be)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Bismuth (Bi)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Boron (B)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cadmium (Cd)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	400	26-SEP-11
Calcium (Ca)-Total		19.5	19.0		mg/L	2.4	20	26-SEP-11
Cesium (Cs)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Chromium (Cr)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Cobalt (Co)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Copper (Cu)-Total		0.00135	0.00126		mg/L	6.6	20	26-SEP-11
Iron (Fe)-Total		0.12	0.12		mg/L	5.5	400	26-SEP-11
Lead (Pb)-Total		<0.000090	<0.000090	RPD-NA	mg/L	N/A	400	26-SEP-11
Lithium (Li)-Total		0.0042	0.0040		mg/L	6.1	400	26-SEP-11
Magnesium (Mg)-Total		8.30	8.20		mg/L	1.2	20	26-SEP-11
Manganese (Mn)-Total		0.0401	0.0397		mg/L	0.96	20	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-6 DUP		**WG1356012-5**						
Molybdenum (Mo)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Nickel (Ni)-Total		<0.0020	<0.0020	RPD-NA	mg/L	N/A	400	26-SEP-11
Phosphorus (P)-Total		<0.20	<0.20	RPD-NA	mg/L	N/A	400	26-SEP-11
Potassium (K)-Total		1.40	1.31		mg/L	6.7	20	26-SEP-11
Rubidium (Rb)-Total		0.00142	0.00138		mg/L	2.4	20	26-SEP-11
Selenium (Se)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Silicon (Si)-Total		1.98	2.15		mg/L	8.3	20	26-SEP-11
Silver (Ag)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Sodium (Na)-Total		3.77	3.74		mg/L	0.94	20	26-SEP-11
Strontium (Sr)-Total		0.0475	0.0465		mg/L	2.2	20	26-SEP-11
Tellurium (Te)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Thallium (Tl)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Thorium (Th)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	25	26-SEP-11
Tin (Sn)-Total		<0.00020	<0.00020	RPD-NA	mg/L	N/A	400	26-SEP-11
Tungsten (W)-Total		<0.0010	<0.0010	RPD-NA	mg/L	N/A	400	26-SEP-11
Uranium (U)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	400	26-SEP-11
Vanadium (V)-Total		0.00055	0.00050		mg/L	9.0	400	26-SEP-11
Zinc (Zn)-Total		<0.0050	<0.0050	RPD-NA	mg/L	N/A	400	26-SEP-11
Zirconium (Zr)-Total		<0.00040	<0.00040	RPD-NA	mg/L	N/A	400	26-SEP-11
WG1356012-2 LCS								
Aluminum (Al)-Total			98		%		80-120	26-SEP-11
Antimony (Sb)-Total			101		%		80-120	26-SEP-11
Arsenic (As)-Total			97		%		80-120	26-SEP-11
Barium (Ba)-Total			101		%		80-120	26-SEP-11
Beryllium (Be)-Total			102		%		80-120	26-SEP-11
Bismuth (Bi)-Total			97		%		80-120	26-SEP-11
Boron (B)-Total			105		%		80-120	26-SEP-11
Cadmium (Cd)-Total			100		%		80-120	26-SEP-11
Calcium (Ca)-Total			107		%		80-120	26-SEP-11
Cesium (Cs)-Total			93		%		80-120	26-SEP-11
Chromium (Cr)-Total			102		%		80-120	26-SEP-11
Cobalt (Co)-Total			97		%		80-120	26-SEP-11
Copper (Cu)-Total			97		%		80-120	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-2 LCS								
Iron (Fe)-Total			99		%		80-120	26-SEP-11
Lead (Pb)-Total			99		%		80-120	26-SEP-11
Lithium (Li)-Total			112		%		80-120	26-SEP-11
Magnesium (Mg)-Total			106		%		80-120	26-SEP-11
Manganese (Mn)-Total			98		%		80-120	26-SEP-11
Molybdenum (Mo)-Total			101		%		80-120	26-SEP-11
Nickel (Ni)-Total			102		%		80-120	26-SEP-11
Phosphorus (P)-Total			99		%		80-120	26-SEP-11
Potassium (K)-Total			110		%		80-120	26-SEP-11
Rubidium (Rb)-Total			107		%		80-120	26-SEP-11
Selenium (Se)-Total			94		%		80-120	26-SEP-11
Silicon (Si)-Total			113		%		80-120	26-SEP-11
Silver (Ag)-Total			108		%		80-120	26-SEP-11
Sodium (Na)-Total			113		%		80-120	26-SEP-11
Strontium (Sr)-Total			104		%		80-120	26-SEP-11
Tellurium (Te)-Total			99		%		80-120	26-SEP-11
Thallium (Tl)-Total			101		%		80-120	26-SEP-11
Thorium (Th)-Total			95		%		70-130	26-SEP-11
Tin (Sn)-Total			101		%		80-120	26-SEP-11
Titanium (Ti)-Total			109		%		80-120	26-SEP-11
Tungsten (W)-Total			97		%		80-120	26-SEP-11
Uranium (U)-Total			94		%		80-120	26-SEP-11
Vanadium (V)-Total			105		%		80-120	26-SEP-11
Zinc (Zn)-Total			99		%		80-120	26-SEP-11
Zirconium (Zr)-Total			103		%		80-120	26-SEP-11
WG1356012-1 MB								
Aluminum (Al)-Total			<0.0050		mg/L		0.02	26-SEP-11
Antimony (Sb)-Total			<0.00020		mg/L		0.001	26-SEP-11
Arsenic (As)-Total			<0.00020		mg/L		0.001	26-SEP-11
Barium (Ba)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Beryllium (Be)-Total			<0.00020		mg/L		0.001	26-SEP-11
Bismuth (Bi)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Boron (B)-Total			<0.010		mg/L		0.03	26-SEP-11
Cadmium (Cd)-Total			<0.000010		mg/L		0.0002	26-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-L-MS-WP	**Water**							
Batch R2258458								
WG1356012-1 MB								
Calcium (Ca)-Total			<0.10		mg/L		0.2	26-SEP-11
Cesium (Cs)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Chromium (Cr)-Total			<0.0010		mg/L		0.002	26-SEP-11
Cobalt (Co)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Copper (Cu)-Total			<0.00020		mg/L		0.002	26-SEP-11
Iron (Fe)-Total			<0.10		mg/L		0.1	26-SEP-11
Lead (Pb)-Total			<0.000090		mg/L		0.001	26-SEP-11
Lithium (Li)-Total			<0.0020		mg/L		0.002	26-SEP-11
Magnesium (Mg)-Total			<0.010		mg/L		0.05	26-SEP-11
Manganese (Mn)-Total			<0.00030		mg/L		0.001	26-SEP-11
Molybdenum (Mo)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Nickel (Ni)-Total			<0.0020		mg/L		0.002	26-SEP-11
Phosphorus (P)-Total			<0.20		mg/L		0.5	26-SEP-11
Potassium (K)-Total			<0.020		mg/L		0.1	26-SEP-11
Rubidium (Rb)-Total			<0.00020		mg/L		0.0005	26-SEP-11
Selenium (Se)-Total			<0.0010		mg/L		0.005	26-SEP-11
Silicon (Si)-Total			<0.050		mg/L		0.3	26-SEP-11
Silver (Ag)-Total			<0.00010		mg/L		0.001	26-SEP-11
Sodium (Na)-Total			<0.030		mg/L		0.05	26-SEP-11
Strontium (Sr)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Tellurium (Te)-Total			<0.00020		mg/L		0.001	26-SEP-11
Thallium (Tl)-Total			<0.00010		mg/L		0.005	26-SEP-11
Thorium (Th)-Total			<0.00010		mg/L		0.0001	26-SEP-11
Tin (Sn)-Total			<0.00020		mg/L		0.0006	26-SEP-11
Titanium (Ti)-Total			<0.00020		mg/L		0.001	26-SEP-11
Tungsten (W)-Total			<0.0010		mg/L		0.002	26-SEP-11
Uranium (U)-Total			<0.00010		mg/L		0.0005	26-SEP-11
Vanadium (V)-Total			<0.00020		mg/L		0.002	26-SEP-11
Zinc (Zn)-Total			<0.0050		mg/L		0.02	26-SEP-11
Zirconium (Zr)-Total			<0.00040		mg/L		0.001	26-SEP-11
N-TOTKJ-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOTKJ-WP	**Water**							
Batch R2255224								
WG1353102-1 CVS								
Total Kjeldahl Nitrogen			95		%		90-110	21-SEP-11
WG1352408-4 DUP		**L1060071-2**						
Total Kjeldahl Nitrogen		1.61	1.68		mg/L	4.1	20	21-SEP-11
WG1352408-6 DUP		**L1060073-3**						
Total Kjeldahl Nitrogen		1.31	1.26		mg/L	3.9	20	21-SEP-11
WG1352408-2 LCS								
Total Kjeldahl Nitrogen			105		%		75-125	21-SEP-11
WG1352408-1 MB								
Total Kjeldahl Nitrogen			<0.20		mg/L		0.2	21-SEP-11
WG1352408-3 MS		**L1060071-2**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
WG1352408-5 MS		**L1060073-3**						
Total Kjeldahl Nitrogen			N/A	MS-B	%		-	21-SEP-11
NH3-COL-WP	**Water**							
Batch R2260877								
WG1359404-3 DUP		**L1060061-1**						
Ammonia as N		0.062	0.062		mg/L	0.65	20	29-SEP-11
WG1359404-5 DUP		**L1062339-1**						
Ammonia as N		20.9	20.9	DLA	mg/L	0.12	20	29-SEP-11
WG1359404-7 DUP		**L1062578-4**						
Ammonia as N		110	110	DLA	mg/L	0.13	20	29-SEP-11
WG1359404-2 LCS								
Ammonia as N			105		%		85-115	29-SEP-11
WG1359404-1 MB								
Ammonia as N			<0.050		mg/L		0.05	29-SEP-11
WG1359404-4 MS		**L1060058-2**						
Ammonia as N			104		%		75-125	29-SEP-11
WG1359404-6 MS		**L1060062-5**						
Ammonia as N			95		%		75-125	29-SEP-11
WG1359404-8 MS		**L1062345-3**						
Ammonia as N			106		%		75-125	29-SEP-11
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrite-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrite-N			96		%		85-115	19-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-WP	**Water**							
Batch R2255553								
WG1353456-1 MB								
Nitrite-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrite-N			104		%		75-125	19-SEP-11
NO3-IC-WP	**Water**							
Batch R2255553								
WG1353456-3 DUP		**L1060115-3**						
Nitrate-N		<0.050	<0.050	RPD-NA	mg/L	N/A	20	19-SEP-11
WG1353456-2 LCS								
Nitrate-N			100		%		85-115	19-SEP-11
WG1353456-1 MB								
Nitrate-N			<0.050		mg/L		0.05	19-SEP-11
WG1353456-4 MS		**L1060115-3**						
Nitrate-N			108		%		75-125	19-SEP-11
P-T-COL-WP	**Water**							
Batch R2254917								
WG1352018-3 DUP		**L1060058-1**						
Phosphorus (P)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	20-SEP-11
WG1352018-5 DUP		**L1060062-3**						
Phosphorus (P)-Total		0.036	0.018	J	mg/L	0.011	0.02	20-SEP-11
WG1352018-2 LCS								
Phosphorus (P)-Total			94		%		80-120	20-SEP-11
WG1352018-1 MB								
Phosphorus (P)-Total			<0.010		mg/L		0.01	20-SEP-11
WG1352018-6 MS		**L1060063-2**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
WG1352018-7 MS		**L1060065-1**						
Phosphorus (P)-Total			85		%		70-130	20-SEP-11
WG1352018-8 MS		**L1060115-1**						
Phosphorus (P)-Total			91		%		70-130	20-SEP-11
PH-WP	**Water**							
Batch R2254119								
WG1351848-4 DUP		**L1060067-1**						
pH		8.42	8.44	J	pH units	0.02	0.2	19-SEP-11
WG1351848-2 LCS								
pH			7.41		pH units		7.3-7.5	19-SEP-11
SIO2-L-COL-WP	**Water**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SIO2-L-COL-WP	**Water**							
Batch R2258513								
WG1356848-6 DUP		**L1057743-1**						
Silica, Reactive (as SiO2)		0.321	0.323		mg/L	0.70	20	24-SEP-11
WG1356848-7 DUP		**L1059181-1**						
Silica, Reactive (as SiO2)		0.0841	0.0838		mg/L	0.32	20	24-SEP-11
WG1356848-8 DUP		**L1060061-2**						
Silica, Reactive (as SiO2)		4.04	4.49		mg/L	11	20	24-SEP-11
WG1356848-9 DUP		**L1060065-3**						
Silica, Reactive (as SiO2)		2.66	2.57		mg/L	3.6	20	24-SEP-11
WG1356848-2 LCS								
Silica, Reactive (as SiO2)			100		%		85-115	24-SEP-11
WG1356848-1 MB								
Silica, Reactive (as SiO2)			<0.0050		mg/L		0.005	24-SEP-11
WG1356848-3 MS		**L1060058-1**						
Silica, Reactive (as SiO2)			103		%		75-125	24-SEP-11
WG1356848-4 MS		**L1060060-3**						
Silica, Reactive (as SiO2)			97		%		75-125	24-SEP-11
WG1356848-5 MS		**L1060063-7**						
Silica, Reactive (as SiO2)			113		%		75-125	24-SEP-11
SO4-IC-WP	**Water**							
Batch R2255553								
WG1353456-2 LCS								
Sulfate			102		%		85-115	19-SEP-11
WG1353456-1 MB								
Sulfate			<0.50		mg/L		0.5	19-SEP-11
SOLIDS-TDS-WP	**Water**							
Batch R2260332								
WG1357759-2 CVS								
Total Dissolved Solids			100		%		85-115	28-SEP-11
WG1357759-3 DUP		**L1060941-1**						
Total Dissolved Solids		190	212		mg/L	11	20	28-SEP-11
WG1357759-4 DUP		**L1061337-1**						
Total Dissolved Solids		10.0	10.0		mg/L	0.0	400	28-SEP-11
WG1357759-5 DUP		**L1061337-2**						
Total Dissolved Solids		18.0	16.0		mg/L	12	400	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Dissolved Solids		1480	1510		mg/L	2.0	20	28-SEP-11
WG1357759-1 MB								
Total Dissolved Solids			<5.0		mg/L		5	28-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SOLIDS-TOTSUS-WP	**Water**							
Batch R2260332								
WG1357759-2 CVS								
Total Suspended Solids			96		%		85-115	28-SEP-11
WG1357759-6 DUP		**L1063827-1**						
Total Suspended Solids		90.0	85.0		mg/L	5.7	20	28-SEP-11
WG1357759-7 DUP		**L1064352-1**						
Total Suspended Solids		330	320		mg/L	3.1	20	28-SEP-11
WG1357759-1 MB								
Total Suspended Solids			<5.0		mg/L		5	28-SEP-11
TURBIDITY-WP	**Water**							
Batch R2255191								
WG1353067-3 DUP		**L1060067-2**						
Turbidity		<0.10	<0.10	RPD-NA	NTU	N/A	15	20-SEP-11
WG1353067-2 LCS								
Turbidity			98		%		85-115	20-SEP-11
WG1353067-1 MB								
Turbidity			<0.10		NTU		0.1	20-SEP-11

Quality Control Report

Workorder: L1060067 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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
DLA	Detection Limit Adjusted For required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1060067 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Total Dissolved Solids							
	1	17-SEP-11 10:12	28-SEP-11 10:40	7	11	days	EHT
	2	17-SEP-11 12:00	28-SEP-11 10:40	7	11	days	EHT
Total Suspended Solids							
	1	17-SEP-11 10:12	28-SEP-11 10:40	7	11	days	EHT
	2	17-SEP-11 12:00	28-SEP-11 10:40	7	11	days	EHT
Turbidity							
	1	17-SEP-11 10:12	20-SEP-11 09:00	48	71	hours	EHTL
	2	17-SEP-11 12:00	20-SEP-11 09:00	48	69	hours	EHTL
pH							
	1	17-SEP-11 10:12	19-SEP-11 14:58	0.25	53	hours	EHTR-FM
	2	17-SEP-11 12:00	19-SEP-11 14:58	0.25	51	hours	EHTR-FM
Anions and Nutrients							
Bromide							
	1	17-SEP-11 10:12	19-SEP-11 14:41	48	53	hours	EHTL
	2	17-SEP-11 12:00	19-SEP-11 14:41	48	51	hours	EHTL
Colour, True							
	1	17-SEP-11 10:12	19-SEP-11 16:44	48	54	hours	EHTL
	2	17-SEP-11 12:00	19-SEP-11 16:44	48	53	hours	EHTL
Nitrate as N							
	1	17-SEP-11 10:12	19-SEP-11 14:41	48	53	hours	EHTL
	2	17-SEP-11 12:00	19-SEP-11 14:41	48	51	hours	EHTL
Nitrite as N							
	1	17-SEP-11 10:12	19-SEP-11 14:41	48	53	hours	EHTL
	2	17-SEP-11 12:00	19-SEP-11 14:41	48	51	hours	EHTL
Phosphorus, Total							
	1	17-SEP-11 10:12	19-SEP-11 17:44	48	55	hours	EHTL
	2	17-SEP-11 12:00	19-SEP-11 17:44	48	54	hours	EHTL

Legend & Qualifier Definitions:

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

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1060067 were received on 19-SEP-11 08:30.

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

Quality Control Report

Workorder: L1060067 Report Date: 06-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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

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

ALS Environmental

L1060067

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 8

Page 1 of 1

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☑ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483-300	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Chlorophylla / Pheophytin	Acidity, Colour, Turbidity	Anions, Br, silica,ph,ec,Alk	NH3,TKN, PT	CBOD	Solids (TSS, TDS)	Metals & HG -Total	Metals & Hg - Dissolved	TOC,DOC				Number of Containers
								P			P		P				
	ANB-03	17-Sep-11	10:12	water	X	X	X	X	X	X	X	X	X				6
	TRB-05	17-Sep-11	12:00	water	X	X	X	X	X	X	X	X	X				6

L1060067-COFC

Special Instructions / Regulations with water or land us

Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
				19 Sep 11	0830	14 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 19-SEP-11
Report Date: 23-DEC-11 12:22 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060330

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483-300
C of C Numbers:
Legal Site Desc:

Robert S. Kitlar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060330-1 ARL-01 (PHYTO) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-2 UL1-01 (PHYTO) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-3 NTL-01 (PHYTO) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-4 GSL-01 (PHYTO) Sampled By: CLIENT on 14-SEP-11 @ 09:50 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-5 THL-01 (PHYTO) Sampled By: CLIENT on 15-SEP-11 @ 09:25 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-6 ANB-06 (PHYTO) Sampled By: CLIENT on 16-SEP-11 @ 14:13 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060330-7 ARL-01 (ZOOP) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768
L1060330-8 UL1-01 (ZOOP) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768
L1060330-9 NTL-01 (ZOOP) Sampled By: CLIENT on 14-SEP-11 @ 14:15 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768
L1060330-10 GSL-01 (ZOOP) Sampled By: CLIENT on 14-SEP-11 @ 09:50 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768

* 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
L1060330-11 THL-01 (ZOOP) Sampled By: CLIENT on 15-SEP-11 @ 09:25 Matrix: WATER **Miscellaneous Parameters**							
Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768
L1060330-12 ANB-06 (ZOOP) Sampled By: CLIENT on 16-SEP-11 @ 14:13 Matrix: WATER **Miscellaneous Parameters**							
Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PHYTO-BIO-WP	Water	Phytoplankton Biovolumes	Standard Methods 10200, 1998

This procedure is applicable to the identification and enumeration of microscopic organisms occurring within samples of fresh water. Samples are prepared using a sedimentation technique, and are then examined using a compound phase contrast inverted microscope. Both phytoplankton and zooplankton are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060330 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1060330 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Phytoplankton Sample Results

Lab Number: L1060330-1 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: ARL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cymbella*	*sp.*	6200	3500	21700000
Bacillariophyceae	*Gomphonema*	*sp.*	1000	6000	6000000
Bacillariophyceae	*Navicula*	*sp.*	6200	4000	24800000
Bacillariophyceae	*Nitzschia*	*sp.*	3000	540	1620000
Chlorophyceae	*Botryococcus*	*sp.*	2000	125000	250000000
Chlorophyceae	*Elakatothrix*	*sp.*	6200	180	1116000
Chlorophyceae	*Euastrum*	*sp.*	1000	12000	12000000
Chlorophyceae	*Monoraphidium*	*sp.*	12400	120	1488000
Chlorophyceae	*Pediastrum*	*tetras*	2000	900	1800000
Chlorophyceae	*Scenedesmus*	*sp.*	37200	160	5952000
Chlorophyceae	*Spirogyra*	*sp.*	1000	450000	450000000
Chlorophyceae	*Spondylosium*	*sp.*	1000	1600	1600000
Chlorophyceae	*Tetraedron*	*caudatum*	18600	128	2380800
Chlorophyceae	*Tetraedron*	*sp.*	24800	512	12697600
Chrysophyceae	*Bitrichia*	*sp.*	24800	360	8928000
Chrysophyceae	*Dinobryon*	*bavaricum*	6200	540	3348000
Chrysophyceae	*Dinobryon*	*sp.*	24800	540	13392000
Chrysophyceae	*small chrysophytes*		7104000	64	454656000
Cryptophyceae	*Cryptomonas*	*sp.*	43400	12000	520800000

Date Printed: December 15, 2011

Lab Number: L1060330-1 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: ARL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Cyanophyceae	*Aphanocapsa*	*sp.*	2000	27000	54000000
Cyanophyceae	*Chroococcus*	*sp.*	8000	216	1728000
Cyanophyceae	*Gomphosphaeria*	*sp.*	1000	27000	27000000
Cyanophyceae	*Planktolyngbya*	*sp.*	4000	480	1920000
Cyanophyceae	*Planktothrix*	*sp.*	1000	4800	4800000
Cyanophyceae	*Pseudanabaena*	*sp.*	12400	360	4464000
Cyanophyceae	*Spirulina*	*sp.*	6200	1080	6696000
Dinophyceae	*Gymnodinium*	*sp.*	6200	6000	37200000
Fragilariophyceae	*Synedra*	*sp.*	6200	540	3348000
Fragilariophyceae	*Tabellaria*	*sp.*	1000	1200	1200000

Date Printed: December 15, 2011

ALS Laboratories
Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-10 **Work Order:** L1060330

Date Sampled: September 14, 2011
Source: GSL-01
Submitter:
Sample ID:
Volume Decanted (mL): 100
Volume analyzed (mL): 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	300	2.07E+07	6.22E+09
Protozoa	Ciliata	Peritrichida	Epistylidae	*Epistylis*	*sp.*	600	9.60E+04	5.76E+07
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	58200	6.40E+04	3.72E+09
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	100	4.15E+07	4.15E+09
Crustacea	Copepoda			*Nauplii*		700	4.32E+05	3.02E+08
Crustacea	Copepoda	Cyclopoida		*To young to ID*		100	5.40E+06	5.40E+08
Protozoa	Lobosa	Arcellinida	Difflugiidae	*Difflugia*	*sp.*	100	1.73E+06	1.73E+08
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	1000	4.32E+07	4.32E+10
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	800	8.10E+04	6.48E+07
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	6400	3.24E+05	2.07E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	3000	5.76E+05	1.73E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	17800	6.48E+05	1.15E+10
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	80200	3.24E+05	2.60E+10
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	6000	3.24E+05	1.94E+09

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Zooplankton Sample Results

Lab Number: L1060330-11 **Work Order:** L1060330

Date Sampled: September 15, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: THL-01 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	200	2.07E+07	4.15E+09
Crustacea	Branchiopoda	Cladocera	Holopediidae	*Holopedium*	*sp.*	200	3.78E+06	7.56E+08
Protozoa	Ciliata	Holotrichida	Tracheliidae	*Trachelius*	*sp.*	600	1.70E+06	1.02E+09
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	24000	6.40E+04	1.54E+09
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	100	4.15E+07	4.15E+09
Crustacea	Copepoda			*Nauplii*		3200	4.32E+05	1.38E+09
Crustacea	Copepoda	Cyclopoida		*To young to ID*		100	5.40E+06	5.40E+08
Protozoa	Heliozoa	Actinophryida	Actinosphaeridae	*Actinosphaerium*	*sp.*	100	7.29E+05	7.29E+07
Rotifera	Monogononta	Ploima	Gastropodidae	*Ascomorpha*	*sp.*	200	2.88E+05	5.76E+07
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	3600	4.32E+07	1.56E+11
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	2400	8.10E+04	1.94E+08
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	7000	3.24E+05	2.27E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	200	5.76E+05	1.15E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	40600	6.48E+05	2.63E+10

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Zooplankton Sample Results

Lab Number: L1060330-11 **Work Order:** L1060330

Date Sampled: September 15, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: THL-01 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	10800	3.24E+05	3.50E+09
Rotifera	Monogononta	Ploima	Lecanidae	*Monostyla*	*sp.*	300	8.64E+05	2.59E+08
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	2400	3.24E+05	7.78E+08
Rotifera	Monogononta	Ploima	Synchaetidae	*Synchaeta*	*sp.*	100	1.22E+06	1.22E+08
Rotifera	Monogononta	Ploima	Trichocercidae	*Trichocerca*	*sp.*	200	1.94E+06	3.89E+08

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Zooplankton Sample Results

Lab Number: L1060330-12 **Work Order:** L1060330

Date Sampled: September 16, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: ANB-06 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera				*Unidentified*		100	3.24E+05	3.24E+07
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	4600	2.07E+07	9.54E+10
Crustacea	Branchiopoda	Cladocera	Chydoridae	*Chydorus*	*sp.*	700	8.64E+06	6.05E+09
Protozoa	Ciliata	Spirotrichida	Codonellidae	*Codonella*	*sp.*	600	1.22E+05	7.29E+07
Protozoa	Ciliata	Peritrichida	Epistylidae	*Epistylis*	*sp.*	14000	9.60E+04	1.34E+09
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	5200	6.40E+04	3.33E+08
Crustacea	Copepoda	Cyclopoida	Cyclopidae	*Cyclops*	*sp.*	300	2.30E+07	6.91E+09
Crustacea	Copepoda	Cyclopoida	Cyclopidae	*Damaged*		100	1.49E+07	1.49E+09
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	100	4.15E+07	4.15E+09
Crustacea	Copepoda			*Nauplii*		1200	4.32E+05	5.18E+08
Crustacea	Copepoda	Cyclopoida		*To young to ID*		500	5.40E+06	2.70E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Ascomorpha*	*sp.*	200	2.88E+05	5.76E+07
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	300	4.32E+07	1.30E+10
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	100	8.10E+04	8.10E+06

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Zooplankton Sample Results

Lab Number: L1060330-12 **Work Order:** L1060330

Date Sampled: September 16, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: ANB-06 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	4600	3.24E+05	1.49E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	200	5.76E+05	1.15E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	3400	6.48E+05	2.20E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	42600	3.24E+05	1.38E+10
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	7200	3.24E+05	2.33E+09
Rotifera	Monogononta	Ploima	Trichocercidae	*Trichocerca*	*sp.*	100	3.60E+06	3.60E+08

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Phytoplankton Sample Results

Lab Number: L1060330-2 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: UL1-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cymbella*	*sp.*	1000	3500	3500000
Bacillariophyceae	*Navicula*	*sp.*	6200	4000	24800000
Bacillariophyceae	*Nitzschia*	*sp.*	6200	540	3348000
Bacillariophyceae	*Rhoicosphenia*	*sp.*	6200	240	1488000
Chlorophyceae	*Botryococcus*	*sp.*	18600	8000	148800000
Chlorophyceae	*Elakatothrix*	*sp.*	142600	180	25668000
Chlorophyceae	*Monoraphidium*	*sp.*	37200	120	4464000
Chlorophyceae	*Oocystis*	*sp.*	6200	1500	9300000
Chlorophyceae	*Pediastrum*	*tetras*	12400	900	11160000
Chlorophyceae	*Planktosphaeria*	*sp.*	24800	1000	24800000
Chlorophyceae	*Quadrigula*	*sp.*	18000	180	3240000
Chlorophyceae	*Scenedesmus*	*sp.*	322400	160	51584000
Chlorophyceae	*Tetraedron*	*minimum*	12400	256	3174400
Chrysophyceae	*Bitrichia*	*sp.*	74400	360	26784000
Chrysophyceae	*Dinobryon*	*bavaricum*	93000	540	50220000
Chrysophyceae	*Dinobryon*	*sp.*	99200	540	53568000
Chrysophyceae	*small chrysophytes*		12192000	64	780288000
Cryptophyceae	*Cryptomonas*	*sp.*	62000	12000	744000000
Cyanophyceae	*Aphanocapsa*	*sp.*	18600	27000	502200000

Date Printed: December 15, 2011

Lab Number: L1060330-2 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: UL1-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Cyanophyceae	*Aphanothece*	*sp.*	18600	8000	148800000
Cyanophyceae	*Chroococcus*	*sp.*	49600	216	10713600
Cyanophyceae	*Gomphosphaeria*	*sp.*	55800	27000	1506600000
Cyanophyceae	*Merismopedia*	*sp.*	9984000	8	79872000
Cyanophyceae	*Microcystis*	*sp.*	3000	216000	648000000
Cyanophyceae	*Planktolyngbya*	*sp.*	1056000	240	253440000
Cyanophyceae	*Planktothrix*	*sp.*	1000	9600	9600000
Cyanophyceae	*Pseudanabaena*	*sp.*	49600	360	17856000
Dinophyceae	*Gymnodinium*	*sp.*	12400	10000	124000000
Dinophyceae	*Peridinium*	*sp.*	1000	181500	181500000
Euglenophyceae	*Euglena*	*sp.*	1000	11250	11250000
Fragilariophyceae	*Synedra*	*sp.*	1000	540	540000

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Phytoplankton Sample Results

Lab Number: L1060330-3 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: NTL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cocconeis*	*sp.*	1000	4500	4500000
Bacillariophyceae	*Navicula*	*sp.*	6000	4000	24000000
Bacillariophyceae	*Nitzschia*	*sp.*	6200	540	3348000
Chlorophyceae	*Botryococcus*	*sp.*	7000	216000	1512000000
Chlorophyceae	*Cosmarium*	*sp.*	2000	4000	8000000
Chlorophyceae	*Crucigenia*	*sp.*	72000	36	2592000
Chlorophyceae	*Crucigenia*	*tetrapedia*	74400	36	2678400
Chlorophyceae	*Dictyosphaerium*	*sp.*	6200	8000	49600000
Chlorophyceae	*Elakatothrix*	*sp.*	9000	180	1620000
Chlorophyceae	*Monoraphidium*	*sp.*	2000	120	240000
Chlorophyceae	*Oocystis*	*sp.*	6200	1500	9300000
Chlorophyceae	*Pediastrum*	*tetras*	6200	900	5580000
Chlorophyceae	*Planktosphaeria*	*sp.*	1000	3375	3375000
Chlorophyceae	*Scenedesmus*	*arcuatus*	16000	160	2560000
Chlorophyceae	*Scenedesmus*	*quadricauda*	74400	160	11904000
Chlorophyceae	*Scenedesmus*	*sp.*	322400	160	51584000
Chlorophyceae	*Scenedesmus*	*spinosus*	24800	160	3968000
Chlorophyceae	*Spondylosium*	*sp.*	1000	1600	1600000
Chlorophyceae	*Tetraedron*	*minimum*	6200	256	1587200

Date Printed: December 15, 2011

Lab Number: L1060330-3 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: NTL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Chlorophyceae	*Tetraedron*	*sp.*	6200	512	3174400
Chrysophyceae	*Dinobryon*	*bavaricum*	130200	540	70308000
Chrysophyceae	*Dinobryon*	*sp.*	18600	540	10044000
Chrysophyceae	*small chrysophytes*		9504000	64	608256000
Cryptophyceae	*Cryptomonas*	*sp.*	198400	12000	2380800000
Cyanophyceae	*Anabaena*	*sp.*	6200	4320	26784000
Cyanophyceae	*Aphanocapsa*	*sp.*	6200	125000	775000000
Cyanophyceae	*Aphanothece*	*sp.*	12400	27000	334800000
Cyanophyceae	*Chroococcus*	*sp.*	29000	27000	783000000
Cyanophyceae	*Gomphosphaeria*	*sp.*	18600	27000	502200000
Cyanophyceae	*Merismopedia*	*sp.*	4608000	8	36864000
Cyanophyceae	*Microcystis*	*sp.*	3000	216000	648000000
Cyanophyceae	*Planktolyngbya*	*sp.*	6200	240	1488000
Cyanophyceae	*Pseudanabaena*	*sp.*	6200	360	2232000
Dinophyceae	*Gymnodinium*	*sp.*	12400	49000	607600000

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Phytoplankton Sample Results

Lab Number: L1060330-4 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**

Source: GSL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cymbella*	*sp.*	1000	4000	4000000
Bacillariophyceae	*Navicula*	*sp.*	12400	4000	49600000
Bacillariophyceae	*Nitzschia*	*sigmoidea*	1000	4680	4680000
Bacillariophyceae	*Nitzschia*	*sp.*	6200	540	3348000
Chlorophyceae	*Elakatothrix*	*sp.*	18600	180	3348000
Chlorophyceae	*Monoraphidium*	*sp.*	24800	120	2976000
Chlorophyceae	*Scenedesmus*	*sp.*	24800	160	3968000
Chrysophyceae	*Dinobryon*	*sp.*	43400	540	23436000
Chrysophyceae	*small chrysophytes*		6240000	64	399360000
Coscinodiscophyceae	*Rhizosolenia*	*sp.*	6200	96	595200
Cryptophyceae	*Cryptomonas*	*sp.*	62000	12000	744000000
Cyanophyceae	*Gomphosphaeria*	*sp.*	6200	27000	167400000
Cyanophyceae	*Merismopedia*	*sp.*	32000	8	256000
Cyanophyceae	*Planktolyngbya*	*sp.*	12400	240	2976000
Cyanophyceae	*Pseudanabaena*	*sp.*	18600	360	6696000
Dinophyceae	*Gymnodinium*	*sp.*	31000	18750	581250000
Euglenophyceae	*Trachelomonas*	*sp.*	1000	12000	12000000
Fragilariophyceae	*Synedra*	*sp.*	12400	540	6696000

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Phytoplankton Sample Results

Lab Number: L1060330-5 **Work Order:** L1060330

Date Sampled: September 15, 2011 **Submitter:**

Source: THL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Navicula*	*sp.*	10000	4000	40000000
Chlorophyceae	*Arthrodesmus*	*sp.*	6200	1350	8370000
Chlorophyceae	*Botryococcus*	*sp.*	1000	64000	64000000
Chlorophyceae	*Elakatothrix*	*sp.*	6200	180	1116000
Chlorophyceae	*Monoraphidium*	*sp.*	130200	120	15624000
Chlorophyceae	*Planktosphaeria*	*sp.*	12400	8000	99200000
Chlorophyceae	*Scenedesmus*	*sp.*	4000	160	640000
Chlorophyceae	*Staurastrum*	*sp.*	1000	4500	4500000
Chlorophyceae	*Tetraedron*	*minimum*	18600	256	4761600
Chrysophyceae	*Bitrichia*	*sp.*	12400	128	1587200
Chrysophyceae	*Dinobryon*	*bavaricum*	86800	540	46872000
Chrysophyceae	*Dinobryon*	*sp.*	12400	540	6696000
Chrysophyceae	*Mallomonas*	*sp.*	12400	1280	15872000
Chrysophyceae	*small chrysophytes*		16320000	64	1044480000
Cryptophyceae	*Cryptomonas*	*sp.*	68200	12000	818400000
Cyanophyceae	*Aphanizomenon*	*sp.*	1000	3840	3840000
Cyanophyceae	*Aphanocapsa*	*sp.*	6200	64000	396800000
Cyanophyceae	*Aphanothece*	*sp.*	12400	27000	334800000
Cyanophyceae	*Gomphosphaeria*	*sp.*	18600	27000	502200000

Date Printed: December 15, 2011

Lab Number: L1060330-5 **Work Order:** L1060330

Date Sampled: September 15, 2011 **Submitter:**

Source: THL-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Cyanophyceae	*Merismopedia*	*sp.*	99200	8	793600
Cyanophyceae	*Microcystis*	*sp.*	12000	216000	2592000000
Cyanophyceae	*Oscillatoria*	*sp.*	1000	12960	12960000
Cyanophyceae	*Planktolyngbya*	*sp.*	1248000	240	299520000
Cyanophyceae	*Pseudanabaena*	*sp.*	31000	360	11160000
Dinophyceae	*Gymnodinium*	*sp.*	6200	18750	116250000
Fragilariophyceae	*Synedra*	*sp.*	24800	540	13392000

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Phytoplankton Sample Results

Lab Number: L1060330-6 **Work Order:** L1060330

Date Sampled: September 16, 2011 **Submitter:**

Source: ANB-06 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cocconeis*	*sp.*	6200	4500	27900000
Bacillariophyceae	*Nitzschia*	*sp.*	18600	540	10044000
Bacillariophyceae	*Surirella*	*sp.*	1000	32000	32000000
Chlorophyceae	*Closterium*	*sp.*	1000	1920	1920000
Chlorophyceae	*Elakatothrix*	*sp.*	1000	180	180000
Chlorophyceae	*Lagerheimia*	*sp.*	6200	128	793600
Chlorophyceae	*Monoraphidium*	*sp.*	768000	120	92160000
Chlorophyceae	*Planktosphaeria*	*sp.*	9000	27000	243000000
Chlorophyceae	*Scenedesmus*	*quadricauda*	8000	160	1280000
Chlorophyceae	*Staurastrum*	*sp.*	1000	6750	6750000
Chlorophyceae	*Tetraedron*	*minimum*	6200	256	1587200
Chlorophyceae	*Tetraedron*	*trigonum*	1000	3750	3750000
Chrysophyceae	*Dinobryon*	*bavaricum*	2000	540	1080000
Chrysophyceae	*small chrysophytes*		3360000	64	215040000
Coscinodiscophyceae	*Cyclotella*	*sp.*	24800	4000	99200000
Coscinodiscophyceae	*Melosira*	*sp.*	68200	23040	1571328000
Coscinodiscophyceae	*Stephanodiscus*	*sp.*	17000	108000	1836000000
Cryptophyceae	*Cryptomonas*	*sp.*	68200	12000	818400000
Cyanophyceae	*Anabaena*	*planctonica*	12400	15360	190464000

Date Printed: December 15, 2011

Lab Number: L1060330-6 **Work Order:** L1060330

Date Sampled: September 16, 2011 **Submitter:**

Source: ANB-06 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Cyanophyceae	*Anabaena*	*sp.*	74400	4320	321408000
Cyanophyceae	*Aphanizomenon*	*sp.*	1056000	3840	4055040000
Cyanophyceae	*Gomphosphaeria*	*sp.*	6200	27000	167400000
Cyanophyceae	*Planktolyngbya*	*sp.*	1152000	240	276480000
Cyanophyceae	*Pseudanabaena*	*sp.*	480000	360	172800000
Dinophyceae	*Ceratium*	*rhomvoides*	1000	96000	96000000
Dinophyceae	*Gymnodinium*	*sp.*	1000	31500	31500000
Euglenophyceae	*Euglena*	*sp.*	1000	10000	10000000
Euglenophyceae	*Trachelomonas*	*sp.*	1000	4500	4500000
Fragilariophyceae	*Asterionella*	*formosa*	142600	810	115506000
Fragilariophyceae	*Fragilaria*	*crotonensis*	8000	1280	10240000
Fragilariophyceae	*Synedra*	*acus*	1000	11250	11250000
Fragilariophyceae	*Synedra*	*sp.*	6200	540	3348000
Fragilariophyceae	*Tabellaria*	*sp.*	55800	2400	133920000

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Zooplankton Sample Results

Lab Number: L1060330-7 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: ARL-01 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera				*Unidentified*		400	1.73E+06	6.91E+08
Rotifera	Bdelloidea		Philodinidae	*Rotaria*	*sp.*	100	8.64E+05	8.64E+07
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	300	2.07E+07	6.22E+09
Crustacea	Branchiopoda	Cladocera		*Damaged*		200	9.72E+06	1.94E+09
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	100	1.44E+07	1.44E+09
Crustacea	Copepoda			*Nauplii*		3200	4.32E+05	1.38E+09
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	200	2.88E+07	5.76E+09
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	500	6.48E+05	3.24E+08
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	4700	3.24E+05	1.52E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	1300	5.76E+05	7.49E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	6400	6.48E+05	4.15E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	20000	3.24E+05	6.48E+09
Rotifera	Monogononta	Ploima	Lecanidae	*Monostyla*	*sp.*	100	8.64E+05	8.64E+07
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	700	3.24E+05	2.27E+08

Date Printed: December 23, 2011

ALS Laboratories
Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-7 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: ARL-01 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Ploima	Synchaetidae	*Synchaeta*	*sp.*	400	1.22E+06	4.86E+08

Date Printed: December 23, 2011

ALS Laboratories
Manitoba Technology Centre
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(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-8 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**
Source: UL1-01 **Sample ID:**

Volume Decanted (mL): 200
Volume analyzed (mL): 10

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average µ3 Biovolume	Biovolume µ3 per Sample
Rotifera				*Unidentified*		320	1.73E+06	5.53E+08
Crustacea	Branchiopoda	Cladocera	Chydoridae	*Alona*	*sp.*	40	1.38E+07	5.53E+08
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	20	2.07E+07	4.15E+08
Crustacea	Branchiopoda	Cladocera	Chydoridae	*Chydorus*	*sp.*	20	5.76E+06	1.15E+08
Crustacea	Branchiopoda	Cladocera	Daphniidae	*Daphnia*	*sp.*	1860	1.23E+08	2.29E+11
Crustacea	Branchiopoda	Cladocera	Holopediidae	*Holopedium*	*sp.*	1060	3.79E+08	4.02E+11
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	38760	6.40E+04	2.48E+09
Crustacea	Copepoda			*Nauplii*		320	4.32E+05	1.38E+08
Protozoa	Heliozoa	Actinophryida	Actinosphaeridae	*Actinosphaerium*	*sp.*	60	6.40E+04	3.84E+06
Arthropoda	Insecta	Diptera	Chaoboridae	*Chaoborus*	*sp.*	20	6.39E+09	1.28E+11
Protozoa	Lobosa	Arcellinida	Difflugiidae	*Difflugia*	*sp.*	240	1.73E+06	4.15E+08
Rotifera	Monogononta	Ploima	Gastropodidae	*Ascomorpha*	*sp.*	280	2.88E+05	8.06E+07
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	100	1.85E+07	1.85E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Brachionus*	*sp.*	40	6.48E+05	2.59E+07

Date Printed: December 23, 2011

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Manitoba Technology Centre
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Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-8 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:** ***Volume Decanted (mL):*** 200

Source: UL1-01 **Sample ID:** ***Volume analyzed (mL):*** 10

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	40	6.48E+05	2.59E+07
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	360	3.24E+05	1.17E+08
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	1360	5.76E+05	7.83E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	360	6.48E+05	2.33E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	26160	3.24E+05	8.48E+09
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	520	3.24E+05	1.68E+08
Rotifera	Monogononta	Ploima	Synchaetidae	*Synchaeta*	*sp.*	60	1.22E+06	7.29E+07
Rotifera	Monogononta	Ploima	Trichotriidae	*Trichotria*	*sp.*	20	3.60E+05	7.20E+06

Date Printed: December 23, 2011

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Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-9 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:** ***Volume Decanted (mL):*** 200

Source: NTL-01 **Sample ID:** ***Volume analyzed (mL):*** 10

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera				*Unidentified*		20	2.30E+06	4.61E+07
Arachnida	Arachnida	Hydracarina		*Unidentified*		20	1.73E+06	3.46E+07
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	1160	2.07E+07	2.41E+10
Crustacea	Branchiopoda	Cladocera	Daphniidae	*Daphnia*	*sp.*	60	1.23E+08	7.40E+09
Crustacea	Branchiopoda	Cladocera	Holopediidae	*Holopedium*	*sp.*	360	3.79E+08	1.37E+11
Protozoa	Ciliata	Peritrichida	Epistylidae	*Epistylis*	*sp.*	6400	9.60E+04	6.14E+08
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	7720	6.40E+04	4.94E+08
Crustacea	Copepoda	Cyclopoida	Cyclopidae	*Cyclops*	*sp.*	440	1.17E+07	5.13E+09
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	3080	3.70E+07	1.14E+11
Crustacea	Copepoda	Calanoida	Temoridae	*Epischura*	*sp.*	20	2.12E+08	4.23E+09
Crustacea	Copepoda			*Nauplii*		1400	4.32E+05	6.05E+08
Protozoa	Heliozoa	Actinophryida	Actinosphaeridae	*Actinosphaerium*	*sp.*	60	6.40E+04	3.84E+06
Rotifera	Monogononta	Ploima	Asplanchnidae	*Asplanchna*	*sp.*	80	1.06E+08	8.47E+09
Rotifera	Monogononta	Collothecaceae	Collothecidae	*Collotheca*	*sp.*	4880	8.10E+04	3.95E+08

Date Printed: December 23, 2011

ALS Laboratories
Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060330-9 **Work Order:** L1060330

Date Sampled: September 14, 2011 **Submitter:**
Source: NTL-01 **Sample ID:**

Volume Decanted (mL): 200
Volume analyzed (mL): 10

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	4440	3.24E+05	1.44E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	20	5.76E+05	1.15E+07
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	11400	6.48E+05	7.39E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	1080	3.24E+05	3.50E+08
Rotifera	Monogononta	Ploima	Lecanidae	*Monostyla*	*sp.*	40	8.64E+05	3.46E+07
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	120	3.24E+05	3.89E+07
Rotifera	Monogononta	Ploima	Synchaetidae	*Synchaeta*	*sp.*	180	2.88E+05	5.18E+07

Date Printed: December 23, 2011

L10600330

ALS Environmental

L10600330-COFC

ytical Request Form
1 800 668 9878
bal.com

COC # 1

Page 1 of 1

Report To	Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company: AECOM -W172	☑ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact: Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: Fax:	Email 3: mark.hadfield@aecom.com	Analysis Request
Invoice To Same as Report? ☑ Yes ☐ No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report? ☐ Yes ☐ No	Job #: 66213483-3000	
Company:	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #: Q24534	
Lab Work Order # (lab use only):	ALS Contact: Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Phytoplankton	Zooplankton	Number of Containers
	ARL-01			water	X	X	2
	UL1-01	14-Sep-11	14:15		X	X	2
	~~GHL-03~~				X	X	
	NTL-01	14-Sep-11	14:15		X	X	2
	GSL-01	14-Sep-11	~~09:50~~		X	X	2
	THL-01	15-Sep-11	09:25am		X	X	2
	ANB-06	16-Sep-11	14:13				2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm)	Time (hh-m)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				19Sep11	15:10	20°C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 19-SEP-11
Report Date: 23-DEC-11 12:22 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060332

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435
C of C Numbers:
Legal Site Desc:

Robert S. Kitlar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060332-1 STL-03 (PHYTO) Sampled By: CLIENT on 16-SEP-11 @ 11:45 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060332-2 STC-01 (PHYTO) Sampled By: CLIENT on 17-SEP-11 @ 09:00 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060332-3 STL-03 (ZOOP) Sampled By: CLIENT on 16-SEP-11 @ 11:45 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768
L1060332-4 STC-01 (ZOOP) Sampled By: CLIENT on 17-SEP-11 @ 09:00 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes	See attached.				23-DEC-11	23-DEC-11	R2305768

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PHYTO-BIO-WP	Water	Phytoplankton Biovolumes	Standard Methods 10200, 1998

This procedure is applicable to the identification and enumeration of microscopic organisms occurring within samples of fresh water. Samples are prepared using a sedimentation technique, and are then examined using a compound phase contrast inverted microscope. Both phytoplankton and zooplankton are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060332 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1060332 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Phytoplankton Sample Results

Lab Number: L1060332-1 **Work Order:** L1060332

Date Sampled: September 16, 2011 **Submitter:**

Source: STL-03 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Eunotia*	*sp.*	17400	720	12528000
Bacillariophyceae	*Navicula*	*sp.*	400	4000	1600000
Chrysophyceae	*small chrysophytes*		1228800	64	78643200
Cryptophyceae	*Cryptomonas*	*sp.*	34700	2000	69400000
Euglenophyceae	*Euglena*	*sp.*	800	10000	8000000

Date Printed: December 15, 2011

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12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Phytoplankton Sample Results

Lab Number: L1060332-2 **Work Order:** L1060332

Date Sampled: September 17, 2011 **Submitter:**

Source: STC-01 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Eunotia*	*sp.*	200	540	108000
Bacillariophyceae	*Navicula*	*sp.*	5000	4000	20000000
Bacillariophyceae	*Nitzschia*	*sp.*	2500	540	1350000
Chrysophyceae	*small chrysophytes*		96000	64	6144000
Cyanophyceae	*Planktolyngbya*	*sp.*	7400	480	3552000
Fragilariophyceae	*Fragilaria*	*sp.*	800	960	768000
Fragilariophyceae	*Synedra*	*acus*	200	8640	1728000
Fragilariophyceae	*Tabellaria*	*sp.*	400	5850	2340000

Date Printed: December 15, 2011

ALS Laboratories
Manitoba Technology Centre
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Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060332-3 **Work Order:** L1060332

Date Sampled: September 16, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: STL-03 **Sample ID:** ***Volume analyzed (mL):*** 10

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Arthropoda	Insecta	Diptera	Chironomidae	*Unidentified*		50	1.20E+07	6.00E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Brachionus*	*sp.*	350	7.78E+06	2.72E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	10	6.48E+05	6.48E+06
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	10	3.24E+05	3.24E+06

Date Printed: December 23, 2011

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Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060332-4 **Work Order:** L1060332

Date Sampled: September 17, 2011 **Submitter:**
Source: STC-01 **Sample ID:**

Volume Decanted (mL): 200
Volume analyzed (mL): 100

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Arachnida	Arachnida	Hydracarina		*Unidentified*		2	4.32E+06	8.64E+06
Crustacea	Branchiopoda	Cladocera	Chydoridae	*Chydorus*	*sp.*	6	8.64E+06	5.18E+07
Crustacea	Copepoda	Cyclopoida	Cyclopidae	*Cyclops*	*sp.*	4	1.92E+07	7.68E+07
Crustacea	Copepoda			*Nauplii*		2	4.32E+05	8.64E+05
Protozoa	Heliozoa	Actinophryida	Actinosphaeridae	*Actinosphaerium*	*sp.*	2	2.16E+05	4.32E+05
Arthropoda	Insecta	Diptera	Chironomidae	*Unidentified*		6	2.16E+06	1.30E+07
Rotifera	Monogononta	Ploima	Euchlanidae	*Euchlanis*	*sp.*	2	5.40E+06	1.08E+07
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	2	6.48E+05	1.30E+06
Rotifera	Monogononta	Ploima	Lecanidae	*Monostyla*	*sp.*	2	8.64E+05	1.73E+06

Date Printed: December 23, 2011

ALS Environmental

L1060332-COFC

/ / Analytical Request Form
l Free: 1 800 668 9878
w.alsglobal.com

L1060332 COC # 2

Page 1 of 1

Report To	Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company: AECOM -W172	☑ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact: Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: Fax:	Email 3: mark.hadfield@aecom.com	Analysis Request
Invoice To Same as Report? ☑ Yes ☐ No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report? ☐ Yes ☐ No	Job #: 6021435-	
Company:	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #: Q24534	
Lab Work Order # (lab use only)	ALS Contact: Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Phytoplankton	Zooplankton	Number of Containers
	STL-03	16-Sep-11	11:45	water	X	X	2
	STC-01	16-Sep-11	9:00	water	X	X	2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mm	Time (hh-m	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				16-Sept 11	15:10	20 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 19-SEP-11
Report Date: 23-DEC-11 12:23 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1060333

Project P.O. #: NOT SUBMITTED
Job Reference: 60212443-200
C of C Numbers:
Legal Site Desc:

Robert S. Kitlar
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1060333-1 GHL-03 (PHYTO) Sampled By: CLIENT on 14-SEP-11 @ 12:37 Matrix: WATER **Miscellaneous Parameters** Phytoplankton Biovolumes	See attached.				15-DEC-11	15-DEC-11	R2301756
L1060333-2 GHL-03 (ZOOP) Sampled By: CLIENT on 14-SEP-11 @ 12:37 Matrix: WATER **Miscellaneous Parameters** Zooplankton Biovolumes Note: Species name cut off: Brachionus quadridentatus	See attached.				23-DEC-11	23-DEC-11	R2305768

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PHYTO-BIO-WP	Water	Phytoplankton Biovolumes	Standard Methods 10200, 1998

This procedure is applicable to the identification and enumeration of microscopic organisms occurring within samples of fresh water. Samples are prepared using a sedimentation technique, and are then examined using a compound phase contrast inverted microscope. Both phytoplankton and zooplankton are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1060333 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1060333 Report Date: 23-DEC-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Phytoplankton Sample Results

Lab Number: L1060333-1 **Work Order:** L1060333

Date Sampled: September 14, 2011 **Submitter:**

Source: GHL-03 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Bacillariophyceae	*Cocconeis*	*sp.*	1000	4500	4500000
Bacillariophyceae	*Navicula*	*sp.*	6200	4000	24800000
Bacillariophyceae	*Nitzschia*	*sp.*	12400	540	6696000
Chlorophyceae	*Elakatothrix*	*sp.*	18600	180	3348000
Chlorophyceae	*Monoraphidium*	*sp.*	43400	120	5208000
Chlorophyceae	*Oocystis*	*sp.*	1000	1500	1500000
Chlorophyceae	*Pediastrum*	*privum*	1000	400	400000
Chlorophyceae	*Planktosphaeria*	*sp.*	2000	8000	16000000
Chlorophyceae	*Quadrigula*	*sp.*	12000	180	2160000
Chlorophyceae	*Scenedesmus*	*quadricauda*	4000	540	2160000
Chlorophyceae	*Scenedesmus*	*sp.*	8000	160	1280000
Chlorophyceae	*Scenedesmus*	*spinosus*	24800	160	3968000
Chrysophyceae	*Dinobryon*	*bavaricum*	6200	540	3348000
Chrysophyceae	*Dinobryon*	*sp.*	24000	540	12960000
Chrysophyceae	*small chrysophytes*		6912000	64	442368000
Coscinodiscophyceae	*Rhizosolenia*	*sp.*	12400	96	1190400
Cryptophyceae	*Cryptomonas*	*sp.*	18600	12000	223200000
Cyanophyceae	*Aphanocapsa*	*sp.*	18600	8000	148800000
Cyanophyceae	*Merismopedia*	*sp.*	8000	8	64000

Date Printed: December 15, 2011

Lab Number: L1060333-1 **Work Order:** L1060333

Date Sampled: September 14, 2011 **Submitter:**

Source: GHL-03 (PHYTO) **WQNum** **Sample Type** WATER

Class	Genus	Species	Number of Cells per litre	Unit Biovolume µ3	Total Biovolume µ3
Cyanophyceae	*Planktolyngbya*	*sp.*	18600	360	6696000
Cyanophyceae	*Pseudanabaena*	*sp.*	99200	480	47616000
Dinophyceae	*Gymnodinium*	*sp.*	6200	31500	195300000
Dinophyceae	*Peridinium*	*sp.*	18600	4500	83700000
Fragilariophyceae	*Fragilaria*	*sp.*	4000	960	3840000
Fragilariophyceae	*Synedra*	*sp.*	18600	540	10044000

Date Printed: December 15, 2011

ALS Laboratories
Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060333-2 **Work Order:** L1060333

Date Sampled: September 14, 2011 **Submitter:** *Volume Decanted (mL):* 100

Source: GHL-03 **Sample ID:** *Volume analyzed (mL):* 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera				*Unidentified*		100	2.88E+05	2.88E+07
Crustacea	Branchiopoda	Cladocera	Bosminidae	*Bosmina*	*sp.*	700	2.07E+07	1.45E+10
Protozoa	Ciliata			*Unidentified*		100	1.73E+06	1.73E+08
Protozoa	Ciliata	Peritrichida	Vorticellidae	*Vorticella*	*sp.*	5800	6.40E+04	3.71E+08
Crustacea	Copepoda	Cyclopoida	Cyclopidae	*Cyclops*	*sp.*	100	4.32E+06	4.32E+08
Crustacea	Copepoda	Calanoida	Diaptomidae	*Diaptomus*	*sp.*	300	4.61E+07	1.38E+10
Crustacea	Copepoda			*Nauplii*		3100	4.32E+05	1.34E+09
Crustacea	Copepoda	Cyclopoida		*To young to ID*		200	3.46E+06	6.91E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Brachionus*	*quadridentat*	100	1.94E+06	1.94E+08
Rotifera	Monogononta	Flosculariaceae	Conochilidae	*Conochilus*	*sp.*	8800	3.24E+05	2.85E+09
Rotifera	Monogononta	Ploima	Gastropodidae	*Gastropus*	*sp.*	1000	5.76E+05	5.76E+08
Rotifera	Monogononta	Ploima	Brachionidae	*Kellicottia*	*longispina*	14100	6.48E+05	9.14E+09
Rotifera	Monogononta	Ploima	Brachionidae	*Keratella*	*sp.*	7000	3.24E+05	2.27E+09
Rotifera	Monogononta	Ploima	Lecanidae	*Lecane*	*sp.*	100	8.64E+05	8.64E+07

Date Printed: December 23, 2011

ALS Laboratories
Manitoba Technology Centre
1329 Niakwa RD E - Unit 12
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Zooplankton Sample Results

Lab Number: L1060333-2 **Work Order:** L1060333

Date Sampled: September 14, 2011 **Submitter:** ***Volume Decanted (mL):*** 100

Source: GHL-03 **Sample ID:** ***Volume analyzed (mL):*** 1

Phylum	Class	Order	Family	*Genus*	*Species*	Total No. per Sample	Average Biovolume µ3	Biovolume per Sample µ3
Rotifera	Monogononta	Ploima	Synchaetidae	*Ploesoma*	*sp.*	100	8.10E+06	8.10E+08
Rotifera	Monogononta	Ploima	Synchaetidae	*Polyarthra*	*sp.*	4800	3.24E+05	1.56E+09
Rotifera	Monogononta	Ploima	Trichocercidae	*Trichocerca*	*sp.*	300	3.60E+06	1.08E+09

Date Printed: December 23, 2011

ALS Environmental

L1060333-COFC

Analytical Request Form
ree: 1 800 668 9878
sglobal.com

L1060333 COC # 3

Page 1 of 1

Report To	Report Format / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company: AECOM -W172	☑ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact: Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address: 99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
	Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone: Fax:	Email 3: mark.hadfield@aecom.com	**Analysis Request**
Invoice To Same as Report ☑ Yes ☐ No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report? ☐ Yes ☐ No	Job #: 602124-43-200	
Company:	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #: Q24534	
Lab Work Order # (lab use only)	ALS Contact: Christine Herrod	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Phytoplankton	Zooplankton	Number of Containers
	GHL-03	14-Sep-11	12:37	water	X	X	2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm)	Time (hh-m	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
				14-Sep-11	15:10	20 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:32 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062716

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062716-1 STL-01A							
Sampled By: CLIENT on 16-SEP-11 @ 14:50							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.10		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	24.3		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	0.86		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	24.4		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.119		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	88.7		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	1.97		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	541		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	3.00	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	93.3	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	3.73	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	4610		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.36		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	15.4		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	55.8		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.120		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	4.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	7.99		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	2930		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.337		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	8.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	134		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	640		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	46100		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	18.5		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1340		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	114		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.804		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	36.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	510		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	483		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.09		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	3.09		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.22		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	210		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	10.1		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	167		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.117		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.595		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	15.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	9060		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-1 STL-01A							
Sampled By: CLIENT on 16-SEP-11 @ 14:50							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	1.77		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-2 STL-01B							
Sampled By: CLIENT on 16-SEP-11 @ 15:00							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.12		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	28.8		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	0.97		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	28.9		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.145		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	87.1		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.31		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	508		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3860		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.53		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	22.9		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	58.9		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.151		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	4.7		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	7.18		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	2180		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.296		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	7.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	109		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	707		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	94000		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	20.6		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1090		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	87.1		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.763		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	28.9		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	460		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	405		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	3.67		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	3.09		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.27		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	167		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	8.60		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	0.20		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	156		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.149		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.580		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	13.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	7880		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-2 STL-01B							
Sampled By: CLIENT on 16-SEP-11 @ 15:00							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	1.63		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-3 STL-01C							
Sampled By: CLIENT on 16-SEP-11 @ 15:05							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.22		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	31.7		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.82		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	32.0		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.365		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	89.5		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.51		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	654		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	5800		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.50		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	36.2		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	36.1		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.262		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	4.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	10.1		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3240		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.352		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	7.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	192		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	871		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	33700		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	32.9		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1670		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	175		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.639		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	48.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	600		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	549		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.76		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	4.48		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.35		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	276		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	11.7		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	0.19		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	165		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.626		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.551		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	13.3		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	11100		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-3 STL-01C							
Sampled By: CLIENT on 16-SEP-11 @ 15:05							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	2.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-4 STL-02A							
Sampled By: CLIENT on 16-SEP-11 @ 13:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	29.6		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.19		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	29.8		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.076		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.8		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.41		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	525		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	5.59	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	87.0	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	7.44	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	4490		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.23		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	8.45		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	74.6		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.067		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	4.6		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	5.98		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3960		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.294		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	7.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	76.0		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	458		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	72400		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	9.22		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1940		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	133		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.847		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	20.6		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	510		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	481		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	3.68		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	2.15		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.16		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	406		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	13.1		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-4 STL-02A							
Sampled By: CLIENT on 16-SEP-11 @ 13:30							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	148		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.080		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.667		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	13.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	5830		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	1.41		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-5 STL-02B							
Sampled By: CLIENT on 16-SEP-11 @ 13:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	31.5		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.23		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	31.6		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.084		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	91.9		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.54		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	554		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	4720		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.27		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	10.1		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	80.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.078		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	3.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	7.61		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3750		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.330		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	7.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	105		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	527		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	57700		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	12.9		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1700		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	104		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.905		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	27.9		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	480		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	468		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	3.78		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	2.41		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.16		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	310		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	13.4		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-5 STL-02B							
Sampled By: CLIENT on 16-SEP-11 @ 13:45							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	146		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.112		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.649		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	14.2		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	8360		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	1.71		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-6 STL-02C							
Sampled By: CLIENT on 16-SEP-11 @ 13:50							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	28.3		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.37		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	28.5		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.102		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	92.5		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.30		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	561		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	4530		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.39		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	12.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	53.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.091		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	3.3		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	9.42		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3490		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.297		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	7.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	187		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	709		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	61700		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	18.7		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1630		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	127		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.762		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	38.3		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	540		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	449		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	3.61		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	2.91		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.30		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	301		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	15.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-6 STL-02C							
Sampled By: CLIENT on 16-SEP-11 @ 13:50							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	136		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.117		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.630		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	14.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	13600		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	1.53		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-7 STL-03A							
Sampled By: CLIENT on 16-SEP-11 @ 12:10							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	32.8		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.16		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	32.9		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.077		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	90.7		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.49		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	490		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	4.89	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	94.6	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	0.48	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	5910		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.19		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	8.92		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	67.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.093		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	4.4		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	5.63		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3230		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.390		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	9.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	125		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	471		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	22600		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	12.0		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1670		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	116		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.801		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	39.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	460		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	527		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.80		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-7 STL-03A							
Sampled By: CLIENT on 16-SEP-11 @ 12:10							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	2.56		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.16		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	237		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	12.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	161		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.266		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.578		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	16.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	5960		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.90		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-8 STL-03B							
Sampled By: CLIENT on 16-SEP-11 @ 12:15							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.10		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	35.8		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	0.87		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	35.9		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.098		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	86.9		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.73		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	565		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	6410		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.29		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	11.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	42.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.17		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.146		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	5.4		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	7.76		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	3150		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.397		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	10.1		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	173		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	641		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	14900		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	15.6		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1600		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	113		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.951		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	54.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	540		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	581		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.90		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062716-8 STL-03B							
Sampled By: CLIENT on 16-SEP-11 @ 12:15							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	3.23		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.18		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	207		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	10.9		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	178		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.152		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.616		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	17.3		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	8510		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	3.31		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062716-9 STL-03C							
Sampled By: CLIENT on 16-SEP-11 @ 12:20							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.20		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	34.8		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.67		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	35.0		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.066		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	87.2		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	2.67		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	517		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	6440		5.0	mg/kg	29-SEP-11	30-SEP-11	R2261045
Antimony (Sb)	0.18		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Arsenic (As)	7.64		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Barium (Ba)	60.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Beryllium (Be)	0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Bismuth (Bi)	0.087		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Boron (B)	2.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2261045
Cadmium (Cd)	4.76		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Calcium (Ca)	3140		100	mg/kg	29-SEP-11	30-SEP-11	R2261045
Cesium (Cs)	0.407		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Chromium (Cr)	11.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2261045
Cobalt (Co)	117		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Copper (Cu)	427		1.0	mg/kg	29-SEP-11	30-SEP-11	R2261045
Iron (Fe)	25800		25	mg/kg	29-SEP-11	30-SEP-11	R2261045
Lead (Pb)	10.9		0.20	mg/kg	29-SEP-11	30-SEP-11	R2261045
Magnesium (Mg)	1760		10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Manganese (Mn)	105		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Molybdenum (Mo)	0.764		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Nickel (Ni)	38.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Phosphorus (P)	510		100	mg/kg	29-SEP-11	30-SEP-11	R2261045
Potassium (K)	575		25	mg/kg	29-SEP-11	30-SEP-11	R2261045
Rubidium (Rb)	4.56		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045

* 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
L1062716-9 STL-03C							
Sampled By: CLIENT on 16-SEP-11 @ 12:20							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	2.66		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Sodium (Na)	231		10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Strontium (Sr)	9.69		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2261045
Titanium (Ti)	187		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Tungsten (W)	0.090		0.050	mg/kg	29-SEP-11	30-SEP-11	R2261045
Uranium (U)	0.613		0.020	mg/kg	29-SEP-11	30-SEP-11	R2261045
Vanadium (V)	17.3		0.50	mg/kg	29-SEP-11	30-SEP-11	R2261045
Zinc (Zn)	4890		10	mg/kg	29-SEP-11	30-SEP-11	R2261045
Zirconium (Zr)	2.82		0.10	mg/kg	29-SEP-11	30-SEP-11	R2261045

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062716 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2263335								
WG1360092-1 DUP		**L1062730-3**						
Inorganic Carbon		0.15	0.18		%	22	30	04-OCT-11
CaCO3 Equivalent		1.21	1.52		%	22	25	04-OCT-11
WG1360092-2 IRM		**0.4%IC**						
Inorganic Carbon			0.45		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.73		%		2.33-4.33	04-OCT-11
WG1360092-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Carbon by Combustion		33.3	33.1		%	0.60	10	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360057-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367458-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			107		%		70-130	12-OCT-11
WG1367458-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			97		%		70-130	12-OCT-11
WG1367458-4 DUP		**L1062716-1**						
Mercury (Hg)-Total		0.119	0.116		mg/kg	2.8	40	12-OCT-11
WG1367458-5 DUP		**L1062761-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367458-5 DUP		**L1062761-1**						
Mercury (Hg)-Total		0.126	0.123		mg/kg	3.0	40	12-OCT-11
WG1367458-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	30-SEP-11
Antimony (Sb)			116		%		70-130	30-SEP-11
Arsenic (As)			99		%		70-130	30-SEP-11
Barium (Ba)			84		%		70-130	30-SEP-11
Beryllium (Be)			85		%		70-130	30-SEP-11
Boron (B)			94		%		70-130	30-SEP-11
Cadmium (Cd)			103		%		70-130	30-SEP-11
Calcium (Ca)			99		%		70-130	30-SEP-11
Chromium (Cr)			95		%		70-130	30-SEP-11
Cobalt (Co)			94		%		70-130	30-SEP-11
Copper (Cu)			104		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			96		%		70-130	30-SEP-11
Magnesium (Mg)			90		%		70-130	30-SEP-11
Manganese (Mn)			94		%		70-130	30-SEP-11
Molybdenum (Mo)			104		%		70-130	30-SEP-11
Nickel (Ni)			90		%		70-130	30-SEP-11
Phosphorus (P)			94		%		70-130	30-SEP-11
Potassium (K)			86		%		70-130	30-SEP-11
Selenium (Se)			98		%		70-130	30-SEP-11
Silver (Ag)			114		%		70-130	30-SEP-11
Sodium (Na)			86		%		70-130	30-SEP-11
Strontium (Sr)			103		%		70-130	30-SEP-11
Thallium (Tl)			91		%		70-130	30-SEP-11
Tin (Sn)			105		%		70-130	30-SEP-11
Titanium (Ti)			103		%		70-130	30-SEP-11
Uranium (U)			85		%		70-130	30-SEP-11
Vanadium (V)			100		%		70-130	30-SEP-11
Zinc (Zn)			93		%		70-130	30-SEP-11
WG1359926-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-3 CRM		**NRC MESS-3**						
Antimony (Sb)			92		%		70-130	30-SEP-11
Arsenic (As)			94		%		70-130	30-SEP-11
Barium (Ba)			96		%		70-130	30-SEP-11
Beryllium (Be)			75		%		70-130	30-SEP-11
Cadmium (Cd)			88		%		70-130	30-SEP-11
Calcium (Ca)			106		%		70-130	30-SEP-11
Chromium (Cr)			81		%		70-130	30-SEP-11
Cobalt (Co)			98		%		70-130	30-SEP-11
Copper (Cu)			100		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			89		%		70-130	30-SEP-11
Magnesium (Mg)			88		%		70-130	30-SEP-11
Manganese (Mn)			104		%		70-130	30-SEP-11
Molybdenum (Mo)			100		%		70-130	30-SEP-11
Nickel (Ni)			99		%		70-130	30-SEP-11
Phosphorus (P)			88		%		70-130	30-SEP-11
Potassium (K)			75		%		70-130	30-SEP-11
Selenium (Se)			118		%		70-130	30-SEP-11
Silver (Ag)			108		%		70-130	30-SEP-11
Sodium (Na)			99		%		70-130	30-SEP-11
Strontium (Sr)			97		%		70-130	30-SEP-11
Tin (Sn)			109		%		70-130	30-SEP-11
Uranium (U)			86		%		70-130	30-SEP-11
Vanadium (V)			74		%		70-130	30-SEP-11
Zinc (Zn)			98		%		70-130	30-SEP-11
WG1359926-5 DUP		**WG1359926-4**						
Aluminum (Al)		4610	4150		mg/kg	10	40	30-SEP-11
Antimony (Sb)		0.36	0.35		mg/kg	0.93	30	30-SEP-11
Arsenic (As)		15.4	13.5		mg/kg	13	30	30-SEP-11
Barium (Ba)		55.8	52.9		mg/kg	5.4	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.120	0.112		mg/kg	6.9	30	30-SEP-11
Boron (B)		4.5	3.7		mg/kg	19	30	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-5 DUP		**WG1359926-4**						
Cadmium (Cd)		7.99	7.73		mg/kg	3.4	30	30-SEP-11
Calcium (Ca)		2930	2740		mg/kg	6.8	30	30-SEP-11
Cesium (Cs)		0.337	0.292		mg/kg	14	30	30-SEP-11
Chromium (Cr)		8.8	7.9		mg/kg	11	30	30-SEP-11
Cobalt (Co)		134	124		mg/kg	8.3	30	30-SEP-11
Copper (Cu)		640	636		mg/kg	0.62	30	30-SEP-11
Iron (Fe)		46100	45700		mg/kg	0.91	30	30-SEP-11
Lead (Pb)		18.5	17.4		mg/kg	6.5	40	30-SEP-11
Magnesium (Mg)		1340	1220		mg/kg	9.1	30	30-SEP-11
Manganese (Mn)		114	104		mg/kg	9.1	30	30-SEP-11
Molybdenum (Mo)		0.804	0.830		mg/kg	3.3	40	30-SEP-11
Nickel (Ni)		36.4	33.5		mg/kg	8.3	30	30-SEP-11
Phosphorus (P)		510	460		mg/kg	10	30	30-SEP-11
Potassium (K)		483	406		mg/kg	17	40	30-SEP-11
Rubidium (Rb)		4.09	3.66		mg/kg	11	30	30-SEP-11
Selenium (Se)		3.09	2.64		mg/kg	16	30	30-SEP-11
Silver (Ag)		0.22	0.20		mg/kg	12	40	30-SEP-11
Sodium (Na)		210	209		mg/kg	0.46	40	30-SEP-11
Strontium (Sr)		10.1	10.1		mg/kg	0.39	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		0.11	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		167	138		mg/kg	19	40	30-SEP-11
Tungsten (W)		0.117	0.120		mg/kg	2.4	30	30-SEP-11
Uranium (U)		0.595	0.568		mg/kg	4.7	30	30-SEP-11
Vanadium (V)		15.0	13.6		mg/kg	10	30	30-SEP-11
Zinc (Zn)		9060	8750		mg/kg	3.6	30	30-SEP-11
Zirconium (Zr)		1.77	1.66		mg/kg	6.1	30	30-SEP-11
WG1359926-7 DUP		**WG1359926-6**						
Aluminum (Al)		4040	3980		mg/kg	1.4	40	30-SEP-11
Antimony (Sb)		0.16	0.17		mg/kg	8.9	30	30-SEP-11
Arsenic (As)		19.8	18.9		mg/kg	4.6	30	30-SEP-11
Barium (Ba)		60.9	61.6		mg/kg	1.2	40	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-7 DUP		**WG1359926-6**						
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.113	0.093		mg/kg	19	30	30-SEP-11
Boron (B)		8.3	8.4		mg/kg	1.6	30	30-SEP-11
Cadmium (Cd)		0.656	0.609		mg/kg	7.4	30	30-SEP-11
Calcium (Ca)		10100	10400		mg/kg	3.4	30	30-SEP-11
Cesium (Cs)		0.364	0.336		mg/kg	7.9	30	30-SEP-11
Chromium (Cr)		13.2	11.7		mg/kg	12	30	30-SEP-11
Cobalt (Co)		6.71	6.28		mg/kg	6.6	30	30-SEP-11
Copper (Cu)		16.3	16.3		mg/kg	0.16	30	30-SEP-11
Iron (Fe)		19100	18200		mg/kg	4.8	30	30-SEP-11
Lead (Pb)		10.3	9.93		mg/kg	3.2	40	30-SEP-11
Magnesium (Mg)		1370	1360		mg/kg	0.98	30	30-SEP-11
Manganese (Mn)		325	321		mg/kg	1.3	30	30-SEP-11
Molybdenum (Mo)		0.953	0.936		mg/kg	1.8	40	30-SEP-11
Nickel (Ni)		14.3	13.2		mg/kg	8.4	30	30-SEP-11
Phosphorus (P)		710	700		mg/kg	1.4	30	30-SEP-11
Potassium (K)		466	441		mg/kg	5.7	40	30-SEP-11
Rubidium (Rb)		3.36	3.40		mg/kg	1.3	30	30-SEP-11
Selenium (Se)		0.95	0.93		mg/kg	2.7	30	30-SEP-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	30-SEP-11
Sodium (Na)		85	82		mg/kg	2.8	40	30-SEP-11
Strontium (Sr)		17.8	16.6		mg/kg	7.0	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		78.0	83.4		mg/kg	6.7	40	30-SEP-11
Tungsten (W)		0.136	0.125		mg/kg	8.3	30	30-SEP-11
Uranium (U)		0.278	0.273		mg/kg	1.9	30	30-SEP-11
Vanadium (V)		9.96	9.50		mg/kg	4.8	30	30-SEP-11
Zinc (Zn)		117	113		mg/kg	3.2	30	30-SEP-11
Zirconium (Zr)		3.16	2.95		mg/kg	7.0	30	30-SEP-11
WG1359926-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	30-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	30-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	30-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	30-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	30-SEP-11
Boron (B)			<1.0		mg/kg		1	30-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	30-SEP-11
Calcium (Ca)			<100		mg/kg		100	30-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	30-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	30-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	30-SEP-11
Copper (Cu)			<1.0		mg/kg		1	30-SEP-11
Iron (Fe)			<25		mg/kg		25	30-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	30-SEP-11
Magnesium (Mg)			<10		mg/kg		10	30-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	30-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	30-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	30-SEP-11
Phosphorus (P)			<100		mg/kg		100	30-SEP-11
Potassium (K)			<25		mg/kg		25	30-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	30-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	30-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	30-SEP-11
Sodium (Na)			<10		mg/kg		10	30-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	30-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	30-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	30-SEP-11
Tin (Sn)			<5.0		mg/kg		5	30-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	30-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	30-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	30-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	30-SEP-11
Zinc (Zn)			<10		mg/kg		10	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Zirconium (Zr)			<0.10		mg/kg		0.1	30-SEP-11
N-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Nitrogen by LECO		3.19	3.18	J	%	0.012	0.05	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360057-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	04-OCT-11
WG1359965-3 DUP		**L1062761-6**						
Phosphorus, Total		1160	1140		mg/kg	1.5	30	04-OCT-11
WG1359965-5 DUP		**L1062767-9**						
Phosphorus, Total		520	535		mg/kg	2.8	30	04-OCT-11
WG1359965-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062716 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062716 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	16-SEP-11 14:50	05-OCT-11 00:00	14	18	days	EHT
	2	16-SEP-11 15:00	05-OCT-11 00:00	14	18	days	EHT
	3	16-SEP-11 15:05	05-OCT-11 00:00	14	18	days	EHT
	4	16-SEP-11 13:30	05-OCT-11 00:00	14	18	days	EHT
	5	16-SEP-11 13:45	05-OCT-11 00:00	14	18	days	EHT
	6	16-SEP-11 13:50	05-OCT-11 00:00	14	18	days	EHT
	7	16-SEP-11 12:10	05-OCT-11 00:00	14	18	days	EHT
	8	16-SEP-11 12:15	05-OCT-11 00:00	14	18	days	EHT
	9	16-SEP-11 12:20	05-OCT-11 00:00	14	18	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	16-SEP-11 14:50	04-OCT-11 00:00	14	17	days	EHT
	2	16-SEP-11 15:00	04-OCT-11 00:00	14	17	days	EHT
	3	16-SEP-11 15:05	04-OCT-11 00:00	14	17	days	EHT
	4	16-SEP-11 13:30	04-OCT-11 00:00	14	17	days	EHT
	5	16-SEP-11 13:45	04-OCT-11 00:00	14	17	days	EHT
	6	16-SEP-11 13:50	04-OCT-11 00:00	14	17	days	EHT
	7	16-SEP-11 12:10	04-OCT-11 00:00	14	17	days	EHT
	8	16-SEP-11 12:15	04-OCT-11 00:00	14	17	days	EHT
	9	16-SEP-11 12:20	04-OCT-11 00:00	14	17	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 L1062716 were received on 23-SEP-11 15:00.

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

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

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

ALS Environmental

L1062716-COFC

stody / Analytical Request Form
Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 16

L1062716

Page 1 of 1

Report To		Distribution				Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard	☐ Other			◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com			○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212435			
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:		Sampler:		

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible)					Number of Containers
	STL-01A	16-Sep-11	14:50	Sediment	X	X	X	X	X	X	X	X					2
	STL-01B	16-Sep-11	15:00	Sediment	X	X	X	X	X	X	X						1
	STL-01C	16-Sep-11	15:05	Sediment	X	X	X	X	X	X	X						1
	STL-02A	16-Sep-11	13:30	Sediment	X	X	X	X	X	X	X	X					2
	STL-02B	16-Sep-11	13:45	Sediment	X	X	X	X	X	X	X						1
	STL-02C	16-Sep-11	13:50	Sediment	X	X	X	X	X	X	X						1
	STL-03A	16-Sep-11	12:10	Sediment	X	X	X	X	X	X	X	X					2
	STL-03B	16-Sep-11	12:15	Sediment	X	X	X	X	X	X	X						1
	STL-03C	16-Sep-11	12:20	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23Sep11	10:17		23SEP11	1500	01 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:32 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062730

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062730-1 THL-01A							
Sampled By: CLIENT on 15-SEP-11 @ 09:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.27		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	34.8		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	2.23		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	35.1		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.121		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	98.3		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.39		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	787		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	5.54	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	82.8	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	11.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	3200		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.29		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	17.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	96.8		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.138		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	10.6		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.804		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	9260		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.391		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	5.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	3.67		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	20.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	8130		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	22.9		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1700		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	250		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.755		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	9.25		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	840		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	710		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.88		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.13		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.13		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	142		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	22.3		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	113		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.157		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.262		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	9.23		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-1 THL-01A							
Sampled By: CLIENT on 15-SEP-11 @ 09:30							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	154		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.89		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-2 THL-01B							
Sampled By: CLIENT on 15-SEP-11 @ 09:40							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	35.6		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.22		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	35.8		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.140		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	98.2		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.51		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	977		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2620		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.27		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	16.2		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	68.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.184		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	8.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.886		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	8790		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.347		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	5.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	3.32		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	19.6		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	4990		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	26.9		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1530		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	114		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.836		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	10.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	900		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	538		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.29		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.06		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	142		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	21.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	79.2		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.196		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.246		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	7.78		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-2 THL-01B							
Sampled By: CLIENT on 15-SEP-11 @ 09:40							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	127		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	1.68		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-3 THL-01C							
Sampled By: CLIENT on 15-SEP-11 @ 09:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	36.5		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.21		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	36.7		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.056		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.5		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.58		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	794		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	3340		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	14.1		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	108		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.060		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	9.0		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.424		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	8940		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.385		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	8.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	3.41		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	16.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	7280		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	6.82		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1750		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	160		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	1.20		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	10.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	650		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	734		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	5.71		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	0.99		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	162		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	30.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	141		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.106		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.400		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	10.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-3 THL-01C							
Sampled By: CLIENT on 15-SEP-11 @ 09:45							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	87		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.97		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-4 THL-02A							
Sampled By: CLIENT on 15-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	33.6		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.37		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	33.8		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.122		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.8		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.27		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	849		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	2.18	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	87.6	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	10.3	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	3800		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.38		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	23.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	77.1		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.17		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.218		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	11.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.893		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	8590		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.399		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	6.7		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	4.60		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	19.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	12300		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	23.2		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1510		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	216		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.927		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	10.3		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	830		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	642		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	5.04		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.29		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	144		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	21.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-4 THL-02A							
Sampled By: CLIENT on 15-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	98.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.139		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.367		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	12.9		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	118		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	3.29		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-5 THL-02B							
Sampled By: CLIENT on 15-SEP-11 @ 10:35							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	33.2		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.29		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	33.3		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.131		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	97.7		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.19		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	885		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	3280		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.39		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	17.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	70.5		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.182		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	9.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.902		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	8010		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.338		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	7.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	4.23		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	20.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	10400		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	22.1		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1440		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	197		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.818		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	10.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	880		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	541		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	4.42		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.37		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.13		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	133		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	19.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062730-5 THL-02B							
Sampled By: CLIENT on 15-SEP-11 @ 10:35							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	94.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.156		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.302		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	10.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	127		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	2.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062730-6 THL-02C							
Sampled By: CLIENT on 15-SEP-11 @ 10:40							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	33.6		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.32		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	33.8		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.132		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.6		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.29		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	878		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	3190		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.35		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	20.0		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	85.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.13		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.189		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	10.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.872		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	9010		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.346		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	5.3		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	4.18		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	21.7		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	13300		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	22.7		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1440		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	240		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.828		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	9.63		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	880		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	618		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.38		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.25		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	121		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	21.5		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-6 THL-02C							
Sampled By: CLIENT on 15-SEP-11 @ 10:40							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	90.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.182		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.332		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	10.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	119		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.61		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-7 THL-03A							
Sampled By: CLIENT on 15-SEP-11 @ 11:40							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.19		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	34.5		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.55		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	34.7		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.100		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.5		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.16		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	760		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	2.47	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	84.3	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	13.2	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	3860		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.27		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	18.7		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	88.2		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.13		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.151		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	8.4		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.636		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	8400		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.461		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	12.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	4.14		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	14.4		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	8410		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	15.3		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1790		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	173		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.812		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	11.6		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-7 THL-03A							
Sampled By: CLIENT on 15-SEP-11 @ 11:40							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	700		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	665		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	6.01		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.25		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	133		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	23.2		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	127		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.116		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.321		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	11.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	87		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.76		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062730-8 THL-03B							
Sampled By: CLIENT on 15-SEP-11 @ 11:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.17		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	34.7		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.44		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	34.9		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.096		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	97.5		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.26		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	820		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	3640		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.26		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	16.9		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	95.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.124		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	8.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.701		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9070		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.431		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	8.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	3.74		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	14.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	9220		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	18.7		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1710		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	223		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.649		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	8.79		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062730-8 THL-03B							
Sampled By: CLIENT on 15-SEP-11 @ 11:45							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	650		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	726		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	5.55		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.06		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	132		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	21.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	131		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.135		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.293		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	11.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	87		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	2.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062730-9 THL-03C							
Sampled By: CLIENT on 15-SEP-11 @ 11:50							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.22		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	35.3		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.82		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	35.5		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.098		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.8		0.10	%	05-OCT-11	05-OCT-11	R2263660
Total Nitrogen by LECO	3.47		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	950		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2710		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.25		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	15.7		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	80.4		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.12		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.151		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	9.4		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.721		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	8230		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.329		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	4.9		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	3.19		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	15.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	7350		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	18.1		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	1510		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	154		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.694		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	8.05		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062730-9 THL-03C							
Sampled By: CLIENT on 15-SEP-11 @ 11:50							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	910		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	580		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	4.18		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.08		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	135		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	22.4		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	79.5		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.127		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.260		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	9.30		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	99		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zirconium (Zr)	2.17		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062730 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2263335								
WG1360092-1 DUP		**L1062730-3**						
Inorganic Carbon		0.15	0.18		%	22	30	04-OCT-11
CaCO3 Equivalent		1.21	1.52		%	22	25	04-OCT-11
WG1360092-2 IRM		**0.4%IC**						
Inorganic Carbon			0.45		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.73		%		2.33-4.33	04-OCT-11
WG1360092-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Carbon by Combustion		33.3	33.1		%	0.60	10	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360057-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367458-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			107		%		70-130	12-OCT-11
WG1367458-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			97		%		70-130	12-OCT-11
WG1367458-4 DUP		**L1062716-1**						
Mercury (Hg)-Total		0.119	0.116		mg/kg	2.8	40	12-OCT-11
WG1367458-5 DUP		**L1062761-1**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367458-5 DUP		**L1062761-1**						
Mercury (Hg)-Total		0.126	0.123		mg/kg	3.0	40	12-OCT-11
WG1367458-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

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99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

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Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

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Winnipeg MB R3P 0Y7
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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

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Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	30-SEP-11
Antimony (Sb)			116		%		70-130	30-SEP-11
Arsenic (As)			99		%		70-130	30-SEP-11
Barium (Ba)			84		%		70-130	30-SEP-11
Beryllium (Be)			85		%		70-130	30-SEP-11
Boron (B)			94		%		70-130	30-SEP-11
Cadmium (Cd)			103		%		70-130	30-SEP-11
Calcium (Ca)			99		%		70-130	30-SEP-11
Chromium (Cr)			95		%		70-130	30-SEP-11
Cobalt (Co)			94		%		70-130	30-SEP-11
Copper (Cu)			104		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			96		%		70-130	30-SEP-11
Magnesium (Mg)			90		%		70-130	30-SEP-11
Manganese (Mn)			94		%		70-130	30-SEP-11
Molybdenum (Mo)			104		%		70-130	30-SEP-11
Nickel (Ni)			90		%		70-130	30-SEP-11
Phosphorus (P)			94		%		70-130	30-SEP-11
Potassium (K)			86		%		70-130	30-SEP-11
Selenium (Se)			98		%		70-130	30-SEP-11
Silver (Ag)			114		%		70-130	30-SEP-11
Sodium (Na)			86		%		70-130	30-SEP-11
Strontium (Sr)			103		%		70-130	30-SEP-11
Thallium (Tl)			91		%		70-130	30-SEP-11
Tin (Sn)			105		%		70-130	30-SEP-11
Titanium (Ti)			103		%		70-130	30-SEP-11
Uranium (U)			85		%		70-130	30-SEP-11
Vanadium (V)			100		%		70-130	30-SEP-11
Zinc (Zn)			93		%		70-130	30-SEP-11
WG1359926-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-3 CRM		**NRC MESS-3**						
Antimony (Sb)			92		%		70-130	30-SEP-11
Arsenic (As)			94		%		70-130	30-SEP-11
Barium (Ba)			96		%		70-130	30-SEP-11
Beryllium (Be)			75		%		70-130	30-SEP-11
Cadmium (Cd)			88		%		70-130	30-SEP-11
Calcium (Ca)			106		%		70-130	30-SEP-11
Chromium (Cr)			81		%		70-130	30-SEP-11
Cobalt (Co)			98		%		70-130	30-SEP-11
Copper (Cu)			100		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			89		%		70-130	30-SEP-11
Magnesium (Mg)			88		%		70-130	30-SEP-11
Manganese (Mn)			104		%		70-130	30-SEP-11
Molybdenum (Mo)			100		%		70-130	30-SEP-11
Nickel (Ni)			99		%		70-130	30-SEP-11
Phosphorus (P)			88		%		70-130	30-SEP-11
Potassium (K)			75		%		70-130	30-SEP-11
Selenium (Se)			118		%		70-130	30-SEP-11
Silver (Ag)			108		%		70-130	30-SEP-11
Sodium (Na)			99		%		70-130	30-SEP-11
Strontium (Sr)			97		%		70-130	30-SEP-11
Tin (Sn)			109		%		70-130	30-SEP-11
Uranium (U)			86		%		70-130	30-SEP-11
Vanadium (V)			74		%		70-130	30-SEP-11
Zinc (Zn)			98		%		70-130	30-SEP-11
WG1359926-5 DUP		**WG1359926-4**						
Aluminum (Al)		4610	4150		mg/kg	10	40	30-SEP-11
Antimony (Sb)		0.36	0.35		mg/kg	0.93	30	30-SEP-11
Arsenic (As)		15.4	13.5		mg/kg	13	30	30-SEP-11
Barium (Ba)		55.8	52.9		mg/kg	5.4	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.120	0.112		mg/kg	6.9	30	30-SEP-11
Boron (B)		4.5	3.7		mg/kg	19	30	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-5 DUP		**WG1359926-4**						
Cadmium (Cd)		7.99	7.73		mg/kg	3.4	30	30-SEP-11
Calcium (Ca)		2930	2740		mg/kg	6.8	30	30-SEP-11
Cesium (Cs)		0.337	0.292		mg/kg	14	30	30-SEP-11
Chromium (Cr)		8.8	7.9		mg/kg	11	30	30-SEP-11
Cobalt (Co)		134	124		mg/kg	8.3	30	30-SEP-11
Copper (Cu)		640	636		mg/kg	0.62	30	30-SEP-11
Iron (Fe)		46100	45700		mg/kg	0.91	30	30-SEP-11
Lead (Pb)		18.5	17.4		mg/kg	6.5	40	30-SEP-11
Magnesium (Mg)		1340	1220		mg/kg	9.1	30	30-SEP-11
Manganese (Mn)		114	104		mg/kg	9.1	30	30-SEP-11
Molybdenum (Mo)		0.804	0.830		mg/kg	3.3	40	30-SEP-11
Nickel (Ni)		36.4	33.5		mg/kg	8.3	30	30-SEP-11
Phosphorus (P)		510	460		mg/kg	10	30	30-SEP-11
Potassium (K)		483	406		mg/kg	17	40	30-SEP-11
Rubidium (Rb)		4.09	3.66		mg/kg	11	30	30-SEP-11
Selenium (Se)		3.09	2.64		mg/kg	16	30	30-SEP-11
Silver (Ag)		0.22	0.20		mg/kg	12	40	30-SEP-11
Sodium (Na)		210	209		mg/kg	0.46	40	30-SEP-11
Strontium (Sr)		10.1	10.1		mg/kg	0.39	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		0.11	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		167	138		mg/kg	19	40	30-SEP-11
Tungsten (W)		0.117	0.120		mg/kg	2.4	30	30-SEP-11
Uranium (U)		0.595	0.568		mg/kg	4.7	30	30-SEP-11
Vanadium (V)		15.0	13.6		mg/kg	10	30	30-SEP-11
Zinc (Zn)		9060	8750		mg/kg	3.6	30	30-SEP-11
Zirconium (Zr)		1.77	1.66		mg/kg	6.1	30	30-SEP-11
WG1359926-7 DUP		**WG1359926-6**						
Aluminum (Al)		4040	3980		mg/kg	1.4	40	30-SEP-11
Antimony (Sb)		0.16	0.17		mg/kg	8.9	30	30-SEP-11
Arsenic (As)		19.8	18.9		mg/kg	4.6	30	30-SEP-11
Barium (Ba)		60.9	61.6		mg/kg	1.2	40	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-7 DUP		**WG1359926-6**						
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.113	0.093		mg/kg	19	30	30-SEP-11
Boron (B)		8.3	8.4		mg/kg	1.6	30	30-SEP-11
Cadmium (Cd)		0.656	0.609		mg/kg	7.4	30	30-SEP-11
Calcium (Ca)		10100	10400		mg/kg	3.4	30	30-SEP-11
Cesium (Cs)		0.364	0.336		mg/kg	7.9	30	30-SEP-11
Chromium (Cr)		13.2	11.7		mg/kg	12	30	30-SEP-11
Cobalt (Co)		6.71	6.28		mg/kg	6.6	30	30-SEP-11
Copper (Cu)		16.3	16.3		mg/kg	0.16	30	30-SEP-11
Iron (Fe)		19100	18200		mg/kg	4.8	30	30-SEP-11
Lead (Pb)		10.3	9.93		mg/kg	3.2	40	30-SEP-11
Magnesium (Mg)		1370	1360		mg/kg	0.98	30	30-SEP-11
Manganese (Mn)		325	321		mg/kg	1.3	30	30-SEP-11
Molybdenum (Mo)		0.953	0.936		mg/kg	1.8	40	30-SEP-11
Nickel (Ni)		14.3	13.2		mg/kg	8.4	30	30-SEP-11
Phosphorus (P)		710	700		mg/kg	1.4	30	30-SEP-11
Potassium (K)		466	441		mg/kg	5.7	40	30-SEP-11
Rubidium (Rb)		3.36	3.40		mg/kg	1.3	30	30-SEP-11
Selenium (Se)		0.95	0.93		mg/kg	2.7	30	30-SEP-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	30-SEP-11
Sodium (Na)		85	82		mg/kg	2.8	40	30-SEP-11
Strontium (Sr)		17.8	16.6		mg/kg	7.0	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		78.0	83.4		mg/kg	6.7	40	30-SEP-11
Tungsten (W)		0.136	0.125		mg/kg	8.3	30	30-SEP-11
Uranium (U)		0.278	0.273		mg/kg	1.9	30	30-SEP-11
Vanadium (V)		9.96	9.50		mg/kg	4.8	30	30-SEP-11
Zinc (Zn)		117	113		mg/kg	3.2	30	30-SEP-11
Zirconium (Zr)		3.16	2.95		mg/kg	7.0	30	30-SEP-11
WG1359926-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	30-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	30-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	30-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	30-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	30-SEP-11
Boron (B)			<1.0		mg/kg		1	30-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	30-SEP-11
Calcium (Ca)			<100		mg/kg		100	30-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	30-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	30-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	30-SEP-11
Copper (Cu)			<1.0		mg/kg		1	30-SEP-11
Iron (Fe)			<25		mg/kg		25	30-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	30-SEP-11
Magnesium (Mg)			<10		mg/kg		10	30-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	30-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	30-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	30-SEP-11
Phosphorus (P)			<100		mg/kg		100	30-SEP-11
Potassium (K)			<25		mg/kg		25	30-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	30-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	30-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	30-SEP-11
Sodium (Na)			<10		mg/kg		10	30-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	30-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	30-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	30-SEP-11
Tin (Sn)			<5.0		mg/kg		5	30-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	30-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	30-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	30-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	30-SEP-11
Zinc (Zn)			<10		mg/kg		10	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Zirconium (Zr)			<0.10		mg/kg		0.1	30-SEP-11
N-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Nitrogen by LECO		3.19	3.18	J	%	0.012	0.05	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360057-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062730 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062730 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	15-SEP-11 09:30	05-OCT-11 00:00	14	20	days	EHT
	2	15-SEP-11 09:40	05-OCT-11 00:00	14	20	days	EHT
	3	15-SEP-11 09:45	05-OCT-11 00:00	14	20	days	EHT
	4	15-SEP-11 10:30	05-OCT-11 00:00	14	20	days	EHT
	5	15-SEP-11 10:35	05-OCT-11 00:00	14	20	days	EHT
	6	15-SEP-11 10:40	05-OCT-11 00:00	14	20	days	EHT
	7	15-SEP-11 11:40	05-OCT-11 00:00	14	20	days	EHT
	8	15-SEP-11 11:45	05-OCT-11 00:00	14	20	days	EHT
	9	15-SEP-11 11:50	05-OCT-11 00:00	14	20	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	15-SEP-11 09:30	04-OCT-11 00:00	14	19	days	EHT
	2	15-SEP-11 09:40	04-OCT-11 00:00	14	19	days	EHT
	3	15-SEP-11 09:45	04-OCT-11 00:00	14	19	days	EHT
	4	15-SEP-11 10:30	04-OCT-11 00:00	14	19	days	EHT
	5	15-SEP-11 10:35	04-OCT-11 00:00	14	19	days	EHT
	6	15-SEP-11 10:40	04-OCT-11 00:00	14	19	days	EHT
	7	15-SEP-11 11:40	04-OCT-11 00:00	14	19	days	EHT
	8	15-SEP-11 11:45	04-OCT-11 00:00	14	19	days	EHT
	9	15-SEP-11 11:50	04-OCT-11 00:00	14	19	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 L1062730 were received on 23-SEP-11 15:00.

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

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

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

ALS Environment

Custody / Analytical Request Form
ada Toll Free: 1 800 668 9878
www.alsglobal.com

L1062730

COC # 8

Page 1 of 1

Report To		Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3: mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 60213483	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible)					Number of Containers
	THL-01A	15-Sep-11	9:30	Sediment	X	X	X	X	X	X	X	X					2
	THL-01B	15-Sep-11	9:40	Sediment	X	X	X	X	X	X	X						1
	THL-01C	15-Sep-11	9:45	Sediment	X	X	X	X	X	X	X						1
	THL-02A	15-Sep-11	10:30	Sediment	X	X	X	X	X	X	X	X					2
	THL-02B	15-Sep-11	10:35	Sediment	X	X	X	X	X	X	X						1
	THL-02C	15-Sep-11	10:40	Sediment	X	X	X	X	X	X	X						1
	THL-03A	15-Sep-11	11:40	Sediment	X	X	X	X	X	X	X	X					2
	THL-03B	15-Sep-11	11:45	Sediment	X	X	X	X	X	X	X						1
	THL-03C	15-Sep-11	11:50	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	22-Sep-11	14:35		23 Sept/11	5:00	20.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:33 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062732

Project P.O. #: NOT SUBMITTED
Job Reference: 60212443
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062732-1 GHL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 10:13							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	32.4		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.34		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	32.6		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.087		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.3		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.87		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	529		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	2.82	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	77.9	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	19.3	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	4690		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.24		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	39.5		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	98.1		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.101		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	8.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.380		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	9800		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.471		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	8.3		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	5.15		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	25.2		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	5570		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	7.25		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	2110		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	166		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	1.28		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	12.6		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	550		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	563		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	5.67		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.11		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	161		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	35.2		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	170		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.062		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.528		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	12.6		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	71		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062732-1 GHL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 10:13							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.17		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062732-2 GHL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 10:25							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2263335
Total Organic Carbon	27.6		0.10	%	04-OCT-11	04-OCT-11	R2263335
CaCO3 Equivalent	1.36		0.70	%	04-OCT-11	04-OCT-11	R2263335
Total Carbon by combustion method							
Total Carbon by Combustion	27.8		0.1	%	01-OCT-11	01-OCT-11	R2263333
Miscellaneous Parameters							
Mercury (Hg)-Total	0.146		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.7		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.55		0.020	%	01-OCT-11	01-OCT-11	R2263333
Phosphorus, Total	785		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	4600		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.41		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	45.4		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	84.2		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.14		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.188		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	8.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	0.936		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	9150		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.449		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	8.1		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	6.11		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	32.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	8120		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	27.2		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	2300		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	178		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	0.956		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	11.9		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	710		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	629		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	5.64		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.21		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.18		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	125		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	25.9		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	148		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.133		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.440		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	13.0		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	358		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062732-2 GHL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 10:25							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	2.62		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062732-3 GHL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 10:33							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.13		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	31.0		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.08		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	31.1		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.147		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.4		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.80		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	744		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	5430		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Antimony (Sb)	0.51		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Arsenic (As)	44.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Barium (Ba)	93.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Beryllium (Be)	0.13		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Bismuth (Bi)	0.230		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Boron (B)	8.8		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cadmium (Cd)	1.06		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Calcium (Ca)	9050		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cesium (Cs)	0.563		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Chromium (Cr)	9.5		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Cobalt (Co)	6.33		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Copper (Cu)	33.1		1.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Iron (Fe)	8640		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Lead (Pb)	31.7		0.20	mg/kg	29-SEP-11	30-SEP-11	R2262196
Magnesium (Mg)	2530		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Manganese (Mn)	201		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Molybdenum (Mo)	1.07		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Nickel (Ni)	13.2		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Phosphorus (P)	680		100	mg/kg	29-SEP-11	30-SEP-11	R2262196
Potassium (K)	756		25	mg/kg	29-SEP-11	30-SEP-11	R2262196
Rubidium (Rb)	7.63		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Selenium (Se)	1.21		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Silver (Ag)	0.22		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Sodium (Na)	119		10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Strontium (Sr)	27.6		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tellurium (Te)	0.11		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	30-SEP-11	R2262196
Titanium (Ti)	198		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Tungsten (W)	0.154		0.050	mg/kg	29-SEP-11	30-SEP-11	R2262196
Uranium (U)	0.488		0.020	mg/kg	29-SEP-11	30-SEP-11	R2262196
Vanadium (V)	15.7		0.50	mg/kg	29-SEP-11	30-SEP-11	R2262196
Zinc (Zn)	230		10	mg/kg	29-SEP-11	30-SEP-11	R2262196

* 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
L1062732-3 GHL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 10:33							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	3.56		0.10	mg/kg	29-SEP-11	30-SEP-11	R2262196
L1062732-4 GHL-02A							
Sampled By: CLIENT on 14-SEP-11 @ 11:05							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.22		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	32.6		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.87		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	32.8		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.060		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.6		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.97		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	599		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.22	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	79.0	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	19.8	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	4690		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	37.9		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	71.0		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.13		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.030		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	7.7		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.278		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	8510		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.390		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	8.3		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	5.21		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	27.4		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5590		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	2.41		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	1780		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	135		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	1.23		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	11.7		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	630		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	537		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	5.03		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.17		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	188		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	31.3		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062732-4 GHL-02A							
Sampled By: CLIENT on 14-SEP-11 @ 11:05							
Matrix: SEDIMENT							
Metals							
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	89.0		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.055		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.558		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	12.4		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	68		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	1.05		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062732-5 GHL-02B							
Sampled By: CLIENT on 14-SEP-11 @ 11:14							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	31.9		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.33		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	32.1		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.164		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.6		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.03		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	943		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	5170		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.62		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	48.8		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	72.4		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.15		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.274		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	9.1		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	1.08		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	8930		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.482		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	8.8		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.57		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	38.8		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	8840		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	33.4		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	2180		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	187		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	1.18		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	12.9		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	790		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	681		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	6.22		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.45		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	0.22		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	166		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	26.8		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062732-5 GHL-02B							
Sampled By: CLIENT on 14-SEP-11 @ 11:14							
Matrix: SEDIMENT							
Metals							
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	148		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.144		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.551		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	13.8		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	246		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	2.98		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062732-6 GHL-02C							
Sampled By: CLIENT on 14-SEP-11 @ 11:23							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	32.4		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.16		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	32.6		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.138		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.9		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.92		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	668		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	5220		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.51		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	46.6		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	75.4		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.11		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.321		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	7.6		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.898		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	8950		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.499		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	9.5		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.32		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	31.7		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	8250		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	24.5		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	2090		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	175		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	1.15		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	13.1		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	610		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	621		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	6.43		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.27		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	0.11		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	151		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	28.0		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062732-6 GHL-02C							
Sampled By: CLIENT on 14-SEP-11 @ 11:23							
Matrix: SEDIMENT							
Metals							
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	143		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.094		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.529		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	14.0		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	112		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	2.99		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062732-7 GHL-03A							
Sampled By: CLIENT on 14-SEP-11 @ 12:51							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	33.1		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.20		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	33.2		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.166		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.6		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.03		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	727		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.72	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	89.2	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	9.09	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	4750		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.53		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	44.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	67.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.12		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.229		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	9.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	1.19		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	9240		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.405		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	9.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	5.54		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	39.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	7850		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	36.3		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	2130		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	174		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	1.07		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	11.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	710		100	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062732-7 GHL-03A							
Sampled By: CLIENT on 14-SEP-11 @ 12:51							
Matrix: SEDIMENT							
Metals							
Potassium (K)	586		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	4.71		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.40		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.23		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	188		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	26.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	130		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.145		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.519		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	12.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	365		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	2.34		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062732-8 GHL-03B							
Sampled By: CLIENT on 14-SEP-11 @ 12:58							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.13		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	33.3		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.08		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	33.4		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.097		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	97.2		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.99		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	619		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	3900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.35		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	29.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	68.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.311		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	6.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.528		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7970		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.372		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	8.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	3.79		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	22.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	5400		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	12.7		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1580		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	156		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.957		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	10.0		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	450		100	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062732-8 GHL-03B							
Sampled By: CLIENT on 14-SEP-11 @ 12:58							
Matrix: SEDIMENT							
Metals							
Potassium (K)	419		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	4.47		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.97		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	137		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	26.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	121		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.055		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.449		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	10.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	60		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	2.62		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062732-9 GHL-03C							
Sampled By: CLIENT on 14-SEP-11 @ 13:03							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.22		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	33.0		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.81		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	33.2		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.054		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	97.1		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.95		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	535		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	4300		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	31.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	75.9		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.12		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.029		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	6.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.243		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	8240		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.409		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	9.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	3.94		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	25.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	5250		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	2.57		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1780		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	138		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	1.22		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	10.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	450		100	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062732-9 GHL-03C							
Sampled By: CLIENT on 14-SEP-11 @ 13:03							
Matrix: SEDIMENT							
Metals							
Potassium (K)	512		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	5.41		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.02		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	177		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	31.1		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	152		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	<0.050		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.576		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	11.9		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	61		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	2.09		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062732 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2263335								
WG1360092-1 DUP		**L1062730-3**						
Inorganic Carbon		0.15	0.18		%	22	30	04-OCT-11
CaCO3 Equivalent		1.21	1.52		%	22	25	04-OCT-11
WG1360092-2 IRM		**0.4%IC**						
Inorganic Carbon			0.45		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.73		%		2.33-4.33	04-OCT-11
WG1360092-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
Batch R2264114								
WG1360093-1 DUP		**L1062760-6**						
Inorganic Carbon		0.12	0.12		%	0.71	30	04-OCT-11
CaCO3 Equivalent		1.02	1.02		%	0.71	25	04-OCT-11
WG1360093-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.68		%		2.33-4.33	04-OCT-11
WG1360093-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Carbon by Combustion		33.3	33.1		%	0.60	10	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360057-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Carbon by Combustion		31.6	31.5		%	0.28	10	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360059-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
HG-200.2-CVAF-WP	**Soil**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367458-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			107		%		70-130	12-OCT-11
WG1367458-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			97		%		70-130	12-OCT-11
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367458-4 DUP		**L1062716-1**						
Mercury (Hg)-Total		0.119	0.116		mg/kg	2.8	40	12-OCT-11
WG1367458-5 DUP		**L1062761-1**						
Mercury (Hg)-Total		0.126	0.123		mg/kg	3.0	40	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367458-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	30-SEP-11
Antimony (Sb)			116		%		70-130	30-SEP-11
Arsenic (As)			99		%		70-130	30-SEP-11
Barium (Ba)			84		%		70-130	30-SEP-11
Beryllium (Be)			85		%		70-130	30-SEP-11
Boron (B)			94		%		70-130	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Cadmium (Cd)			103		%		70-130	30-SEP-11
Calcium (Ca)			99		%		70-130	30-SEP-11
Chromium (Cr)			95		%		70-130	30-SEP-11
Cobalt (Co)			94		%		70-130	30-SEP-11
Copper (Cu)			104		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			96		%		70-130	30-SEP-11
Magnesium (Mg)			90		%		70-130	30-SEP-11
Manganese (Mn)			94		%		70-130	30-SEP-11
Molybdenum (Mo)			104		%		70-130	30-SEP-11
Nickel (Ni)			90		%		70-130	30-SEP-11
Phosphorus (P)			94		%		70-130	30-SEP-11
Potassium (K)			86		%		70-130	30-SEP-11
Selenium (Se)			98		%		70-130	30-SEP-11
Silver (Ag)			114		%		70-130	30-SEP-11
Sodium (Na)			86		%		70-130	30-SEP-11
Strontium (Sr)			103		%		70-130	30-SEP-11
Thallium (Tl)			91		%		70-130	30-SEP-11
Tin (Sn)			105		%		70-130	30-SEP-11
Titanium (Ti)			103		%		70-130	30-SEP-11
Uranium (U)			85		%		70-130	30-SEP-11
Vanadium (V)			100		%		70-130	30-SEP-11
Zinc (Zn)			93		%		70-130	30-SEP-11
WG1359926-3 CRM		**NRC MESS-3**						
Antimony (Sb)			92		%		70-130	30-SEP-11
Arsenic (As)			94		%		70-130	30-SEP-11
Barium (Ba)			96		%		70-130	30-SEP-11
Beryllium (Be)			75		%		70-130	30-SEP-11
Cadmium (Cd)			88		%		70-130	30-SEP-11
Calcium (Ca)			106		%		70-130	30-SEP-11
Chromium (Cr)			81		%		70-130	30-SEP-11
Cobalt (Co)			98		%		70-130	30-SEP-11
Copper (Cu)			100		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-3 CRM		**NRC MESS-3**						
Lead (Pb)			89		%		70-130	30-SEP-11
Magnesium (Mg)			88		%		70-130	30-SEP-11
Manganese (Mn)			104		%		70-130	30-SEP-11
Molybdenum (Mo)			100		%		70-130	30-SEP-11
Nickel (Ni)			99		%		70-130	30-SEP-11
Phosphorus (P)			88		%		70-130	30-SEP-11
Potassium (K)			75		%		70-130	30-SEP-11
Selenium (Se)			118		%		70-130	30-SEP-11
Silver (Ag)			108		%		70-130	30-SEP-11
Sodium (Na)			99		%		70-130	30-SEP-11
Strontium (Sr)			97		%		70-130	30-SEP-11
Tin (Sn)			109		%		70-130	30-SEP-11
Uranium (U)			86		%		70-130	30-SEP-11
Vanadium (V)			74		%		70-130	30-SEP-11
Zinc (Zn)			98		%		70-130	30-SEP-11
WG1359926-5 DUP		**WG1359926-4**						
Aluminum (Al)		4610	4150		mg/kg	10	40	30-SEP-11
Antimony (Sb)		0.36	0.35		mg/kg	0.93	30	30-SEP-11
Arsenic (As)		15.4	13.5		mg/kg	13	30	30-SEP-11
Barium (Ba)		55.8	52.9		mg/kg	5.4	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.120	0.112		mg/kg	6.9	30	30-SEP-11
Boron (B)		4.5	3.7		mg/kg	19	30	30-SEP-11
Cadmium (Cd)		7.99	7.73		mg/kg	3.4	30	30-SEP-11
Calcium (Ca)		2930	2740		mg/kg	6.8	30	30-SEP-11
Cesium (Cs)		0.337	0.292		mg/kg	14	30	30-SEP-11
Chromium (Cr)		8.8	7.9		mg/kg	11	30	30-SEP-11
Cobalt (Co)		134	124		mg/kg	8.3	30	30-SEP-11
Copper (Cu)		640	636		mg/kg	0.62	30	30-SEP-11
Iron (Fe)		46100	45700		mg/kg	0.91	30	30-SEP-11
Lead (Pb)		18.5	17.4		mg/kg	6.5	40	30-SEP-11
Magnesium (Mg)		1340	1220		mg/kg	9.1	30	30-SEP-11
Manganese (Mn)		114	104		mg/kg	9.1	30	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-5 DUP		**WG1359926-4**						
Molybdenum (Mo)		0.804	0.830		mg/kg	3.3	40	30-SEP-11
Nickel (Ni)		36.4	33.5		mg/kg	8.3	30	30-SEP-11
Phosphorus (P)		510	460		mg/kg	10	30	30-SEP-11
Potassium (K)		483	406		mg/kg	17	40	30-SEP-11
Rubidium (Rb)		4.09	3.66		mg/kg	11	30	30-SEP-11
Selenium (Se)		3.09	2.64		mg/kg	16	30	30-SEP-11
Silver (Ag)		0.22	0.20		mg/kg	12	40	30-SEP-11
Sodium (Na)		210	209		mg/kg	0.46	40	30-SEP-11
Strontium (Sr)		10.1	10.1		mg/kg	0.39	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		0.11	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		167	138		mg/kg	19	40	30-SEP-11
Tungsten (W)		0.117	0.120		mg/kg	2.4	30	30-SEP-11
Uranium (U)		0.595	0.568		mg/kg	4.7	30	30-SEP-11
Vanadium (V)		15.0	13.6		mg/kg	10	30	30-SEP-11
Zinc (Zn)		9060	8750		mg/kg	3.6	30	30-SEP-11
Zirconium (Zr)		1.77	1.66		mg/kg	6.1	30	30-SEP-11
WG1359926-7 DUP		**WG1359926-6**						
Aluminum (Al)		4040	3980		mg/kg	1.4	40	30-SEP-11
Antimony (Sb)		0.16	0.17		mg/kg	8.9	30	30-SEP-11
Arsenic (As)		19.8	18.9		mg/kg	4.6	30	30-SEP-11
Barium (Ba)		60.9	61.6		mg/kg	1.2	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.113	0.093		mg/kg	19	30	30-SEP-11
Boron (B)		8.3	8.4		mg/kg	1.6	30	30-SEP-11
Cadmium (Cd)		0.656	0.609		mg/kg	7.4	30	30-SEP-11
Calcium (Ca)		10100	10400		mg/kg	3.4	30	30-SEP-11
Cesium (Cs)		0.364	0.336		mg/kg	7.9	30	30-SEP-11
Chromium (Cr)		13.2	11.7		mg/kg	12	30	30-SEP-11
Cobalt (Co)		6.71	6.28		mg/kg	6.6	30	30-SEP-11
Copper (Cu)		16.3	16.3		mg/kg	0.16	30	30-SEP-11
Iron (Fe)		19100	18200		mg/kg	4.8	30	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-7 DUP		**WG1359926-6**						
Lead (Pb)		10.3	9.93		mg/kg	3.2	40	30-SEP-11
Magnesium (Mg)		1370	1360		mg/kg	0.98	30	30-SEP-11
Manganese (Mn)		325	321		mg/kg	1.3	30	30-SEP-11
Molybdenum (Mo)		0.953	0.936		mg/kg	1.8	40	30-SEP-11
Nickel (Ni)		14.3	13.2		mg/kg	8.4	30	30-SEP-11
Phosphorus (P)		710	700		mg/kg	1.4	30	30-SEP-11
Potassium (K)		466	441		mg/kg	5.7	40	30-SEP-11
Rubidium (Rb)		3.36	3.40		mg/kg	1.3	30	30-SEP-11
Selenium (Se)		0.95	0.93		mg/kg	2.7	30	30-SEP-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	30-SEP-11
Sodium (Na)		85	82		mg/kg	2.8	40	30-SEP-11
Strontium (Sr)		17.8	16.6		mg/kg	7.0	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		78.0	83.4		mg/kg	6.7	40	30-SEP-11
Tungsten (W)		0.136	0.125		mg/kg	8.3	30	30-SEP-11
Uranium (U)		0.278	0.273		mg/kg	1.9	30	30-SEP-11
Vanadium (V)		9.96	9.50		mg/kg	4.8	30	30-SEP-11
Zinc (Zn)		117	113		mg/kg	3.2	30	30-SEP-11
Zirconium (Zr)		3.16	2.95		mg/kg	7.0	30	30-SEP-11
WG1359926-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	30-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	30-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	30-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	30-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	30-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	30-SEP-11
Boron (B)			<1.0		mg/kg		1	30-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	30-SEP-11
Calcium (Ca)			<100		mg/kg		100	30-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	30-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Cobalt (Co)			<0.020		mg/kg		0.02	30-SEP-11
Copper (Cu)			<1.0		mg/kg		1	30-SEP-11
Iron (Fe)			<25		mg/kg		25	30-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	30-SEP-11
Magnesium (Mg)			<10		mg/kg		10	30-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	30-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	30-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	30-SEP-11
Phosphorus (P)			<100		mg/kg		100	30-SEP-11
Potassium (K)			<25		mg/kg		25	30-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	30-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	30-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	30-SEP-11
Sodium (Na)			<10		mg/kg		10	30-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	30-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	30-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	30-SEP-11
Tin (Sn)			<5.0		mg/kg		5	30-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	30-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	30-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	30-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	30-SEP-11
Zinc (Zn)			<10		mg/kg		10	30-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	30-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11
MOIST-SK	**Soil**							
Batch R2263672								
WG1360345-1 DUP		**L1062732-9**						
% Moisture		97.1	97.1		%	0.0064	25	05-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2263333								
WG1360057-1 DUP		**L1062730-5**						
Total Nitrogen by LECO		3.19	3.18	J	%	0.012	0.05	01-OCT-11
WG1360057-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360057-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOT-LECO-SK	**Soil**							
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Nitrogen by LECO		2.92	2.91	J	%	0.013	0.05	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360059-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062732 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062732 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	14-SEP-11 10:13	05-OCT-11 00:00	14	21	days	EHT
	2	14-SEP-11 10:25	05-OCT-11 00:00	14	21	days	EHT
	3	14-SEP-11 10:33	05-OCT-11 00:00	14	21	days	EHT
	4	14-SEP-11 11:05	05-OCT-11 00:00	14	21	days	EHT
	5	14-SEP-11 11:14	05-OCT-11 00:00	14	21	days	EHT
	6	14-SEP-11 11:23	05-OCT-11 00:00	14	21	days	EHT
	7	14-SEP-11 12:51	05-OCT-11 00:00	14	20	days	EHT
	8	14-SEP-11 12:58	05-OCT-11 00:00	14	20	days	EHT
	9	14-SEP-11 13:03	05-OCT-11 00:00	14	20	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	14-SEP-11 10:13	04-OCT-11 00:00	14	20	days	EHT
	2	14-SEP-11 10:25	04-OCT-11 00:00	14	20	days	EHT
	3	14-SEP-11 10:33	04-OCT-11 00:00	14	20	days	EHT
	4	14-SEP-11 11:05	04-OCT-11 00:00	14	20	days	EHT
	5	14-SEP-11 11:14	04-OCT-11 00:00	14	20	days	EHT
	6	14-SEP-11 11:23	04-OCT-11 00:00	14	20	days	EHT
	7	14-SEP-11 12:51	04-OCT-11 00:00	14	19	days	EHT
	8	14-SEP-11 12:58	04-OCT-11 00:00	14	19	days	EHT
	9	14-SEP-11 13:03	04-OCT-11 00:00	14	19	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 L1062732 were received on 23-SEP-11 15:00.

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

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

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

ALS Environmental

stody / Analytical Request Form
a Toll Free: 1 800 668 9878
www.alsglobal.com

L1062732

COC # 9

Page 1 of 1

L1062732-COFC

Report To		Distribution				Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	Standard	Other			◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com			○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212443			
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:		Sampler:		

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	GHL-01A	14-Sep-11	10:13	Sediment	X	X	X	X	X	X	X	X					2
	GHL-01B	14-Sep-11	10:25	Sediment	X	X	X	X	X	X	X						1
	GHL-01C	14-Sep-11	10:33	Sediment	X	X	X	X	X	X	X						1
	GHL-02A	14-Sep-11	11:05	Sediment	X	X	X	X	X	X	X	X					2
	GHL-02B	14-Sep-11	11:14	Sediment	X	X	X	X	X	X	X						1
	GHL-02C	14-Sep-11	11:23	Sediment	X	X	X	X	X	X	X						1
	GHL-03A	14-Sep-11	12:51	Sediment	X	X	X	X	X	X	X	X					2
	GHL-03B	14-Sep-11	12:58	Sediment	X	X	X	X	X	X	X						1
	GHL-03C	14-Sep-11	13:03	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	22-Sep-11	14:32		23Sept11	15:00	20.5 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-MAR-12 14:09 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062734

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062734-1 STL-01A Sampled By: CLIENT on 16-SEP-11 @ 14:50 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062734-2 STL-02A Sampled By: CLIENT on 16-SEP-11 @ 13:30 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062734-3 STL-03A Sampled By: CLIENT on 16-SEP-11 @ 12:10 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062734-4 STC-02A Sampled By: CLIENT on 15-SEP-11 @ 16:12 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062734-5 STC-03B Sampled By: CLIENT on 15-SEP-11 @ 15:10 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062734 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062734 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-1 **Work Order:** L1062734

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		47	0	0	47

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-2 **Work Order:** L1062734

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STL-02A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		163	0	0	163

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-3 **Work Order:** L1062734

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STL-03A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		18	0	0	18
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		5	0	0	5

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-4 **Work Order:** L1062734

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STC-02A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
GASTROPODA			*unidentified*	*damaged*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		3	0	0	3
INSECTA	*EPHEMEROPTERA*		*unidentified*	*damaged*	1	0	0	1
INSECTA	*ODONATA - ANISOP*	*GOMPHIDAE*	*unidentified*	*too young to ID*	1	0	0	1

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-5 **Work Order:** L1062734

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STC-03B	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Glossiphonia*	*sp.*	0	0	0	1
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Helobdella*	*stagnalis*	0	0	0	1
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*	*Nais*	*sp.*	0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*	*nymph*	2	0	0	2
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	10
CRUSTACEA	*CLADOCERA*				0	0	0	7
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	94
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	10
CRUSTACEA	*OSTRACODA*				0	0	0	46
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Armiger*	*crista*	0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Gyraulus*	*sp.*	0	0	0	3
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*sincera*	0	0	0	3
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*tricarinata*	0	0	0	3
INSECTA	*COLEOPTERA*	*HALIPLIDAE*	*Haliplus*	*sp.*	1	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			22	0	0	22
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		14	0	0	14
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		5	0	0	5
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		51	0	0	51
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		33	0	0	33
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*unidentified pupa*		0	0	1	1

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062734-5 **Work Order:** L1062734

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STC-03B	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	56	0	0	56
INSECTA	*ODONATA-ANISOP*	*CORDULIIDAE*	*Epitheca*	*sp.*	1	0	0	1
INSECTA	*PLECOPTERA*		*unidentified nymph*	*too young to ID*	2	0	0	2
NEMATODA			*unidentified*		0	0	0	2

Date Printed: March 02, 2012

ALS Environmental

L10627734-COFC

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L10627734

COC # 13

Page 1 of 1

Report To		tribution	Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3: mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 60212435	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q24534	
Lab Work Order # (lab use only):		ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS	Number of Containers
	STL-01A	16-Sep-11	14:50	Sediment	X	2
	STL-02A	16-Sep-11	13:30	Sediment	X	2
	STL-03A	16-Sep-11	12:10	Sediment	X	2
	STC-02A	15-Sep-11	16:12	Sediment	X	3
	STC-03A B	15-Sep-11	15:10	Sediment	X	2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	10:23		23Sept11	1500	20.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-FEB-12 12:57 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062735

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062735-1 NTL-01A Sampled By: CLIENT on 14-SEP-11 @ 12:10 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062735-2 UL1-01A Sampled By: CLIENT on 14-SEP-11 @ 14:25 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062735-3 GSL-01A Sampled By: CLIENT on 14-SEP-11 @ 09:36 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062735-4 THL-01A Sampled By: CLIENT on 15-SEP-11 @ 09:30 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062735-5 THL-02A Sampled By: CLIENT on 15-SEP-11 @ 10:30 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062735-6 THL-03A Sampled By: CLIENT on 15-SEP-11 @ 11:50 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

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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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062735 Report Date: 02-FEB-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062735 Report Date: 02-FEB-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-1 **Work Order:** L1062735

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	NTL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	33
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	21
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			8	0	0	8
INSECTA	*DIPTERA*	*CHAOBORIDAE*	*Chaoborus*	*sp.*	2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		9	0	0	9
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*damaged*		0	0	0	3
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*Pisidium*	*sp.*	0	0	0	1

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-2 **Work Order:** L1062735

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	UL1-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	42
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*sincera var. ontariensis*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			5	0	0	5
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		88	0	0	88
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		12	0	0	12
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		1	0	0	1
INSECTA	*EPHEMEROPTERA*	*LEPTOPHLEBIIDAE*	*Paraleptophlebia*	*sp.*	1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*	*Oecetis*	*sp.*	3	0	0	3

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-3 **Work Order:** L1062735

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	GSL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*TROMBIDIFORMES*	*ARRENURIDAE*	*Arrenurus*	*sp.*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	2	0	0	2

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-4 **Work Order:** L1062735

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	THL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Placobdella*	*sp.*	0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		3	0	0	3

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-5 **Work Order:** L1062735

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT
Source:	60213483	**WQ Site #:**	THL-02A	**Sample ID**	

Station No

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062735-6 **Work Order:** L1062735

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	THL-03A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*CLADOCERA*				0	0	0	2
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*sincera var. ontariensis*	0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		22	0	0	22
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		7	0	0	7
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		8	0	0	8
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		2	0	0	2
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	2

Date Printed: February 02, 2012

ALS Environment

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 14

L1062735

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L1062735-COFC

Report To		: / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3: mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 60213483	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q24534	

Lab Work Order # (lab use only)	ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS	Number of Containers
	NTL-01A	14-Sep-11	12:10	Sediment	X	1
	UL1-01A	14-Sep-11	14:25	Sediment	X	1
	GSL-01A	14-Sep-11	9:36	Sediment	X	1
	THL-01A	15-Sep-11	9:30	Sediment	X	1
	THL-02A	15-Sep-11	10:30	Sediment	X	1
	THL-03A	15-Sep-11	11:50	Sediment	X	1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	10:27		23 Sept 11	15:00	20.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-MAR-12 14:09 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062756

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062756-1 STC-01A Sampled By: CLIENT on 16-SEP-11 @ 10:30 Matrix: SEDIMENT							
Miscellaneous Parameters							
Benthic Invertebrates	See attached		0		02-MAR-12	02-MAR-12	R2332508
Note: Entire sample sorted							

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

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Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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
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< - 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.
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Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1062756 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062756 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

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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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062756-1 **Work Order:** L1062756

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212435	**WQ Site #:**	STC-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*OSTRACODA*				0	0	0	2
INSECTA	*COLEOPTERA*	*PTILIDAE*	*unidentified*		0	1	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2

Date Printed: March 02, 2012

ALS Environmental

Chain of Custody / Analytical Request F
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

L10627560-COFC

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Page 1 of 1

Report To		Report Format / Distribution		Analysis Request
Company:	AECOM -W172	☐ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days) (subject to availability)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212435	
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only):		ALS Contact:	Sampler:	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS	P	Number of Containers
	STC-01A	16-Sep-11	10:30	Sediment	X		1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / Hazardous Details

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Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	10:26		23Sep11	1500	20.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-MAR-12 14:09 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062758

Project P.O. #: NOT SUBMITTED
Job Reference: 60212443
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062758-1 GHL-01A Sampled By: CLIENT on 14-SEP-11 @ 10:13 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062758-2 GHL-02A Sampled By: CLIENT on 14-SEP-11 @ 11:05 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062758-3 GHL-03A Sampled By: CLIENT on 14-SEP-11 @ 12:51 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

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Chain of Custody Numbers:

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D.L. - The reporting limit.
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Quality Control Report

Workorder: L1062758 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062758 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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

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ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062758-1 **Work Order:** L1062758

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212443	**WQ Site #:**	GHL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	2	0	0	2

Date Printed: March 02, 2012

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Benthic Sample Results

Lab Number: L1062758-2 **Work Order:** L1062758

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212443	**WQ Site #:**	GHL-02A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*TROMBIDIFORMES*	*UNIONICOLIDAE*	*Neumania*	*sp.*	0	0	0	1
NEMATODA			*unidentified*		0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	1

Date Printed: March 02, 2012

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Benthic Sample Results

Lab Number: L1062758-3 **Work Order:** L1062758

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60212443	**WQ Site #:**	GHL-03A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*TROMBIDIFORMES*	*LIMNESIIDAE*	*Limnesia*	*sp.*	0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1

Date Printed: March 02, 2012

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878
www.alsglobal.com

L1062758-COFC

Report To		Report Format / Distribution		Service Requested (Rush subje[ct to availability])
Company:	AECOM -W172	☑ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212443	P
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS												Number of Containers
	GHL-01A	14-Sep-11	10:13	Sediment	X												1
	GHL-02A	14-Sep-11	11:05	Sediment	X												1
	GHL-03A	14-Sep-11	12:51	Sediment	X												1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by: [signature]	Date (dd-mmm-yy) 23-Sep-11	Time (hh-mm) 09:42	Received by: [signature]	Date: 23Sept11	Time: 1500	Temperature: 20.6 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-FEB-12 12:57 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062759

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062759-1 ANB-04A Sampled By: CLIENT on 16-SEP-11 @ 14:45 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-2 ANB-05A Sampled By: CLIENT on 16-SEP-11 @ 16:20 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-3 ANB-06A Sampled By: CLIENT on 16-SEP-11 @ 14:18 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-4 ANB-07A Sampled By: CLIENT on 16-SEP-11 @ 12:29 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-5 ANB-08A Sampled By: CLIENT on 16-SEP-11 @ 11:39 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-6 ANB-09A Sampled By: CLIENT on 16-SEP-11 @ 10:51 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-7 ANB-10A Sampled By: CLIENT on 16-SEP-11 @ 10:00 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-8 ANC-01B Sampled By: CLIENT on 15-SEP-11 @ 13:30 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017
L1062759-9 ANC-02A Sampled By: CLIENT on 14-SEP-11 @ 10:20 Matrix: SEDIMENT **Miscellaneous Parameters**							

* 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
L1062759-9 ANC-02A Sampled By: CLIENT on 14-SEP-11 @ 10:20 Matrix: SEDIMENT Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-FEB-12	02-FEB-12	R2320017

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062759 Report Date: 02-FEB-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062759 Report Date: 02-FEB-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

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Benthic Sample Results

Lab Number: L1062759-1 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-04A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	15
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CALANOIDA*			0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	12
CRUSTACEA	*OSTRACODA*				0	0	0	6
GASTROPODA	*BASOMMATOPHOR*	*ANCYLIDAE*	*Ferrissia*	*sp.*	0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Gyraulus*	*sp.*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*limosa*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*walkeri*	0	0	0	2
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Cincinnatia*	*cincinnatiensis*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			10	0	0	10
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		11	0	0	11
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Coelotanypodini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		8	0	0	8
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		7	0	0	7
INSECTA	*EPHEMEROPTERA*		*unidentified*	*damaged*	1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	3	0	0	3
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*	*Oecetis*	*sp.*	1	0	0	1

Date Printed: February 02, 2012

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Benthic Sample Results

Lab Number: L1062759-1 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-04A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
INSECTA	*TRICHOPTERA*	*MOLANNIDAE*	*Molanna*	*sp.*	1	0	0	1
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*	*Phryganea*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	5

Date Printed: February 02, 2012

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Benthic Sample Results

Lab Number: L1062759-2 **Work Order:** L1062759

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-05A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Helobdella*	*stagnalis*	0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*	*Megapus*	*sp.*	0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	1
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	1
GASTROPODA			*unidentified*	*damaged*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*limosa*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*walkeri*	0	0	0	2
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			6	0	0	6
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		11	0	0	11
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Coelotanypodini*		2	0	0	2
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	1

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Benthic Sample Results

Lab Number: L1062759-3 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-06A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*TROMBIDIFORMES*	*MIDEOPSIDAE*	*Mideopsis*	*sp.*	0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	7
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*limosa*	0	0	0	3
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*walkeri*	0	0	0	2
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*unidentified*	*too young to ID*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		8	0	0	8
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanypodini*		1	0	0	1
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	1	0	0	1
INSECTA	*MEGALOPTERA*	*SIALIDAE*	*Sialis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	5

Date Printed: February 02, 2012

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Benthic Sample Results

Lab Number: L1062759-4 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-07A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	1
CRUSTACEA	*OSTRACODA*				0	0	0	1
GASTROPODA			*unidentified*	*damaged*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*limosa*	0	0	0	2
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*unidentified*	*too young to ID*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		14	0	0	14
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		10	0	0	10
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanypodini*		4	0	0	4
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	5	0	0	5

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Benthic Sample Results

Lab Number: L1062759-5 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-08A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*PONTOPOREIIDAE*	*Diporeia*	*hoyi*	0	0	0	5
CRUSTACEA	*OSTRACODA*				0	0	0	3
INSECTA	*DIPTERA*	*CHAOBORIDAE*	*Chaoborus*	*sp.*	1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	2	0	0	2
INSECTA	*MEGALOPTERA*	*SIALIDAE*	*Sialis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	13
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*damaged*		0	0	0	6

Date Printed: February 02, 2012

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Benthic Sample Results

Lab Number: L1062759-6 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-09A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*	*Stylaria*	*lacustris*	0	0	0	7
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*	*unidentified*	*with hair setae*	0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*		0	0	0	1
CRUSTACEA	*AMPHIPODA*	*PONTOPOREIIDAE*	*Diporeia*	*hoyi*	0	0	0	9
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
CRUSTACEA	*OSTRACODA*				0	0	0	4
INSECTA	*DIPTERA*	*CHAOBORIDAE*	*Chaoborus*	*sp.*	1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		1	0	0	1
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	58
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	7

Date Printed: February 02, 2012

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Benthic Sample Results

Lab Number: L1062759-7 **Work Order:** L1062759

Date Sampled	September 16, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-10A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*	*unidentified*	*with hair setae*		0	0	2
ANNELIDA	*OLIGOCHAETA*	*TUBIFICIDAE*	*unidentified*	*without hair setae*	0	0	0	2
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*OSTRACODA*				0	0	0	14
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Marstonia*	*decepta*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		33	0	0	33
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		17	0	0	17
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanypodini*		5	0	0	5
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		8	0	0	8
INSECTA	*EPHEMEROPTERA*		*unidentified*	*damaged*	1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	3	0	0	3
INSECTA	*EPHEMEROPTERA*	*EPHEMERIDAE*	*Hexagenia*	*sp.*	3	0	0	3
INSECTA	*MEGALOPTERA*	*SIALIDAE*	*Sialis*	*sp.*	1	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*Pisidium*	*sp.*	0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	7

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062759-8 **Work Order:** L1062759

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANC-01B	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Helobdella*	*stagnalis*	0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		2	0	0	2
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*Pisidium*	*sp.*	0	0	0	1

Date Printed: February 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062759-9 **Work Order:** L1062759

Date Sampled	September 14, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANC-02A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		1	0	0	1

Date Printed: February 02, 2012

ALS Environ

L10627590-COFC

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 10

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☑ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483	P
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS	Number of Containers	
	ANB-04A	16-Sep-11	14:45	Sediment	X	1	L
	ANB-05A	15-Sep-11	16:20	Sediment	X	1	L
	ANB-06A	16-Sep-11	14:18	Sediment	X	1	L
	ANB-07A	16-Sep-11	12:29	Sediment	X	1	L
	ANB-08A	16-Sep-11	11:39	Sediment	X	1	L
	ANB-09A	16-Sep-11	10:51	Sediment	X	1	L
	ANB-10A	16-Sep-11	10:00	Sediment	X	1	L
	ANC-01B	15-Sep-11	13:30	Sediment	X	1	L
	ANC-02A	14-Sep-11	10:20	Sediment	X	1	L

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-09-11	09:44		23 Sept/11	15:00	20.8°C				

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 11-OCT-11 13:34 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062760

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062760-1 ANC-01B							
Sampled By: CLIENT on 15-SEP-11 @ 13:55							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.73		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	0.86		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	6.06		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	1.6		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	37.4		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.059		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	486		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	27.8		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	20.6		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	51.6		0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Clay				03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	4500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	1.19		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	6.85		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	145		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.91		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.218		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	15.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.154		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	22800		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.69		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	63.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	16.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	35.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	4670		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	10.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	16200		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	691		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.272		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	41.9		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	490		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5840		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	64.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.52		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.19		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	524		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	44.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.30		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1450		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.134		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.01		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	64.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	221		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-1 ANC-01B							
Sampled By: CLIENT on 15-SEP-11 @ 13:55							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	30.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062760-2 ANC-01A							
Sampled By: CLIENT on 15-SEP-11 @ 13:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.80		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	0.59		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	6.69		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	1.4		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	34.3		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.045		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	517		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	35900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.83		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	5.96		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	173		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	1.13		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.273		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	16.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.114		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	28700		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	3.23		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	74.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	18.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	36.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	43500		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	12.1		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	18400		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	741		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.297		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	51.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	530		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	6980		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	75.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.23		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	570		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	53.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.34		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1640		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.123		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.08		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	76.0		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	159		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-2 ANC-01A							
Sampled By: CLIENT on 15-SEP-11 @ 13:30							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	39.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062760-3 ANC-01C							
Sampled By: CLIENT on 15-SEP-11 @ 14:05							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.79		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	0.77		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	6.57		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	1.6		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	30.9		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.055		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	516		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	33700		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.83		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	5.92		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	164		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	1.12		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.273		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	17.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.118		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	30100		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	3.09		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	72.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	17.9		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	35.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	41900		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	11.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	19000		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	751		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.483		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	48.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	540		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	6700		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	73.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.22		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	542		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	51.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.33		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1550		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.129		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.13		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	71.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	173		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-3 ANC-01C							
Sampled By: CLIENT on 15-SEP-11 @ 14:05							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	38.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062760-4 ANC-02A							
Sampled By: CLIENT on 17-SEP-11 @ 10:20							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.13		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	6.74		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.10		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	6.9		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	64.9		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.372		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	465		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	24.7		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	20.6		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	54.7		0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Clay				03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	33700		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	4.97		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	7.55		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	141		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.93		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.215		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	13.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.906		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	10000		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.78		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	77.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	18.1		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	43.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	38700		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	13.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	12800		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	414		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.500		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	46.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	490		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	6330		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	73.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.33		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.20		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	407		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	42.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-4 ANC-02A							
Sampled By: CLIENT on 17-SEP-11 @ 10:20							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1260		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.155		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.49		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	67.5		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	688		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	28.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062760-5 ANC-02B							
Sampled By: CLIENT on 17-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	3.03		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	0.89		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	3.1		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	44.6		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.215		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	474		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	30500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	3.19		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	9.46		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	133		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.86		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.189		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	14.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.574		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9960		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.47		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	72.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	19.9		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	43.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	37500		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.9		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	12800		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	454		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.327		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	45.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	500		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5850		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	67.7		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.54		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.18		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	436		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	38.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.32		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-5 ANC-02B							
Sampled By: CLIENT on 17-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1320		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.141		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.32		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	65.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	670		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	24.9		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062760-6 ANC-02C							
Sampled By: CLIENT on 17-SEP-11 @ 10:00							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.12		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	7.57		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.02		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	7.7		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	61.2		0.10	%	05-OCT-11	05-OCT-11	R2263667
Total Nitrogen by LECO	0.330		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	426		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	35900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.26		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	4.66		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	161		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	1.08		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.264		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	12.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.172		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9160		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	3.11		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	73.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	17.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	27.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	40000		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	12.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	13500		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	486		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.211		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	44.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	400		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	6110		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	77.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.19		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	386		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	40.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.33		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062760-6 ANC-02C							
Sampled By: CLIENT on 17-SEP-11 @ 10:00							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1370		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.110		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.49		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	65.1		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	152		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	30.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062760 Report Date: 11-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264114								
WG1360093-1 DUP		**L1062760-6**						
Inorganic Carbon		0.12	0.12		%	0.71	30	04-OCT-11
CaCO3 Equivalent		1.02	1.02		%	0.71	25	04-OCT-11
WG1360093-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.68		%		2.33-4.33	04-OCT-11
WG1360093-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Carbon by Combustion		31.6	31.5		%	0.28	10	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360059-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
N-TOT-LECO-SK	**Soil**							
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Nitrogen by LECO		2.92	2.91	J	%	0.013	0.05	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360059-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11
P-SALM-ICP-SK	**Soil**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062760 Report Date: 11-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062760 Report Date: 11-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	15-SEP-11 13:55	05-OCT-11 00:00	14	19	days	EHT
	2	15-SEP-11 13:30	05-OCT-11 00:00	14	19	days	EHT
	3	15-SEP-11 14:05	05-OCT-11 00:00	14	19	days	EHT
	4	17-SEP-11 10:20	05-OCT-11 00:00	14	18	days	EHT
	5	17-SEP-11 10:30	05-OCT-11 00:00	14	18	days	EHT
	6	17-SEP-11 10:00	05-OCT-11 00:00	14	18	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	15-SEP-11 13:55	04-OCT-11 00:00	14	18	days	EHT
	2	15-SEP-11 13:30	04-OCT-11 00:00	14	18	days	EHT
	3	15-SEP-11 14:05	04-OCT-11 00:00	14	18	days	EHT
	4	17-SEP-11 10:20	04-OCT-11 00:00	14	17	days	EHT
	5	17-SEP-11 10:30	04-OCT-11 00:00	14	17	days	EHT
	6	17-SEP-11 10:00	04-OCT-11 00:00	14	17	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 L1062760 were received on 23-SEP-11 15:00.

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

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

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

ALS Environme

'n of Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 6

Page 1 of 1

L1062760-COFC

Report To		rmat / Distribution				Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172			☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com			○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483			
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:		Sampler:		

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	ANC-01B	15-Sep-11	13:55	Sediment	X	X	X	X	X	X	X	X					2
	ANC-01A	15-Sep-11	13:30	Sediment	X	X	X	X	X	X	X						1
	ANC-01C	15-Sep-11	14:05	Sediment	X	X	X	X	X	X	X						1
	ANC-02A	17-Sep-11	10:20	Sediment	X	X	X	X	X	X	X	X					2
	ANC-02B	17-Sep-11	10:30	Sediment	X	X	X	X	X	X	X						1
	ANC-02C	17-Sep-11	10:00	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	09:59		23Sept/15		2.9 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:33 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062761

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062761-1 GSL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 09:36							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	31.4		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.28		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	31.6		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.126		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.4		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.92		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	828		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.67	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	85.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	12.6	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	4040		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.16		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	19.8		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	60.9		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.113		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	8.3		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.656		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	10100		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.364		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	13.2		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.71		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	16.3		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	19100		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	10.3		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	1370		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	325		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.953		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	14.3		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	710		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	466		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	3.36		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	0.95		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	85		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	17.8		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	78.0		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.136		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.278		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	9.96		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-1 GSL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 09:36							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	117		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	3.16		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-2 GSL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 10:05							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.17		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	32.1		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.41		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	32.3		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.080		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	95.4		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.75		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	531		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3530		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	9.41		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	52.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.034		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	4.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.357		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9180		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.300		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	7.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	5.10		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	9.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	10300		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	2.93		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1120		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	292		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.755		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	9.05		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	370		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	250		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	2.74		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.73		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	63		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	16.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	68.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	<0.050		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.221		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	8.35		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062761-2 GSL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 10:05							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	75		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	2.51		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062761-3 GSL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 10:10							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	31.8		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.29		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	31.9		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.097		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.0		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	2.77		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	583		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3540		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.15		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	11.9		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	55.6		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.096		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	6.2		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.598		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	9330		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.336		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	6.6		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	5.28		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	10.9		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	11000		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	10.9		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	1120		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	275		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.694		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	9.74		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	440		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	349		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	3.17		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	0.90		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	61		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	15.6		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	67.3		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.068		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.223		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	8.32		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-3 GSL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 10:10							
Matrix: SEDIMENT							
Metals							
Zinc (Zn)	88		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	2.76		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-4 UL1-01A							
Sampled By: CLIENT on 14-SEP-11 @ 14:25							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	36.6		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.32		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	36.7		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.126		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.3		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.29		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	984		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	3.26	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	81.9	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	14.8	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	4250		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.20		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	7.64		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	77.4		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.11		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.147		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	6.1		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.841		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	8700		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.320		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	3.9		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.88		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	42.6		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5170		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	19.6		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	1090		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	173		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.786		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	10.3		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	940		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	554		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	3.99		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.28		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	113		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	18.0		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-4 UL1-01A							
Sampled By: CLIENT on 14-SEP-11 @ 14:25							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	62.7		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.132		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.442		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	12.5		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	95		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	0.73		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-5 UL1-01B							
Sampled By: CLIENT on 14-SEP-11 @ 14:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	35.1		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.35		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	35.2		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.164		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.7		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.28		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	1090		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3750		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.26		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	10.2		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	83.1		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.177		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	6.5		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.860		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	9060		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.336		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	3.7		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.20		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	39.0		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5990		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	25.3		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	988		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	183		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.679		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	9.34		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Phosphorus (P)	990		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	499		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	4.08		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.36		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	0.11		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	102		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	17.6		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-5 UL1-01B							
Sampled By: CLIENT on 14-SEP-11 @ 14:30							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	71.2		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.247		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.377		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	11.9		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	104		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	0.87		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-6 UL1-01C							
Sampled By: CLIENT on 14-SEP-11 @ 14:35							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	36.0		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.28		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	36.1		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.146		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	97.4		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.36		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	1160		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3930		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	9.28		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	99.5		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.171		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	6.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.866		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	10600		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.341		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	5.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	6.73		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	42.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	6230		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	21.4		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	1120		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	232		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.781		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	9.17		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	1030		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	480		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	4.18		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.19		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	111		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	19.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062761-6 UL1-01C							
Sampled By: CLIENT on 14-SEP-11 @ 14:35							
Matrix: SEDIMENT							
Metals							
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	81.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.160		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.411		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	13.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	94		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	1.04		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062761-7 NTL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 12:10							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.18		0.10	%	04-OCT-11	04-OCT-11	R2264114
Total Organic Carbon	32.0		0.10	%	04-OCT-11	04-OCT-11	R2264114
CaCO3 Equivalent	1.50		0.70	%	04-OCT-11	04-OCT-11	R2264114
Total Carbon by combustion method							
Total Carbon by Combustion	32.2		0.1	%	03-OCT-11	03-OCT-11	R2264112
Miscellaneous Parameters							
Mercury (Hg)-Total	0.166		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.6		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.11		0.020	%	03-OCT-11	03-OCT-11	R2264112
Phosphorus, Total	658		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	0.34	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	86.0	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	13.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	3550		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.35		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	11.2		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	87.0		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.12		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.207		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	5.0		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	1.06		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	7960		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.405		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	5.4		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	5.83		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	18.2		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5150		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	29.7		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	992		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	119		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.950		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	9.93		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-7 NTL-01A							
Sampled By: CLIENT on 14-SEP-11 @ 12:10							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	660		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	409		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	3.81		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.11		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	79		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	17.0		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	0.16		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	58.8		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.103		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.245		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	8.01		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	115		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	1.75		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-8 NTL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 12:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.23		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	31.1		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.95		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	31.4		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.144		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	97.4		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.05		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	682		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3630		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	0.33		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	10.5		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	83.5		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.183		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	5.1		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.976		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	7650		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.426		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	5.1		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	5.89		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	17.0		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5210		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	26.0		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	977		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	118		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	0.991		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	9.63		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-8 NTL-01B							
Sampled By: CLIENT on 14-SEP-11 @ 12:30							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	640		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	411		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	4.15		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.12		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	71		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	17.7		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	0.15		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	60.6		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	0.106		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.253		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	8.31		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	108		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	1.95		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
L1062761-9 NTL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 12:35							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.23		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	34.6		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.96		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	34.9		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.8		0.10	%	05-OCT-11	05-OCT-11	R2263672
Total Nitrogen by LECO	3.05		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	541		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	4620		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Arsenic (As)	3.22		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Barium (Ba)	83.5		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Beryllium (Be)	0.18		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Bismuth (Bi)	0.033		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Boron (B)	5.2		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cadmium (Cd)	0.491		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Calcium (Ca)	8600		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cesium (Cs)	0.410		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Chromium (Cr)	7.3		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Cobalt (Co)	6.84		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Copper (Cu)	14.5		1.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Iron (Fe)	5430		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Lead (Pb)	3.23		0.20	mg/kg	29-SEP-11	01-OCT-11	R2262196
Magnesium (Mg)	1250		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Manganese (Mn)	139		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Molybdenum (Mo)	1.06		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Nickel (Ni)	9.57		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196

* 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
L1062761-9 NTL-01C							
Sampled By: CLIENT on 14-SEP-11 @ 12:35							
Matrix: SEDIMENT							
Metals							
Phosphorus (P)	500		100	mg/kg	29-SEP-11	01-OCT-11	R2262196
Potassium (K)	347		25	mg/kg	29-SEP-11	01-OCT-11	R2262196
Rubidium (Rb)	3.59		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Selenium (Se)	1.22		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Sodium (Na)	62		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Strontium (Sr)	20.9		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	01-OCT-11	R2262196
Titanium (Ti)	96.8		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Tungsten (W)	<0.050		0.050	mg/kg	29-SEP-11	01-OCT-11	R2262196
Uranium (U)	0.365		0.020	mg/kg	29-SEP-11	01-OCT-11	R2262196
Vanadium (V)	10.6		0.50	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zinc (Zn)	132		10	mg/kg	29-SEP-11	01-OCT-11	R2262196
Zirconium (Zr)	1.56		0.10	mg/kg	29-SEP-11	01-OCT-11	R2262196

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062761 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264114								
WG1360093-1 DUP		**L1062760-6**						
Inorganic Carbon		0.12	0.12		%	0.71	30	04-OCT-11
CaCO3 Equivalent		1.02	1.02		%	0.71	25	04-OCT-11
WG1360093-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.68		%		2.33-4.33	04-OCT-11
WG1360093-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
Batch R2264115								
WG1360095-1 DUP		**L1062764-1**						
Inorganic Carbon		0.13	0.10		%	25	30	04-OCT-11
CaCO3 Equivalent		1.08	0.85		%	25	25	04-OCT-11
WG1360095-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.64		%		2.33-4.33	04-OCT-11
WG1360095-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Carbon by Combustion		31.6	31.5		%	0.28	10	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360059-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Carbon by Combustion		8.3	8.2		%	0.52	10	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360061-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
HG-200.2-CVAF-WP	**Soil**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367458-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			107		%		70-130	12-OCT-11
WG1367458-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			97		%		70-130	12-OCT-11
WG1367458-4 DUP		**L1062716-1**						
Mercury (Hg)-Total		0.119	0.116		mg/kg	2.8	40	12-OCT-11
WG1367458-5 DUP		**L1062761-1**						
Mercury (Hg)-Total		0.126	0.123		mg/kg	3.0	40	12-OCT-11
WG1367458-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	30-SEP-11
Antimony (Sb)			116		%		70-130	30-SEP-11
Arsenic (As)			99		%		70-130	30-SEP-11
Barium (Ba)			84		%		70-130	30-SEP-11
Beryllium (Be)			85		%		70-130	30-SEP-11
Boron (B)			94		%		70-130	30-SEP-11
Cadmium (Cd)			103		%		70-130	30-SEP-11
Calcium (Ca)			99		%		70-130	30-SEP-11
Chromium (Cr)			95		%		70-130	30-SEP-11
Cobalt (Co)			94		%		70-130	30-SEP-11
Copper (Cu)			104		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			96		%		70-130	30-SEP-11
Magnesium (Mg)			90		%		70-130	30-SEP-11
Manganese (Mn)			94		%		70-130	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-2 CRM		**NRC PACS-2**						
Molybdenum (Mo)			104		%		70-130	30-SEP-11
Nickel (Ni)			90		%		70-130	30-SEP-11
Phosphorus (P)			94		%		70-130	30-SEP-11
Potassium (K)			86		%		70-130	30-SEP-11
Selenium (Se)			98		%		70-130	30-SEP-11
Silver (Ag)			114		%		70-130	30-SEP-11
Sodium (Na)			86		%		70-130	30-SEP-11
Strontium (Sr)			103		%		70-130	30-SEP-11
Thallium (Tl)			91		%		70-130	30-SEP-11
Tin (Sn)			105		%		70-130	30-SEP-11
Titanium (Ti)			103		%		70-130	30-SEP-11
Uranium (U)			85		%		70-130	30-SEP-11
Vanadium (V)			100		%		70-130	30-SEP-11
Zinc (Zn)			93		%		70-130	30-SEP-11
WG1359926-3 CRM		**NRC MESS-3**						
Antimony (Sb)			92		%		70-130	30-SEP-11
Arsenic (As)			94		%		70-130	30-SEP-11
Barium (Ba)			96		%		70-130	30-SEP-11
Beryllium (Be)			75		%		70-130	30-SEP-11
Cadmium (Cd)			88		%		70-130	30-SEP-11
Calcium (Ca)			106		%		70-130	30-SEP-11
Chromium (Cr)			81		%		70-130	30-SEP-11
Cobalt (Co)			98		%		70-130	30-SEP-11
Copper (Cu)			100		%		70-130	30-SEP-11
Iron (Fe)			96		%		70-130	30-SEP-11
Lead (Pb)			89		%		70-130	30-SEP-11
Magnesium (Mg)			88		%		70-130	30-SEP-11
Manganese (Mn)			104		%		70-130	30-SEP-11
Molybdenum (Mo)			100		%		70-130	30-SEP-11
Nickel (Ni)			99		%		70-130	30-SEP-11
Phosphorus (P)			88		%		70-130	30-SEP-11
Potassium (K)			75		%		70-130	30-SEP-11
Selenium (Se)			118		%		70-130	30-SEP-11
Silver (Ag)			108		%		70-130	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-3 CRM		**NRC MESS-3**						
Sodium (Na)			99		%		70-130	30-SEP-11
Strontium (Sr)			97		%		70-130	30-SEP-11
Tin (Sn)			109		%		70-130	30-SEP-11
Uranium (U)			86		%		70-130	30-SEP-11
Vanadium (V)			74		%		70-130	30-SEP-11
Zinc (Zn)			98		%		70-130	30-SEP-11
WG1359926-5 DUP		**WG1359926-4**						
Aluminum (Al)		4610	4150		mg/kg	10	40	30-SEP-11
Antimony (Sb)		0.36	0.35		mg/kg	0.93	30	30-SEP-11
Arsenic (As)		15.4	13.5		mg/kg	13	30	30-SEP-11
Barium (Ba)		55.8	52.9		mg/kg	5.4	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.120	0.112		mg/kg	6.9	30	30-SEP-11
Boron (B)		4.5	3.7		mg/kg	19	30	30-SEP-11
Cadmium (Cd)		7.99	7.73		mg/kg	3.4	30	30-SEP-11
Calcium (Ca)		2930	2740		mg/kg	6.8	30	30-SEP-11
Cesium (Cs)		0.337	0.292		mg/kg	14	30	30-SEP-11
Chromium (Cr)		8.8	7.9		mg/kg	11	30	30-SEP-11
Cobalt (Co)		134	124		mg/kg	8.3	30	30-SEP-11
Copper (Cu)		640	636		mg/kg	0.62	30	30-SEP-11
Iron (Fe)		46100	45700		mg/kg	0.91	30	30-SEP-11
Lead (Pb)		18.5	17.4		mg/kg	6.5	40	30-SEP-11
Magnesium (Mg)		1340	1220		mg/kg	9.1	30	30-SEP-11
Manganese (Mn)		114	104		mg/kg	9.1	30	30-SEP-11
Molybdenum (Mo)		0.804	0.830		mg/kg	3.3	40	30-SEP-11
Nickel (Ni)		36.4	33.5		mg/kg	8.3	30	30-SEP-11
Phosphorus (P)		510	460		mg/kg	10	30	30-SEP-11
Potassium (K)		483	406		mg/kg	17	40	30-SEP-11
Rubidium (Rb)		4.09	3.66		mg/kg	11	30	30-SEP-11
Selenium (Se)		3.09	2.64		mg/kg	16	30	30-SEP-11
Silver (Ag)		0.22	0.20		mg/kg	12	40	30-SEP-11
Sodium (Na)		210	209		mg/kg	0.46	40	30-SEP-11
Strontium (Sr)		10.1	10.1		mg/kg	0.39	40	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-5 DUP		**WG1359926-4**						
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		0.11	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		167	138		mg/kg	19	40	30-SEP-11
Tungsten (W)		0.117	0.120		mg/kg	2.4	30	30-SEP-11
Uranium (U)		0.595	0.568		mg/kg	4.7	30	30-SEP-11
Vanadium (V)		15.0	13.6		mg/kg	10	30	30-SEP-11
Zinc (Zn)		9060	8750		mg/kg	3.6	30	30-SEP-11
Zirconium (Zr)		1.77	1.66		mg/kg	6.1	30	30-SEP-11
WG1359926-7 DUP		**WG1359926-6**						
Aluminum (Al)		4040	3980		mg/kg	1.4	40	30-SEP-11
Antimony (Sb)		0.16	0.17		mg/kg	8.9	30	30-SEP-11
Arsenic (As)		19.8	18.9		mg/kg	4.6	30	30-SEP-11
Barium (Ba)		60.9	61.6		mg/kg	1.2	40	30-SEP-11
Beryllium (Be)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Bismuth (Bi)		0.113	0.093		mg/kg	19	30	30-SEP-11
Boron (B)		8.3	8.4		mg/kg	1.6	30	30-SEP-11
Cadmium (Cd)		0.656	0.609		mg/kg	7.4	30	30-SEP-11
Calcium (Ca)		10100	10400		mg/kg	3.4	30	30-SEP-11
Cesium (Cs)		0.364	0.336		mg/kg	7.9	30	30-SEP-11
Chromium (Cr)		13.2	11.7		mg/kg	12	30	30-SEP-11
Cobalt (Co)		6.71	6.28		mg/kg	6.6	30	30-SEP-11
Copper (Cu)		16.3	16.3		mg/kg	0.16	30	30-SEP-11
Iron (Fe)		19100	18200		mg/kg	4.8	30	30-SEP-11
Lead (Pb)		10.3	9.93		mg/kg	3.2	40	30-SEP-11
Magnesium (Mg)		1370	1360		mg/kg	0.98	30	30-SEP-11
Manganese (Mn)		325	321		mg/kg	1.3	30	30-SEP-11
Molybdenum (Mo)		0.953	0.936		mg/kg	1.8	40	30-SEP-11
Nickel (Ni)		14.3	13.2		mg/kg	8.4	30	30-SEP-11
Phosphorus (P)		710	700		mg/kg	1.4	30	30-SEP-11
Potassium (K)		466	441		mg/kg	5.7	40	30-SEP-11
Rubidium (Rb)		3.36	3.40		mg/kg	1.3	30	30-SEP-11
Selenium (Se)		0.95	0.93		mg/kg	2.7	30	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-7 DUP		**WG1359926-6**						
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	30-SEP-11
Sodium (Na)		85	82		mg/kg	2.8	40	30-SEP-11
Strontium (Sr)		17.8	16.6		mg/kg	7.0	40	30-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	30-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	30-SEP-11
Titanium (Ti)		78.0	83.4		mg/kg	6.7	40	30-SEP-11
Tungsten (W)		0.136	0.125		mg/kg	8.3	30	30-SEP-11
Uranium (U)		0.278	0.273		mg/kg	1.9	30	30-SEP-11
Vanadium (V)		9.96	9.50		mg/kg	4.8	30	30-SEP-11
Zinc (Zn)		117	113		mg/kg	3.2	30	30-SEP-11
Zirconium (Zr)		3.16	2.95		mg/kg	7.0	30	30-SEP-11
WG1359926-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	30-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	30-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	30-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	30-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	30-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	30-SEP-11
Boron (B)			<1.0		mg/kg		1	30-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	30-SEP-11
Calcium (Ca)			<100		mg/kg		100	30-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	30-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	30-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	30-SEP-11
Copper (Cu)			<1.0		mg/kg		1	30-SEP-11
Iron (Fe)			<25		mg/kg		25	30-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	30-SEP-11
Magnesium (Mg)			<10		mg/kg		10	30-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	30-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	30-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	30-SEP-11
Phosphorus (P)			<100		mg/kg		100	30-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262196								
WG1359926-1 MB								
Potassium (K)			<25		mg/kg		25	30-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	30-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	30-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	30-SEP-11
Sodium (Na)			<10		mg/kg		10	30-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	30-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	30-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	30-SEP-11
Tin (Sn)			<5.0		mg/kg		5	30-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	30-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	30-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	30-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	30-SEP-11
Zinc (Zn)			<10		mg/kg		10	30-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	30-SEP-11
MOIST-SK	**Soil**							
Batch R2263672								
WG1360345-1 DUP		**L1062732-9**						
% Moisture		97.1	97.1		%	0.0064	25	05-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2264112								
WG1360059-1 DUP		**L1062761-1**						
Total Nitrogen by LECO		2.92	2.91	J	%	0.013	0.05	03-OCT-11
WG1360059-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360059-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Nitrogen by LECO		0.813	0.793	J	%	0.020	0.05	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360061-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	04-OCT-11
WG1359965-3 DUP		**L1062761-6**						
Phosphorus, Total		1160	1140		mg/kg	1.5	30	04-OCT-11
WG1359965-5 DUP		**L1062767-9**						
Phosphorus, Total		520	535		mg/kg	2.8	30	04-OCT-11
WG1359965-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062761 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062761 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	14-SEP-11 09:36	05-OCT-11 00:00	14	21	days	EHT
	2	14-SEP-11 10:05	05-OCT-11 00:00	14	21	days	EHT
	3	14-SEP-11 10:10	05-OCT-11 00:00	14	21	days	EHT
	4	14-SEP-11 14:25	05-OCT-11 00:00	14	20	days	EHT
	5	14-SEP-11 14:30	05-OCT-11 00:00	14	20	days	EHT
	6	14-SEP-11 14:35	05-OCT-11 00:00	14	20	days	EHT
	7	14-SEP-11 12:10	05-OCT-11 00:00	14	20	days	EHT
	8	14-SEP-11 12:30	05-OCT-11 00:00	14	20	days	EHT
	9	14-SEP-11 12:35	05-OCT-11 00:00	14	20	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	14-SEP-11 09:36	04-OCT-11 00:00	14	20	days	EHT
	2	14-SEP-11 10:05	04-OCT-11 00:00	14	20	days	EHT
	3	14-SEP-11 10:10	04-OCT-11 00:00	14	20	days	EHT
	4	14-SEP-11 14:25	04-OCT-11 00:00	14	19	days	EHT
	5	14-SEP-11 14:30	04-OCT-11 00:00	14	19	days	EHT
	6	14-SEP-11 14:35	04-OCT-11 00:00	14	19	days	EHT
	7	14-SEP-11 12:10	04-OCT-11 00:00	14	19	days	EHT
	8	14-SEP-11 12:30	04-OCT-11 00:00	14	19	days	EHT
	9	14-SEP-11 12:35	04-OCT-11 00:00	14	19	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 L1062761 were received on 23-SEP-11 15:00.

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

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

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

ALS Environme

L1062761-COFC

◦ of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 12

Page 1 of 1

Report To

Company: AECOM -W172

Contact: Cliff Samoiloff

Address: 99 Commerce Dr

Phone: Fax:

Invoice To Same as Report ? ☑ Yes ☐ No

Hardcopy of Invoice with Report? ☐ Yes ☐ No

Company:

Contact:

Address:

Phone: Fax:

◦mat / Distribution

☐ Other

☑ PDF ☑ Excel ☐ Digital ☐ Fax

Email 1: cliff.samoiloff@aecom.com

Email 2: shawna.kjartanson@aecom.com

Email 3: mark.hadfield@aecom.com

Client / Project Information

Job #: 60213483

PO / AFE:

LSD:

Quote #: Q24534

ALS Contact:

Sampler:

Service Requested (Rush for routine analysis subject to availability)

◉ Regular (Standard Turnaround Times - Business Days)

○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT

○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT

○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Lab Work Order # (lab use only)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	GSL-01A	14-Sep-11	9:36	Sediment	X	X	X	X	X	X	X	X					2
	GSL-01B	14-Sep-11	10:05	Sediment	X	X	X	X	X	X	X						1
	GSL-01C	14-Sep-11	10:10	Sediment	X	X	X	X	X	X	X						1
	UL1-01A	14-Sep-11	14:25	Sediment	X	X	X	X	X	X	X	X					2
	UL1-01B	14-Sep-11	14:30	Sediment	X	X	X	X	X	X	X						1
	UL1-01C	14-Sep-11	14:35	Sediment	X	X	X	X	X	X	X						1
	NTL-01A	14-Sep-11	12:10	Sediment	X	X	X	X	X	X	X	X					2
	NTL-01B	14-Sep-11	12:30	Sediment	X	X	X	X	X	X	X						1
	NTL-01C	14-Sep-11	12:35	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
[signature]	23-Sep-11	10:02	[signature]	1500	23Sep11	20.6 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 02-MAR-12 14:10 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062762

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062762-1 TED-01A Sampled By: CLIENT on 13-SEP-11 @ 10:32 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-2 GHC-01A Sampled By: CLIENT on 13-SEP-11 @ 15:59 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-3 THC-01A Sampled By: CLIENT on 13-SEP-11 @ 14:29 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-4 ANB-01A Sampled By: CLIENT on 15-SEP-11 @ 14:16 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-5 ANB-02A Sampled By: CLIENT on 15-SEP-11 @ 15:02 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-6 ANB-03A Sampled By: CLIENT on 17-SEP-11 @ 10:16 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-7 UC1-01A Sampled By: CLIENT on 13-SEP-11 @ 12:49 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508
L1062762-8 ARL-01A Sampled By: CLIENT on 15-SEP-11 @ 09:58 Matrix: SEDIMENT **Miscellaneous Parameters** Benthic Invertebrates Note: Entire sample sorted	See attached		0		02-MAR-12	02-MAR-12	R2332508

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BENTHOS-WP	Soil	Benthic Invertebrates	STANDARD METHODS 10500

The benthic macroinvertebrates method is a procedure for identifying those organisms inhabiting the substrates of freshwater lakes and rivers. The organisms contained in large samples must be sorted to varying degrees in the laboratory before identification is performed. Samples are sorted and identified using compound and stereoscopic microscopes. Benthic organisms are identified to species where possible, enumerated and reported.

** 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
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062762 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed

Quality Control Report

Workorder: L1062762 Report Date: 02-MAR-12

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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.

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062762-1 **Work Order:** L1062762

Date Sampled	September 13, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	TED-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*TROMBIDIFORMES*		*unidentified*		0	1	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*ARRENURIDAE*	*Arrenurus*	*sp.*	0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	6
CRUSTACEA	*OSTRACODA*				0	0	0	43
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIDAE*	*Helisoma*	*anceps*	0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Gyraulus*	*sp.*	0	0	0	29
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			59	0	0	59
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		43	0	0	43
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		22	0	0	22
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		19	0	0	19
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		111	0	0	111
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanypodini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		101	0	0	101
INSECTA	*DIPTERA*	*EPHYDRIDAE*	*Hydrellia*	*sp.*	1	0	0	1
INSECTA	*DIPTERA*	*TABANIDAE*	*Chrysops*	*sp.*	2	0	0	2
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	37	0	0	37
INSECTA	*HEMIPTERA*	*CORIXIDAE*	*Sigara*	*sp.*	0	1	0	1
INSECTA	*ODONATA - ZYGOP*	*COENAGRIONIDAE*	*Ischnura*	*sp.*	1	0	0	1
INSECTA	*ODONATA-ANISOP*	*CORDULIIDAE*	*Cordulia*	*shurtleffi*	2	0	0	2
INSECTA	*TRICHOPTERA*	*POLYCENTROPODIDA*	*damaged*		1	0	0	1

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062762-1 **Work Order:** L1062762

Date Sampled	September 13, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	TED-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*Pisidium*	*sp.*	0	0	0	1
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*Sphaerium*	*simile*	0	0	0	6
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	8

Date Printed: March 02, 2012

ALS Laboratory Group
Manitoba Technology Centre
12-1329 Niakwa Road E
Winnipeg, Manitoba R2J 3T4
(204) 255-9720

Benthic Sample Results

Lab Number: L1062762-2 **Work Order:** L1062762

Date Sampled	September 13, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	GHC-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
CRUSTACEA	*OSTRACODA*				0	0	0	1
GASTROPODA			*unidentified*	*damaged*	0	0	0	1
INSECTA	*COLLEMBOLA*	*ISOTOMIDAE*	*Isotomurus*	*tricolor*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		28	0	0	28
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		34	0	0	34
INSECTA	*HYMENOPTERA*		*unidentified adult*	*terrestrial*	0	1	0	1

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Benthic Sample Results

Lab Number: L1062762-3 **Work Order:** L1062762

Date Sampled	September 13, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	THC-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*ARANEAE*		*unidentified spider*		0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*PHYSIDAE*	*Physa*	*sp.*	0	0	0	1
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*sincera*	0	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		8	0	0	8
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		5	0	0	5
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		18	0	0	18
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		2	0	0	2
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	2

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Benthic Sample Results

Lab Number: L1062762-4 **Work Order:** L1062762

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	3
CRUSTACEA	*CLADOCERA*				0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
CRUSTACEA	*OSTRACODA*				0	0	0	3
GASTROPODA			*unidentified*	*damaged*	0	0	0	3
GASTROPODA	*BASOMMATOPHOR*	*PHYSIDAE*	*Physa*	*sp.*	0	0	0	1
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Promenetus*	*exacuous*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*sp.*	0	0	0	9
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Cincinnatia*	*cincinnatiensis*	0	0	0	3
GASTROPODA	*PROSOBRANCHIA*	*VALVATIDAE*	*Valvata*	*tricarinata*	0	0	0	6
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		36	0	0	36
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	1	0	0	1
INSECTA	*LEPIDOPTERA*		*unidentified*		1	0	0	1
INSECTA	*TRICHOPTERA*	*LEPTOCERIDAE*	*Triaenodes*	*sp.*	1	0	0	1
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*	*Agrypnia*	*sp.*	2	0	0	2
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	1

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Benthic Sample Results

Lab Number: L1062762-5 **Work Order:** L1062762

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-02A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*OLIGOCHAETA*	*NAIDIDAE*	*Stylaria*	*lacustris*	0	0	0	1
ARACHNOIDEA	*TROMBIDIFORMES*	*HYGROBATIDAE*	*Megapus*	*sp.*	0	0	0	1
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	2
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	2
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	21
GASTROPODA	*BASOMMATOPHOR*	*PLANORBIIDAE*	*Gyraulus*	*sp.*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Cincinnatia*	*cincinnatiensis*	0	0	0	28
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		16	0	0	16
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		1	0	0	1
INSECTA	*ODONATA-ANISOP*	*CORDULIIDAE*	*Cordulia*	*shurtleffi*	1	0	0	1

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Benthic Sample Results

Lab Number: L1062762-6 **Work Order:** L1062762

Date Sampled	September 17, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ANB-03A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ANNELIDA	*HIRUDINEA*	*GLOSSIPHONIIDAE*	*Helobdella*	*stagnalis*	0	0	0	2
CRUSTACEA	*AMPHIPODA*	*HYALELLIDAE*	*Hyalella*	*azteca*	0	0	0	9
CRUSTACEA	*CLADOCERA*				0	0	0	1
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	3
CRUSTACEA	*COPEPODA*	*HARPACTICOIDA*			0	0	0	25
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Amnicola*	*sp.*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*Cincinnatia*	*cincinnatiensis*	0	0	0	1
GASTROPODA	*NEOTAENIOGLOSS*	*HYDROBIIDAE*	*unidentified*	*too young to ID*	0	0	0	2
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			5	0	0	5
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1
NEMATODA			*unidentified*		0	0	0	11
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	4

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Benthic Sample Results

Lab Number: L1062762-7 **Work Order:** L1062762

Date Sampled	September 13, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	UC1-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
CRUSTACEA	*CLADOCERA*				0	0	0	39
CRUSTACEA	*COPEPODA*	*CYCLOPOIDA*			0	0	0	6
CRUSTACEA	*OSTRACODA*				0	0	0	2
INSECTA	*COLEOPTERA*	*DYTISCIDAE*	*Laccophilus*	*sp.*	1	0	0	1
INSECTA	*COLLEMBOLA*	*ISOTOMIDAE*	*Isotomurus*	*tricolor*	0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		28	0	0	28
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		1	0	0	1
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		2	0	0	2
INSECTA	*DIPTERA*	*CULICIDAE*	*Culex*	*sp.*	1	0	0	1
INSECTA	*TRICHOPTERA*	*PHRYGANEIDAE*	*Ptilostomis*	*sp.*	1	0	0	1
NEMATODA			*unidentified*		0	0	0	5
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	17

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Benthic Sample Results

Lab Number: L1062762-8 **Work Order:** L1062762

Date Sampled	September 15, 2011	**Submitter**	AECOM	**Sample Type**	SEDIMENT	**Station No**	
Source:	60213483	**WQ Site #:**	ARL-01A	**Sample ID**			

Class	Order	Family/Suborder	Genus	Species	Larva	Adult	Pupa	Total
ARACHNOIDEA	*ARANEAE*		*unidentified spider*		0	0	0	1
INSECTA	*DIPTERA*	*CERATOPOGONIDAE*			2	0	0	2
INSECTA	*DIPTERA*	*CHAOBORIDAE*	*Chaoborus*	*sp.*	3	0	0	3
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Chironomini*		11	0	0	11
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Orthocladinae*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Pentaneurini*		4	0	0	4
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Procladini*		2	0	0	2
INSECTA	*DIPTERA*	*CHIRONOMIDAE*	*Tanytarsini*		4	0	0	4
INSECTA	*DIPTERA*	*DIXIDAE*	*Dixella*	*sp.*	1	0	0	1
INSECTA	*EPHEMEROPTERA*	*CAENIDAE*	*Caenis*	*sp.*	8	0	0	8
PELECYPODA	*VENEROIDA*	*PISIIDAE*	*unidentified*	*Too young to ID*	0	0	0	2

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L1062762-COFC

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COC # 7

Page 1 of 1

Report To		mat / Distribution	Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard ☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1: cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2: shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3: mark.hadfield@aecom.com	**Analysis Request**
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #: 60213483	P
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #: Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BENTHOS	Number of Containers
	TED-01A	13-Sep-11	10:32	Sediment	X	3
	GHC-01A	13-Sep-11	15:59	Sediment	X	1
	THC-01A	13-Sep-11	14:29	Sediment	X	1
	ANB-01A	15-Sep-11	14:16	Sediment	X	1
	ANB-02A	15-Sep-11	15:02	Sediment	X	1
	ANB-03A	17-Sep-11	10:16	Sediment	X	1
	UC1-01A	13-Sep-11	12:49	Sediment	X	2
	ARL-01A	15-Sep-11	9:58	Sediment	X	2

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep 11	09:41		23 Sep 11	1000	20.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:34 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062763

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062763-1 TED-01A							
Sampled By: CLIENT on 13-SEP-11 @ 10:32							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.35		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	34.9		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.89		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	35.2		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	91.5		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.78		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	458		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	27.8	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	66.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	5.45	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	2810		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.12		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	3.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	55.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.027		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	9.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.192		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	16600		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	0.228		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	5.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	2.03		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	12.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	7700		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	2.73		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	2050		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	217		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.585		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	4.68		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	340		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	513		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	3.87		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.63		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	157		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	36.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	130		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.131		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.431		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	8.91		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	46		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062763-1 TED-01A							
Sampled By: CLIENT on 13-SEP-11 @ 10:32							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	4.59		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062763-2 TED-01B							
Sampled By: CLIENT on 13-SEP-11 @ 09:42							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.26		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	41.8		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.20		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	42.1		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.056		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	90.6		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	2.12		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	468		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2050		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	2.87		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	52.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.031		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	8.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.229		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	18100		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.128		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	4.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	1.42		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	12.0		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	3770		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	3.17		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1950		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	138		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.638		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	4.19		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	350		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	233		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	1.63		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.02		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	138		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	41.3		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	68.4		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	<0.050		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.323		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	5.57		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	80		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-2 TED-01B							
Sampled By: CLIENT on 13-SEP-11 @ 09:42							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	1.64		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-3 TED-01C							
Sampled By: CLIENT on 13-SEP-11 @ 09:29							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.30		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	37.9		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.53		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	38.2		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.067		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	91.4		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	2.37		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	494		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2180		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	4.11		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	53.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.049		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	22.0		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.342		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	17700		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.155		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	4.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	2.25		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	12.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	6930		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	5.70		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	2150		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	110		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.707		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	5.18		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	410		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	320		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	1.71		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.97		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	211		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	46.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	67.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.055		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.296		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	6.05		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	74		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-3 TED-01C							
Sampled By: CLIENT on 13-SEP-11 @ 09:29							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	1.99		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-4 UC1-01A							
Sampled By: CLIENT on 13-SEP-11 @ 12:49							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.12		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	5.35		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.98		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	5.5		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.071		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	80.4		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.317		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	524		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	25.7		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	31.9		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	42.4		0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Clay				03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	19300		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.11		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	5.87		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	138		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.47		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.112		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	11.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.327		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	15800		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.67		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	46.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	9.31		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	33.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	24500		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	7.59		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	7560		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	724		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.442		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	26.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	560		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	3230		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	44.3		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.60		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	238		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	31.9		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.21		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062763-4 UC1-01A							
Sampled By: CLIENT on 13-SEP-11 @ 12:49							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	891		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.110		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	2.84		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	44.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	246		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	15.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062763-5 UC1-01B							
Sampled By: CLIENT on 13-SEP-11 @ 12:34							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.17		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	15.2		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.43		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	15.3		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.098		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	83.2		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.865		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	883		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	18400		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.16		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	26.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	181		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.57		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.148		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	15.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.559		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	16300		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.70		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	45.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	18.8		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	38.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	40600		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	10.7		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8020		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	1700		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.343		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	29.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	1030		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3570		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	37.5		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.79		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	277		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	32.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.25		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-5 UC1-01B							
Sampled By: CLIENT on 13-SEP-11 @ 12:34							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	853		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.188		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	2.26		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	54.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	1190		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	12.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-6 UC1-01C							
Sampled By: CLIENT on 13-SEP-11 @ 12:19							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.17		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	18.0		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.45		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	18.2		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.067		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	99.9		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.993		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	615		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	17100		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.12		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	6.38		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	129		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.61		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.126		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	13.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.344		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	16000		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.53		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	50.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	9.01		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	33.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	21400		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	7.94		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	7580		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	685		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.612		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	28.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	630		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3270		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	36.3		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.55		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.12		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	249		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	29.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.21		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-6 UC1-01C							
Sampled By: CLIENT on 13-SEP-11 @ 12:19							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	810		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.138		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	3.07		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	40.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	265		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	13.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-7 THC-01A							
Sampled By: CLIENT on 13-SEP-11 @ 14:29							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.30		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	21.2		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.47		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	21.5		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	89.0		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.20		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	796		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	10.9	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	58.9	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	30.2	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silty clay loam	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	15300		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.21		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	21.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	142		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.50		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.108		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	15.0		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.344		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	12900		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.44		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	52.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	9.23		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	36.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	20400		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	7.83		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8510		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	257		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	1.26		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	32.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	710		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	4030		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	33.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.15		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-7 THC-01A							
Sampled By: CLIENT on 13-SEP-11 @ 14:29							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	382		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	39.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.23		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	987		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.243		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.63		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	51.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	175		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	14.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-8 THC-01B							
Sampled By: CLIENT on 13-SEP-11 @ 14:35							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.33		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	35.6		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.75		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	35.9		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.084		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	94.7		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.85		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	753		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	6550		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.20		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	39.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	75.1		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.18		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.073		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	9.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.379		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	13800		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.608		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	15.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	4.64		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	26.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	10100		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	6.64		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	3330		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	210		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	1.25		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	12.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	730		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	1370		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	11.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.68		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.11		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-8 THC-01B							
Sampled By: CLIENT on 13-SEP-11 @ 14:35							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	141		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	42.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	299		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.075		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.13		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	21.2		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	153		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	5.51		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062763-9 THC-01C							
Sampled By: CLIENT on 13-SEP-11 @ 15:05							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.25		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	27.6		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.07		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	27.8		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.8		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.36		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	768		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	8420		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	6.41		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	106		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.33		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.073		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	7.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.174		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	15400		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.714		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	24.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	4.62		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	18.0		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	10600		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	4.87		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	3850		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	182		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.602		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	16.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	620		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	2150		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	14.7		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062763-9 THC-01C							
Sampled By: CLIENT on 13-SEP-11 @ 15:05							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	309		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	45.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	336		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.066		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.46		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	22.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	63		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	7.61		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062763 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264115								
WG1360095-1 DUP		**L1062764-1**						
Inorganic Carbon		0.13	0.10		%	25	30	04-OCT-11
CaCO3 Equivalent		1.08	0.85		%	25	25	04-OCT-11
WG1360095-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.64		%		2.33-4.33	04-OCT-11
WG1360095-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Carbon by Combustion		8.3	8.2		%	0.52	10	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360061-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOIST-SK	**Soil**							
Batch R2264138								
WG1360346-1 DUP		**L1062763-1**						
% Moisture		91.5	83.5		%	9.2	25	05-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Nitrogen by LECO		0.813	0.793	J	%	0.020	0.05	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360061-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062763 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062763 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	13-SEP-11 10:32	05-OCT-11 00:00	14	22	days	EHT
	2	13-SEP-11 09:42	05-OCT-11 00:00	14	22	days	EHT
	3	13-SEP-11 09:29	05-OCT-11 00:00	14	22	days	EHT
	4	13-SEP-11 12:49	05-OCT-11 00:00	14	21	days	EHT
	5	13-SEP-11 12:34	05-OCT-11 00:00	14	21	days	EHT
	6	13-SEP-11 12:19	05-OCT-11 00:00	14	21	days	EHT
	7	13-SEP-11 14:29	05-OCT-11 00:00	14	21	days	EHT
	8	13-SEP-11 14:35	05-OCT-11 00:00	14	21	days	EHT
	9	13-SEP-11 15:05	05-OCT-11 00:00	14	21	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	13-SEP-11 10:32	04-OCT-11 00:00	14	21	days	EHT
	2	13-SEP-11 09:42	04-OCT-11 00:00	14	21	days	EHT
	3	13-SEP-11 09:29	04-OCT-11 00:00	14	21	days	EHT
	4	13-SEP-11 12:49	04-OCT-11 00:00	14	20	days	EHT
	5	13-SEP-11 12:34	04-OCT-11 00:00	14	20	days	EHT
	6	13-SEP-11 12:19	04-OCT-11 00:00	14	20	days	EHT
	7	13-SEP-11 14:29	04-OCT-11 00:00	14	20	days	EHT
	8	13-SEP-11 14:35	04-OCT-11 00:00	14	20	days	EHT
	9	13-SEP-11 15:05	04-OCT-11 00:00	14	20	days	EHT
Total Metals							
Mercury Total							
	2	13-SEP-11 09:42	12-OCT-11 13:41	28	29	days	EHT
	3	13-SEP-11 09:29	12-OCT-11 13:41	28	29	days	EHT
	5	13-SEP-11 12:34	12-OCT-11 13:41	28	29	days	EHT
	6	13-SEP-11 12:19	12-OCT-11 13:41	28	29	days	EHT
	7	13-SEP-11 14:29	12-OCT-11 13:41	28	29	days	EHT
	8	13-SEP-11 14:35	12-OCT-11 13:41	28	29	days	EHT
	9	13-SEP-11 15:05	12-OCT-11 13:41	28	29	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 L1062763 were received on 23-SEP-11 15:00.

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

Quality Control Report

Workorder: L1062763 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

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

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

ALS Environmen

WL1062763-COFC

Custody / Analytical Request Form
Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 1

Page 1 of 1

Report To		Report Format / Distribution				Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard	☐ Other			◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com			○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483			Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:		Sampler:		

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	TED-01A	13-Sep-11	10:32	Sediment	X	X	X	X	X	X	X	X					2
	TED-01B	13-Sep-11	9:42	Sediment	X	X	X	X	X	X	X						1
	TED-01C	13-Sep-11	9:29	Sediment	X	X	X	X	X	X	X						1
	UC1-01A	13-Sep-11	12:49	Sediment	X	X	X	X	X	X	X	X					2
	UC1-01B	13-Sep-11	12:34	Sediment	X	X	X	X	X	X	X						1
	UC1-01C	13-Sep-11	12:19	Sediment	X	X	X	X	X	X	X						1
	THC-01A	13-Sep-11	14:29	Sediment	X	X	X	X	X	X	X	X					2
	THC-01B	13-Sep-11	14:35	Sediment	X	X	X	X	X	X	X						1
	THC-01C	13-Sep-11	15:05	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	13-Sep-11	09:31		13Sept11	1500	2.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:34 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062764

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062764-1 ANB-07A							
Sampled By: CLIENT on 16-SEP-11 @ 12:29							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.13		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	9.27		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.08		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	9.4		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.059		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	83.6		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.03		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	881		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	11.5	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	53.5	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	34.9	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silty clay loam	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	28900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	1.27		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	15.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	147		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.88		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.240		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	14.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.561		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7990		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.78		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	69.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	17.7		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	39.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	39700		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.4		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11900		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	682		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.391		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	44.0		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	850		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5540		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	68.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.25		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	350		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	36.1		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1300		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.132		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.42		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	64.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	244		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-1 ANB-07A							
Sampled By: CLIENT on 16-SEP-11 @ 12:29							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	19.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-2 ANB-07B							
Sampled By: CLIENT on 16-SEP-11 @ 12:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	9.43		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.72		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	9.4		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	85.2		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.04		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	887		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	26500		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	1.47		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	13.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	143		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.97		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.278		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	17.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.601		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	7400		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.78		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	60.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	15.6		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	37.0		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	40500		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.9		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	11300		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	649		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.363		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	40.1		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	900		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	5360		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	55.7		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.20		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.16		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	333		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	33.7		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.34		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	1260		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.134		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.54		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	55.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	247		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062764-2 ANB-07B							
Sampled By: CLIENT on 16-SEP-11 @ 12:45							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	15.6		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062764-3 ANB-07C							
Sampled By: CLIENT on 16-SEP-11 @ 13:01							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	9.29		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.79		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	9.3		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.061		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	84.7		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	1.00		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	839		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	26500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	1.27		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	12.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	135		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.78		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.221		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	14.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.553		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7340		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.52		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	62.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	15.8		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	36.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	37800		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	13.0		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11200		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	751		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.332		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	40.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	840		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5000		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	63.2		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.11		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.15		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	320		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	34.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.27		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1180		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.182		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.24		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	57.0		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	235		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-3 ANB-07C							
Sampled By: CLIENT on 16-SEP-11 @ 13:01							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	16.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-4 ANB-08A							
Sampled By: CLIENT on 16-SEP-11 @ 11:39							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	6.79		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.89		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	6.9		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.065		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	83.0		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.777		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	1020		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	10.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	56.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	32.6	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Silty clay loam	UMI			03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	26000		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.79		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	16.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	138		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.81		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.216		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	10.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.293		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	6560		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.40		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	59.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	15.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	28.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	40600		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	12.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10800		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	1200		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.288		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	39.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	980		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4810		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	61.7		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.80		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.13		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	289		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	32.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.26		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-4 ANB-08A							
Sampled By: CLIENT on 16-SEP-11 @ 11:39							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1060		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.126		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.44		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	57.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	140		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	12.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-5 ANB-08B							
Sampled By: CLIENT on 16-SEP-11 @ 11:51							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	5.75		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.74		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	5.8		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	83.2		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.661		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	846		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	19400		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.59		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	11.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	104		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.75		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.182		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	12.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.271		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	5430		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.97		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	43.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	11.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	19.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	31000		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	10.9		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8120		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	815		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.215		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	27.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	1050		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3770		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	39.8		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.58		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	262		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	24.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.23		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062764-5 ANB-08B							
Sampled By: CLIENT on 16-SEP-11 @ 11:51							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	913		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.114		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.27		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	41.2		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	106		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	7.98		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062764-6 ANB-08C							
Sampled By: CLIENT on 16-SEP-11 @ 12:04							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.12		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	4.64		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.00		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	4.8		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	80.9		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.537		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	848		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	19700		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.42		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	9.01		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	110		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.61		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.161		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	5.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.230		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	6230		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.94		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	45.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	11.8		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	20.6		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	31400		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	9.33		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	9110		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	808		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.229		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	30.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	670		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	3650		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	47.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	262		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	25.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.21		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-6 ANB-08C							
Sampled By: CLIENT on 16-SEP-11 @ 12:04							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	836		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.099		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.07		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	43.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	100		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	10.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-7 ANB-06A							
Sampled By: CLIENT on 16-SEP-11 @ 14:18							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.25		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	1.69		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	2.05		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	1.9		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	64.9		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.183		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	630		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	21.5		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Silt (0.05mm - 2um)	22.7		0.10	%	03-OCT-11	05-OCT-11	R2264462
% Clay (<2um)	55.9		0.10	%	03-OCT-11	05-OCT-11	R2264462
Texture	Clay				03-OCT-11	05-OCT-11	R2264462
Metals							
Aluminum (Al)	29000		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.32		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	8.30		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	144		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.77		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.178		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	10.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.134		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	10700		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.69		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	68.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	21.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	22.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	40300		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	7.65		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	15100		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	654		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.231		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	47.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	570		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5610		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	66.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.15		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-7 ANB-06A							
Sampled By: CLIENT on 16-SEP-11 @ 14:18							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	409		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	33.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.28		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1410		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.109		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.01		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	62.1		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	104		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	27.9		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-8 ANB-06B							
Sampled By: CLIENT on 16-SEP-11 @ 14:26							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	8.14		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	1.20		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	8.3		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	80.5		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.813		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	727		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	24400		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.69		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	12.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	127		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.76		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.189		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	11.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.339		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7590		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.29		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	56.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	13.8		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	30.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	32500		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	11.2		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10200		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	727		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.300		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	36.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	700		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4290		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	55.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.81		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-8 ANB-06B							
Sampled By: CLIENT on 16-SEP-11 @ 14:26							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	299		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	33.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.23		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1080		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.129		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.77		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	53.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	128		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	16.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062764-9 ANB-06C							
Sampled By: CLIENT on 17-SEP-11 @ 10:57							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	04-OCT-11	04-OCT-11	R2264115
Total Organic Carbon	8.92		0.10	%	04-OCT-11	04-OCT-11	R2264115
CaCO3 Equivalent	0.88		0.70	%	04-OCT-11	04-OCT-11	R2264115
Total Carbon by combustion method							
Total Carbon by Combustion	9.0		0.1	%	03-OCT-11	03-OCT-11	R2264113
Miscellaneous Parameters							
Mercury (Hg)-Total	0.052		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	87.7		0.10	%	05-OCT-11	05-OCT-11	R2264138
Total Nitrogen by LECO	0.918		0.020	%	03-OCT-11	03-OCT-11	R2264113
Phosphorus, Total	781		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	24900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.78		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	12.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	126		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.62		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.196		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	11.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.351		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	6640		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.38		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	57.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	14.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	31.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	34400		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	11.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10200		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	757		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.333		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	37.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	700		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4460		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	58.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.80		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062764-9 ANB-06C							
Sampled By: CLIENT on 17-SEP-11 @ 10:57							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	306		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	31.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.23		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1060		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.119		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.27		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	53.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	142		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	15.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062764 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264115								
WG1360095-1 DUP		**L1062764-1**						
Inorganic Carbon		0.13	0.10		%	25	30	04-OCT-11
CaCO3 Equivalent		1.08	0.85		%	25	25	04-OCT-11
WG1360095-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.64		%		2.33-4.33	04-OCT-11
WG1360095-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Carbon by Combustion		8.3	8.2		%	0.52	10	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.6		%		1.1-1.7	03-OCT-11
WG1360061-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	03-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOIST-SK	**Soil**							
Batch R2264138								
WG1360346-1 DUP		**L1062763-1**						
% Moisture		91.5	83.5		%	9.2	25	05-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2264113								
WG1360061-1 DUP		**L1062764-8**						
Total Nitrogen by LECO		0.813	0.793	J	%	0.020	0.05	03-OCT-11
WG1360061-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.118		%		0.085-0.135	03-OCT-11
WG1360061-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	03-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264462								
WG1360043-1 DUP		**L1062763-4**						
% Sand (2.0mm - 0.05mm)		25.7	25.4	J	%	0.22	10	05-OCT-11
% Silt (0.05mm - 2um)		31.9	30.1	J	%	1.81	10	05-OCT-11
% Clay (<2um)		42.4	44.5	J	%	2.03	10	05-OCT-11
WG1360043-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			49.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			33.4		%		29-39	05-OCT-11
% Clay (<2um)			16.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062764 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062764 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	16-SEP-11 12:29	05-OCT-11 00:00	14	18	days	EHT
	2	16-SEP-11 12:45	05-OCT-11 00:00	14	18	days	EHT
	3	16-SEP-11 13:01	05-OCT-11 00:00	14	18	days	EHT
	4	16-SEP-11 11:39	05-OCT-11 00:00	14	19	days	EHT
	5	16-SEP-11 11:51	05-OCT-11 00:00	14	19	days	EHT
	6	16-SEP-11 12:04	05-OCT-11 00:00	14	19	days	EHT
	7	16-SEP-11 14:18	05-OCT-11 00:00	14	18	days	EHT
	8	16-SEP-11 14:26	05-OCT-11 00:00	14	18	days	EHT
	9	17-SEP-11 10:57	05-OCT-11 00:00	14	18	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	16-SEP-11 12:29	04-OCT-11 00:00	14	17	days	EHT
	2	16-SEP-11 12:45	04-OCT-11 00:00	14	17	days	EHT
	3	16-SEP-11 13:01	04-OCT-11 00:00	14	17	days	EHT
	4	16-SEP-11 11:39	04-OCT-11 00:00	14	18	days	EHT
	5	16-SEP-11 11:51	04-OCT-11 00:00	14	18	days	EHT
	6	16-SEP-11 12:04	04-OCT-11 00:00	14	18	days	EHT
	7	16-SEP-11 14:18	04-OCT-11 00:00	14	17	days	EHT
	8	16-SEP-11 14:26	04-OCT-11 00:00	14	17	days	EHT
	9	17-SEP-11 10:57	04-OCT-11 00:00	14	17	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 L1062764 were received on 23-SEP-11 15:00.

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

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

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

ALS Environment

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

L1062764-COFC

COC # 2

Page 1 of 1

Report To		Report Format / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	ANB-07A	16-Sep-11	12:29	Sediment	X	X	X	X	X	X	X	X					2
	ANB-07B	16-Sep-11	12:45	Sediment	X	X	X	X	X	X	X						1
	ANB-07C	16-Sep-11	13:01	Sediment	X	X	X	X	X	X	X						1
	ANB-08A	16-Sep-11	11:39	Sediment	X	X	X	X	X	X	X	X					2
	ANB-08B	16-Sep-11	11:51	Sediment	X	X	X	X	X	X	X						1
	ANB-08C	16-Sep-11	12:04	Sediment	X	X	X	X	X	X	X						1
	ANB-06A	16-Sep-11	14:18	Sediment	X	X	X	X	X	X	X	X					2
	ANB-06B	16-Sep-11	14:26	Sediment	X	X	X	X	X	X	X						1
	ANB-06C	17-Sep-11	10:57	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	09:34		23SEP11	1500	2.8 °C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:34 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062767

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062767-1 ANB-04A							
Sampled By: CLIENT on 16-SEP-11 @ 14:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	11.7		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	<0.70		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	11.7		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	89.0		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.18		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	663		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.79		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	75.8		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	22.4		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	25400		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.47		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	12.4		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	146		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.97		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.253		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	17.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.408		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	9210		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.73		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	61.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	14.3		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	36.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	34900		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.2		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	11400		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	508		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.491		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	42.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	650		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	5410		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	54.6		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.83		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.18		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	367		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	33.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.32		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	1160		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.121		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.51		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	52.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	155		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-1 ANB-04A							
Sampled By: CLIENT on 16-SEP-11 @ 14:45							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	20.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-2 ANB-04B							
Sampled By: CLIENT on 16-SEP-11 @ 15:01							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	13.1		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.28		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	13.3		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.054		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	92.6		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.38		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	881		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	22800		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	3.07		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	17.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	139		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.81		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.243		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	23.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.823		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	10500		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.55		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	71.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	16.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	47.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	34400		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.3		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	10500		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	683		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.716		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	46.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	970		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	6010		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	52.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.89		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.15		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	567		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	37.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.32		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	1060		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.173		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.47		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	50.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	383		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-2 ANB-04B							
Sampled By: CLIENT on 16-SEP-11 @ 15:01							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	11.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-3 ANB-04C							
Sampled By: CLIENT on 16-SEP-11 @ 15:06							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2263461
Total Organic Carbon	12.5		0.10	%	04-OCT-11	04-OCT-11	R2263461
CaCO3 Equivalent	0.75		0.70	%	04-OCT-11	04-OCT-11	R2263461
Total Carbon by combustion method							
Total Carbon by Combustion	12.5		0.1	%	04-OCT-11	04-OCT-11	R2263460
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	80.8		0.10	%	05-OCT-11	05-OCT-11	R2264467
Total Nitrogen by LECO	1.34		0.020	%	04-OCT-11	04-OCT-11	R2263460
Phosphorus, Total	877		50	mg/kg	05-OCT-11	05-OCT-11	R2263954
Metals							
Aluminum (Al)	22000		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	2.22		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	16.4		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	123		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.78		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.234		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	18.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.813		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	9240		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.38		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	54.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	16.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	46.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	33300		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.2		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	10000		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	611		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.518		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	38.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	780		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	5090		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	48.3		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.72		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.16		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	449		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	31.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.31		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	952		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.142		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.34		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	46.2		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	390		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-3 ANB-04C							
Sampled By: CLIENT on 16-SEP-11 @ 15:06							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	15.6		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-4 ANB-09A							
Sampled By: CLIENT on 16-SEP-11 @ 10:51							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.17		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	6.85		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.46		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	7.0		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.062		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	80.7		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.774		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	1090		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	2.24		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	53.5		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	44.3		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silty clay				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	31700		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.67		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	17.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	165		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.85		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.247		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	15.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.312		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7560		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.93		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	70.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	17.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	31.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	45100		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.2		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	12200		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	1350		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.345		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	44.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	1000		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5780		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	75.1		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.81		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	360		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	38.1		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.28		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062767-4 ANB-09A							
Sampled By: CLIENT on 16-SEP-11 @ 10:51							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1340		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.115		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.68		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	69.9		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	150		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	13.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062767-5 ANB-09B							
Sampled By: CLIENT on 16-SEP-11 @ 11:06							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	7.16		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	0.79		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	7.2		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.064		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	83.8		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.789		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	1160		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	29600		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	0.78		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	23.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	163		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.95		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.240		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	13.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.310		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	7530		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.87		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	66.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	16.7		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	30.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	46700		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.6		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11800		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	1660		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.320		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	42.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	1090		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5390		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	70.2		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.81		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	333		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	37.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.29		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062767-5 ANB-09B							
Sampled By: CLIENT on 16-SEP-11 @ 11:06							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1270		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.177		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.65		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	64.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	147		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	12.6		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062767-6 ANB-09C							
Sampled By: CLIENT on 16-SEP-11 @ 11:17							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	6.93		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	<0.70		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	6.9		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	80.9		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.752		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	1140		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	27700		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.70		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	19.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	164		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	1.05		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.297		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	18.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.313		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	7270		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.89		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	65.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	16.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	30.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	45600		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	17.2		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	12100		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	1310		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.353		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	42.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	1050		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	5720		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	59.1		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.88		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.15		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	332		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	34.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.34		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-6 ANB-09C							
Sampled By: CLIENT on 16-SEP-11 @ 11:17							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1290		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.133		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	2.00		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	63.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	146		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	13.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-7 ANB-10A							
Sampled By: CLIENT on 16-SEP-11 @ 10:00							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	3.74		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	<0.70		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	3.7		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	67.1		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.427		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	664		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	58.4		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	18.1		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	23.4		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Sandy clay loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	15500		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.20		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	6.79		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	89.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.57		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.162		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	10.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.170		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	3990		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.60		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	38.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	9.87		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	17.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	24500		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	9.30		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	7160		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	567		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.198		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	23.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	680		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3160		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	32.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-7 ANB-10A							
Sampled By: CLIENT on 16-SEP-11 @ 10:00							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	228		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	18.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.20		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	788		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.131		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.26		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	37.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	62		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	6.70		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-8 ANB-10B							
Sampled By: CLIENT on 16-SEP-11 @ 10:17							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	2.90		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	0.78		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	2.9		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	59.1		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.327		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	591		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	10900		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.12		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	5.29		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	59.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.35		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.108		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	8.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.138		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	3050		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.08		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	25.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	6.99		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	12.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	17100		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	6.61		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	4960		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	364		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.150		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	16.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	580		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	2100		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	21.3		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-8 ANB-10B							
Sampled By: CLIENT on 16-SEP-11 @ 10:17							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	162		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	13.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.14		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	574		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.080		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.08		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	26.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	43		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	4.41		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062767-9 ANB-10C							
Sampled By: CLIENT on 16-SEP-11 @ 10:26							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	1.53		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	<0.70		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	1.5		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	44.1		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	0.154		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	520		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	8590		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	4.00		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	43.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.32		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.072		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	6.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.100		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	2610		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.751		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	18.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	5.97		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	8.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	13200		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	4.75		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	3860		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	279		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.127		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	11.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	530		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	1570		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	14.9		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062767-9 ANB-10C							
Sampled By: CLIENT on 16-SEP-11 @ 10:26							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	151		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	10.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	446		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.065		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.977		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	21.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	31		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	3.77		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062767 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2263461								
WG1361282-1 DUP		**L1062783-12**						
Inorganic Carbon		0.40	0.40		%	0.90	30	04-OCT-11
CaCO3 Equivalent		3.37	3.34		%	0.90	25	04-OCT-11
WG1361282-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.66		%		2.33-4.33	04-OCT-11
WG1361282-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
Batch R2264106								
WG1360096-1 DUP		**L1062769-1**						
Inorganic Carbon		0.14	0.13		%	0.68	30	04-OCT-11
CaCO3 Equivalent		1.13	1.12		%	0.68	25	04-OCT-11
WG1360096-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.69		%		2.33-4.33	04-OCT-11
WG1360096-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2263460								
WG1361276-1 DUP		**L1062783-12**						
Total Carbon by Combustion		1.9	1.9		%	0.38	10	04-OCT-11
WG1361276-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	04-OCT-11
WG1361276-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	04-OCT-11
Batch R2264105								
WG1360064-1 DUP		**L1062769-5**						
Total Carbon by Combustion		40.1	39.9		%	0.53	10	01-OCT-11
WG1360064-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360064-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
HG-200.2-CVAF-WP	**Soil**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2263460								
WG1361276-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.111		%		0.085-0.135	04-OCT-11
WG1361276-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	04-OCT-11
Batch R2264105								
WG1360064-1 DUP		**L1062769-5**						
Total Nitrogen by LECO		3.09	3.08	J	%	0.004	0.05	01-OCT-11
WG1360064-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360064-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	04-OCT-11
WG1359965-3 DUP		**L1062761-6**						
Phosphorus, Total		1160	1140		mg/kg	1.5	30	04-OCT-11
WG1359965-5 DUP		**L1062767-9**						
Phosphorus, Total		520	535		mg/kg	2.8	30	04-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
Batch R2263954								
WG1361197-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	05-OCT-11
WG1361197-3 DUP		**L1066261-1**						
Phosphorus, Total		467	461		mg/kg	1.1	30	05-OCT-11
WG1361197-1 MB								
Phosphorus, Total			<50		mg/kg		50	05-OCT-11
PSA-3-SK	**Soil**							
Batch R2264046								
WG1360047-1 DUP		**L1062770-1**						
% Sand (2.0mm - 0.05mm)		67.9	68.7	J	%	0.83	10	05-OCT-11
% Silt (0.05mm - 2um)		9.98	10.3	J	%	0.32	10	05-OCT-11
% Clay (<2um)		22.1	21.0	J	%	1.16	10	05-OCT-11
WG1360047-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			50.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			31.4		%		29-39	05-OCT-11
% Clay (<2um)			17.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062767 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062767 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	16-SEP-11 14:45	04-OCT-11 00:00	14	17	days	EHT
	2	16-SEP-11 15:01	04-OCT-11 00:00	14	17	days	EHT
	3	16-SEP-11 15:06	05-OCT-11 00:00	14	18	days	EHT
	4	16-SEP-11 10:51	04-OCT-11 00:00	14	18	days	EHT
	5	16-SEP-11 11:06	04-OCT-11 00:00	14	18	days	EHT
	6	16-SEP-11 11:17	04-OCT-11 00:00	14	18	days	EHT
	7	16-SEP-11 10:00	04-OCT-11 00:00	14	18	days	EHT
	8	16-SEP-11 10:17	04-OCT-11 00:00	14	18	days	EHT
	9	16-SEP-11 10:26	04-OCT-11 00:00	14	18	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	16-SEP-11 14:45	04-OCT-11 00:00	14	17	days	EHT
	2	16-SEP-11 15:01	04-OCT-11 00:00	14	17	days	EHT
	3	16-SEP-11 15:06	04-OCT-11 00:00	14	17	days	EHT
	4	16-SEP-11 10:51	04-OCT-11 00:00	14	18	days	EHT
	5	16-SEP-11 11:06	04-OCT-11 00:00	14	18	days	EHT
	6	16-SEP-11 11:17	04-OCT-11 00:00	14	18	days	EHT
	7	16-SEP-11 10:00	04-OCT-11 00:00	14	18	days	EHT
	8	16-SEP-11 10:17	04-OCT-11 00:00	14	18	days	EHT
	9	16-SEP-11 10:26	04-OCT-11 00:00	14	18	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 L1062767 were received on 23-SEP-11 15:00.

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

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

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

ALS Environment

L1062767-COFC

Custody / Analytical Request Form
ıada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 3

Report To	
Company:	AECOM -W172
Contact:	Cliff Samoiloff
Address:	99 Commerce Dr
Phone:	Fax:
Invoice To Same as Report ?	☑ Yes ☐ No
Hardcopy of Invoice with Report?	☐ Yes ☐ No
Company:	
Contact:	
Address:	
Phone:	Fax:
Lab Work Order # (lab use only)	

t / Distribution	
☐ Standard	☐ Other
☑ PDF ☑ Excel	☐ Digital ☐ Fax
Email 1:	cliff.samoiloff@aecom.com
Email 2:	shawna.kjartanson@aecom.com
Email 3:	mark.hadfield@aecom.com
Client / Project Information	
Job #:	60213483
PO / AFE:	
LSD:	
Quote #:	Q24534
ALS Contact:	Sampler:

Service Requested (Rush for routine analysis subject to availability)

- ◉ Regular (Standard Turnaround Times - Business Days)
- ○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

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

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	ANB-04A	16-Sep-11	14:45	Sediment	X	X	X	X	X	X	X	X					2
	ANB-04B	16-Sep-11	15:01	Sediment	X	X	X	X	X	X	X						1
	ANB-04C	16-Sep-11	15:06	Sediment	X	X	X	X	X	X	X						1
	ANB-09A	16-Sep-11	10:51	Sediment	X	X	X	X	X	X	X	X					2
	ANB-09B	16-Sep-11	11:06	Sediment	X	X	X	X	X	X	X						1
	ANB-09C	16-Sep-11	11:17	Sediment	X	X	X	X	X	X	X						1
	ANB-10A	16-Sep-11	10:00	Sediment	X	X	X	X	X	X	X	X					2
	ANB-10B	16-Sep-11	10:17	Sediment	X	X	X	X	X	X	X						1
	ANB-10C	16-Sep-11	10:26	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
[signature]	23-Sep-11	9:53	[signature]	23Sept11	1500	2.8 °C				

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:35 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062769

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062769-1 ANB-03A							
Sampled By: CLIENT on 17-SEP-11 @ 10:16							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	12.7		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.13		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	12.8		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	87.1		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.20		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	673		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	3.32		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	69.5		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	27.1		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam / Silty clay loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	22900		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	2.52		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	14.4		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	121		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.79		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.215		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	16.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.918		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	10500		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.40		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	56.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	17.3		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	44.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	32300		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	14.3		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	9900		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	522		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.468		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	37.2		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	700		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	4800		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	50.2		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.90		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.17		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	376		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	34.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.31		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	1070		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.141		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.24		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	47.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	439		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-1 ANB-03A							
Sampled By: CLIENT on 17-SEP-11 @ 10:16							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	19.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-2 ANB-03B							
Sampled By: CLIENT on 17-SEP-11 @ 10:28							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	15.7		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.35		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	15.9		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.077		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.9		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.31		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	674		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	20400		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	5.01		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	12.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	101		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.69		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.188		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	16.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	1.47		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	12200		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.02		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	61.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	26.4		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	54.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	29200		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	14.3		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	9120		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	500		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	1.01		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	38.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	670		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3880		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	41.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	3.32		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.18		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	309		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	36.7		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.31		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	920		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.131		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.72		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	43.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	847		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-2 ANB-03B							
Sampled By: CLIENT on 17-SEP-11 @ 10:28							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	20.3		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-3 ANB-03C							
Sampled By: CLIENT on 17-SEP-11 @ 10:39							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	12.3		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	0.91		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	12.4		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.099		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	95.7		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.21		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	730		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	23600		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	1.32		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	14.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	124		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.85		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.234		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	15.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.732		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	10400		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	2.48		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	56.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	17.7		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	41.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	34800		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.0		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	10100		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	542		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.434		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	38.4		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	640		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	4910		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	51.8		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.47		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.17		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	341		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	34.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.30		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	1070		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.146		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.25		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	47.1		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	354		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-3 ANB-03C							
Sampled By: CLIENT on 17-SEP-11 @ 10:39							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	20.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-4 ARL-01A							
Sampled By: CLIENT on 15-SEP-11 @ 09:58							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.15		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	39.2		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.23		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	39.4		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.080		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.7		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	3.18		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	627		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.56	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	76.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	21.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	3390		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.14		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	12.3		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	78.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.067		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	12.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.425		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	13700		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.309		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	6.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	3.57		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	24.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	3350		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	7.44		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1600		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	121		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	1.05		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	9.47		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	580		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	278		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	2.63		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.34		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	77		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	30.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-4 ARL-01A							
Sampled By: CLIENT on 15-SEP-11 @ 09:58							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	83.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.071		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.554		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	10.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	75		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	2.84		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-5 ARL-01B							
Sampled By: CLIENT on 15-SEP-11 @ 10:08							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.14		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	39.9		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	1.16		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	40.1		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.3		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	3.09		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	595		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2470		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	9.26		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	67.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.11		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.028		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	7.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.279		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	9850		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.174		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	4.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	2.52		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	17.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	2250		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	2.10		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1130		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	103		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.811		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	6.55		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	380		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	172		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	1.54		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.96		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	55		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	25.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-5 ARL-01B							
Sampled By: CLIENT on 15-SEP-11 @ 10:08							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	42.1		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	<0.050		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.484		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	7.92		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	53		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	1.47		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-6 ARL-01C							
Sampled By: CLIENT on 15-SEP-11 @ 10:14							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	38.4		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	0.89		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	38.5		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.060		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	95.7		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	3.09		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	618		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	2620		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	11.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	73.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.045		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	9.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.325		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	11600		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.210		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	5.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	2.87		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	20.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	2750		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	4.31		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1230		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	120		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.790		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	7.89		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	470		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	205		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	1.87		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	1.07		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	63		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	27.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-6 ARL-01C							
Sampled By: CLIENT on 15-SEP-11 @ 10:14							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	50.4		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.058		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.484		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	8.76		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	59		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	1.70		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-7 GHC-01A							
Sampled By: CLIENT on 13-SEP-11 @ 15:59							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.26		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	33.7		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	2.19		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	34.0		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.080		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.9		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	1.78		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	788		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	21.5	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	78.0	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	0.56	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264046
Note: Results Unreliable. Insufficient soil for analysis.							
Metals							
Aluminum (Al)	2530		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.17		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	32.0		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	41.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.037		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	6.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.330		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	7790		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.122		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	14.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	2.26		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	33.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	6580		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	7.42		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1450		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	180		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.669		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	8.26		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	590		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	435		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	2.27		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-7 GHC-01A							
Sampled By: CLIENT on 13-SEP-11 @ 15:59							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	0.55		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	96		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	22.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	109		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.138		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.393		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	7.20		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	589		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	1.16		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-8 GHC-01B							
Sampled By: CLIENT on 13-SEP-11 @ 16:33							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.31		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	37.3		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	2.61		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	37.6		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.106		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	99.0		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	2.25		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	970		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	1590		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.23		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	34.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	39.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.043		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	5.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.364		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	6670		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.089		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	10.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	1.96		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	29.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	3010		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	9.07		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1250		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	107		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.649		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	6.56		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	490		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	290		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	1.59		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-8 GHC-01B							
Sampled By: CLIENT on 13-SEP-11 @ 16:33							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	<0.50		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	80		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	38.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	67.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.118		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.228		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	4.75		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	521		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	0.72		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062769-9 GHC-01C							
Sampled By: CLIENT on 13-SEP-11 @ 16:41							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.35		0.10	%	04-OCT-11	04-OCT-11	R2264106
Total Organic Carbon	36.9		0.10	%	04-OCT-11	04-OCT-11	R2264106
CaCO3 Equivalent	2.92		0.70	%	04-OCT-11	04-OCT-11	R2264106
Total Carbon by combustion method							
Total Carbon by Combustion	37.3		0.1	%	01-OCT-11	01-OCT-11	R2264105
Miscellaneous Parameters							
Mercury (Hg)-Total	0.106		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	96.4		0.10	%	04-OCT-11	04-OCT-11	R2263002
Total Nitrogen by LECO	2.48		0.020	%	01-OCT-11	01-OCT-11	R2264105
Phosphorus, Total	1480		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	1730		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.24		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	50.3		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	47.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.073		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	8.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.646		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	13000		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.099		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	11.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	2.42		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	36.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	5150		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	15.7		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	1720		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	398		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.997		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	8.27		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	1180		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	1540		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	3.14		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062769-9 GHC-01C							
Sampled By: CLIENT on 13-SEP-11 @ 16:41							
Matrix: SEDIMENT							
Metals							
Selenium (Se)	0.65		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	679		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	29.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	78.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.175		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	0.273		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	5.57		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	698		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	0.63		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062769 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264106								
WG1360096-1 DUP		**L1062769-1**						
Inorganic Carbon		0.14	0.13		%	0.68	30	04-OCT-11
CaCO3 Equivalent		1.13	1.12		%	0.68	25	04-OCT-11
WG1360096-2 IRM		**0.4%IC**						
Inorganic Carbon			0.44		%		0.28-0.52	04-OCT-11
CaCO3 Equivalent			3.69		%		2.33-4.33	04-OCT-11
WG1360096-3 MB								
Inorganic Carbon			<0.10		%		0.1	04-OCT-11
CaCO3 Equivalent			<0.70		%		1	04-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264105								
WG1360064-1 DUP		**L1062769-5**						
Total Carbon by Combustion		40.1	39.9		%	0.53	10	01-OCT-11
WG1360064-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360064-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11
N-TOT-LECO-SK	**Soil**							
Batch R2264105								
WG1360064-1 DUP		**L1062769-5**						
Total Nitrogen by LECO		3.09	3.08	J	%	0.004	0.05	01-OCT-11
WG1360064-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360064-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11
P-SALM-ICP-SK	**Soil**							

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
P-SALM-ICP-SK	**Soil**							
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264046								
WG1360047-1 DUP		**L1062770-1**						
% Sand (2.0mm - 0.05mm)		67.9	68.7	J	%	0.83	10	05-OCT-11
% Silt (0.05mm - 2um)		9.98	10.3	J	%	0.32	10	05-OCT-11
% Clay (<2um)		22.1	21.0	J	%	1.16	10	05-OCT-11
WG1360047-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			50.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			31.4		%		29-39	05-OCT-11
% Clay (<2um)			17.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062769 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062769 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	17-SEP-11 10:16	04-OCT-11 00:00	14	17	days	EHT
	2	17-SEP-11 10:28	04-OCT-11 00:00	14	17	days	EHT
	3	17-SEP-11 10:39	04-OCT-11 00:00	14	17	days	EHT
	4	15-SEP-11 09:58	04-OCT-11 00:00	14	19	days	EHT
	5	15-SEP-11 10:08	04-OCT-11 00:00	14	19	days	EHT
	6	15-SEP-11 10:14	04-OCT-11 00:00	14	19	days	EHT
	7	13-SEP-11 15:59	04-OCT-11 00:00	14	20	days	EHT
	8	13-SEP-11 16:33	04-OCT-11 00:00	14	20	days	EHT
	9	13-SEP-11 16:41	04-OCT-11 00:00	14	20	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	17-SEP-11 10:16	04-OCT-11 00:00	14	17	days	EHT
	2	17-SEP-11 10:28	04-OCT-11 00:00	14	17	days	EHT
	3	17-SEP-11 10:39	04-OCT-11 00:00	14	17	days	EHT
	4	15-SEP-11 09:58	04-OCT-11 00:00	14	19	days	EHT
	5	15-SEP-11 10:08	04-OCT-11 00:00	14	19	days	EHT
	6	15-SEP-11 10:14	04-OCT-11 00:00	14	19	days	EHT
	7	13-SEP-11 15:59	04-OCT-11 00:00	14	20	days	EHT
	8	13-SEP-11 16:33	04-OCT-11 00:00	14	20	days	EHT
	9	13-SEP-11 16:41	04-OCT-11 00:00	14	20	days	EHT
Total Metals							
Mercury Total							
	7	13-SEP-11 15:59	12-OCT-11 13:41	28	29	days	EHT
	8	13-SEP-11 16:33	12-OCT-11 13:41	28	29	days	EHT
	9	13-SEP-11 16:41	12-OCT-11 13:41	28	29	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 L1062769 were received on 23-SEP-11 15:00.

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

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

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

ALS Environmental

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 4

Page 1 of 1

L1062769-COFC

Report To		Report Format / Distribution				Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172				☐ Other	◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF	☑ Excel	☐ Digital	☐ Fax	○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com			○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com			○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com			Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information				Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483			
Company:		PO / AFE:				
Contact:		LSD:				
Address:						
Phone:	Fax:	Quote #:	Q24534			
Lab Work Order # (lab use only)		ALS Contact:		Sampler:		

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	ANB-03A	17-Sep-11	10:16	Sediment	X	X	X	X	X	X	X	X					2
	ANB-03B	17-Sep-11	10:28	Sediment	X	X	X	X	X	X	X						1
	ANB-03C	17-Sep-11	10:39	Sediment	X	X	X	X	X	X	X						1
	ARL-01A	15-Sep-11	9:58	Sediment	X	X	X	X	X	X	X	X					2
	ARL-01B	15-Sep-11	10:08	Sediment	X	X	X	X	X	X	X						1
	ARL-01C	15-Sep-11	10:14	Sediment	X	X	X	X	X	X	X						1
	GHC-01A	13-Sep-11	15:59	Sediment	X	X	X	X	X	X	X	X					2
	GHC-01B	13-Sep-11	16:33	Sediment	X	X	X	X	X	X	X						1
	GHC-01C	13-Sep-11	16:41	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	09:50		23Sep11	1500	20.8°C				

GENF 18.01 Front

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:35 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062770

Project P.O. #: NOT SUBMITTED
Job Reference: 60212435
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062770-1 STC-01A							
Sampled By: CLIENT on 16-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	1.91		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	0.92		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	2.0		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	48.8		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	0.145		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	516		50	mg/kg	05-OCT-11	05-OCT-11	R2263954
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	67.9		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	9.98		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	22.1		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Sandy clay loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	26500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	3.52		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	209		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.68		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.145		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	16.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.172		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	8270		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.99		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	59.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	26.1		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	43.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	34300		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	7.52		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10500		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	1040		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.429		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	40.4		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	470		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4640		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	56.1		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.64		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	365		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	37.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.23		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1120		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.109		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.24		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	60.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	131		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062770-1 STC-01A							
Sampled By: CLIENT on 16-SEP-11 @ 10:30							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	15.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062770-2 STC-01B							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	2.01		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	<0.70		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	2.0		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	99.2		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	0.137		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	425		50	mg/kg	05-OCT-11	05-OCT-11	R2263954
Metals							
Aluminum (Al)	16100		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	6.61		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	117		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.33		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.084		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	12.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.471		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	5140		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.23		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	37.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	72.8		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	93.3		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	24600		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	5.37		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	7710		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	705		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.312		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	38.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	410		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	3410		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	35.3		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.62		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	257		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	22.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	710		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.136		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	0.822		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	45.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	512		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062770-2 STC-01B							
Sampled By: CLIENT on 16-SEP-11 @ 10:10							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	10.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062770-3 STC-01C							
Sampled By: CLIENT on 16-SEP-11 @ 09:45							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	8.47		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	0.80		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	8.5		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	70.6		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	0.543		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	540		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Metals							
Aluminum (Al)	19900		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.15		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	14.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	175		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.47		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.097		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	22.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	1.30		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	11700		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.46		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	82.9		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	158		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	271		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	29800		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	6.94		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	7780		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	3540		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.722		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	59.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	570		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	3490		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	34.6		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.95		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	248		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	40.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.18		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	790		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.149		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.51		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	41.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	1080		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062770-3 STC-01C							
Sampled By: CLIENT on 16-SEP-11 @ 09:45							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	6.34		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062770-4 STC-02A							
Sampled By: CLIENT on 15-SEP-11 @ 16:12							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.42		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	30.5		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	3.53		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	30.9		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	95.1		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.62		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	697		50	mg/kg	04-OCT-11	04-OCT-11	R2263935
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	8.29	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	72.6	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	19.1	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	4810		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	1.99		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	55.9		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.22		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.069		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	12.1		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.218		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	15300		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.484		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	12.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	5.51		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	17.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	6210		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	3.41		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	3040		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	179		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.431		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	12.2		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	450		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	885		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	7.65		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.91		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	202		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	49.6		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062770-4 STC-02A							
Sampled By: CLIENT on 15-SEP-11 @ 16:12							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	247		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.052		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.42		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	13.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	75		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	7.60		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062770-5 STC-02B							
Sampled By: CLIENT on 15-SEP-11 @ 16:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.33		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	39.0		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	2.76		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	39.4		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	0.057		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	91.8		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.95		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	744		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	3430		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	1.80		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	42.5		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.12		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.048		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	11.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.293		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	15900		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.299		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	8.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	7.69		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	26.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	4110		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	2.72		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	2470		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	198		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.488		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	11.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	520		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	547		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	3.72		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.88		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	243		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	45.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062770-5 STC-02B							
Sampled By: CLIENT on 15-SEP-11 @ 16:30							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	152		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.051		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.52		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	8.37		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	142		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	4.40		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062770-6 STC-02C							
Sampled By: CLIENT on 15-SEP-11 @ 16:50							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.40		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	39.1		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	3.31		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	39.5		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	0.054		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	92.6		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	2.25		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	891		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	2360		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	2.60		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	39.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.039		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	14.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.316		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	14600		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	0.244		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	6.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	9.02		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	31.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	4040		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	2.66		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	2350		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	286		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.444		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	11.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	730		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	661		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	3.33		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.78		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	213		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	42.2		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062770-6 STC-02C							
Sampled By: CLIENT on 15-SEP-11 @ 16:50							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	98.3		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	<0.050		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.09		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	6.16		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	183		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	2.39		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062770-7 STC-03B							
Sampled By: CLIENT on 15-SEP-11 @ 15:10							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.28		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	15.9		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	2.33		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	16.1		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	0.062		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	93.5		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.14		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	882		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	5.50	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	70.8	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	23.7	UMI	0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam	UMI			03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	18000		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	0.16		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	7.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	120		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.57		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.197		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	14.6		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	0.303		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	10600		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.92		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	50.4		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	15.2		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	28.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	36700		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	9.41		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8090		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	524		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.489		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	34.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	780		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	2990		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	36.4		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	0.61		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062770-7 STC-03B							
Sampled By: CLIENT on 15-SEP-11 @ 15:10							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	327		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	41.4		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.22		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	852		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.167		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.73		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	38.6		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	117		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zirconium (Zr)	15.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062770-8 STC-03A							
Sampled By: CLIENT on 15-SEP-11 @ 14:50							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.16		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	15.3		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	1.37		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	15.4		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	81.5		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.03		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	835		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	21400		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	2.85		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	135		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.63		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.152		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	9.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.157		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9590		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.93		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	47.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	12.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	22.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	29600		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	7.45		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	8580		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	1120		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.186		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	28.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	670		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	3130		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	44.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	<0.50		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.15		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062770-8 STC-03A							
Sampled By: CLIENT on 15-SEP-11 @ 14:50							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	313		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	78.6		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.19		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	929		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.103		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.44		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	40.1		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	79		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	20.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062770-9 STC-03C							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.19		0.10	%	06-OCT-11	06-OCT-11	R2264946
Total Organic Carbon	14.4		0.10	%	06-OCT-11	06-OCT-11	R2264946
CaCO3 Equivalent	1.62		0.70	%	06-OCT-11	06-OCT-11	R2264946
Total Carbon by combustion method							
Total Carbon by Combustion	14.6		0.1	%	05-OCT-11	05-OCT-11	R2264945
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	86.1		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	0.989		0.020	%	05-OCT-11	05-OCT-11	R2264945
Phosphorus, Total	703		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	22800		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	3.16		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	141		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.67		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.164		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	12.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.197		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	10700		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.10		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	51.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	13.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	24.2		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	26900		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	8.23		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	8990		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	783		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.256		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	30.5		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	710		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	3850		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	48.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	0.53		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.13		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062770-9 STC-03C							
Sampled By: CLIENT on 15-SEP-11 @ 15:00							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	440		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	56.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.21		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	964		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.096		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.86		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	44.1		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	84		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	13.6		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
UMI	Unreliable: Matrix interference.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062770 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2264946								
WG1360098-1 DUP		**L1062770-9**						
Inorganic Carbon		0.19	0.19		%	2.4	30	06-OCT-11
CaCO3 Equivalent		1.62	1.58		%	2.4	25	06-OCT-11
WG1360098-2 IRM		**0.4%IC**						
Inorganic Carbon			0.37		%		0.28-0.52	06-OCT-11
CaCO3 Equivalent			3.12		%		2.33-4.33	06-OCT-11
WG1360098-3 MB								
Inorganic Carbon			<0.10		%		0.1	06-OCT-11
CaCO3 Equivalent			<0.70		%		1	06-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2264945								
WG1360067-1 DUP		**L1062770-1**						
Total Carbon by Combustion		2.0	2.0		%	3.1	10	05-OCT-11
WG1360067-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.5		%		1.1-1.7	05-OCT-11
WG1360067-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	05-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOT-LECO-SK	**Soil**							
Batch R2264945								
WG1360067-1 DUP		**L1062770-1**						
Total Nitrogen by LECO		0.145	0.144	J	%	0.001	0.05	05-OCT-11
WG1360067-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.111		%		0.085-0.135	05-OCT-11
WG1360067-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	05-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	04-OCT-11
WG1359965-3 DUP		**L1062761-6**						
Phosphorus, Total		1160	1140		mg/kg	1.5	30	04-OCT-11
WG1359965-5 DUP		**L1062767-9**						
Phosphorus, Total		520	535		mg/kg	2.8	30	04-OCT-11
WG1359965-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
Batch R2263935								
WG1359961-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1080		mg/kg		750-1530	04-OCT-11
WG1359961-4 DUP		**L1062760-6**						
Phosphorus, Total		426	441		mg/kg	3.5	30	04-OCT-11
WG1359961-5 DUP		**L1062732-6**						
Phosphorus, Total		668	652		mg/kg	2.5	30	04-OCT-11
WG1359961-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
Batch R2263954								
WG1361197-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	05-OCT-11
WG1361197-3 DUP		**L1066261-1**						
Phosphorus, Total		467	461		mg/kg	1.1	30	05-OCT-11
WG1361197-1 MB								
Phosphorus, Total			<50		mg/kg		50	05-OCT-11
PSA-3-SK	**Soil**							
Batch R2264046								
WG1360047-1 DUP		**L1062770-1**						
% Sand (2.0mm - 0.05mm)		67.9	68.7	J	%	0.83	10	05-OCT-11
% Silt (0.05mm - 2um)		9.98	10.3	J	%	0.32	10	05-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PSA-3-SK	**Soil**							
Batch R2264046								
WG1360047-1 DUP		**L1062770-1**						
% Clay (<2um)		22.1	21.0	J	%	1.16	10	05-OCT-11
WG1360047-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			50.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			31.4		%		29-39	05-OCT-11
% Clay (<2um)			17.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062770 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062770 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	16-SEP-11 10:30	05-OCT-11 00:00	14	19	days	EHT
	2	16-SEP-11 10:10	05-OCT-11 00:00	14	19	days	EHT
	3	16-SEP-11 09:45	05-OCT-11 00:00	14	19	days	EHT
	4	15-SEP-11 16:12	05-OCT-11 00:00	14	19	days	EHT
	5	15-SEP-11 16:30	05-OCT-11 00:00	14	19	days	EHT
	6	15-SEP-11 16:50	05-OCT-11 00:00	14	19	days	EHT
	7	15-SEP-11 15:10	05-OCT-11 00:00	14	19	days	EHT
	8	15-SEP-11 14:50	05-OCT-11 00:00	14	19	days	EHT
	9	15-SEP-11 15:00	05-OCT-11 00:00	14	19	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	16-SEP-11 10:30	06-OCT-11 00:00	14	20	days	EHT
	2	16-SEP-11 10:10	06-OCT-11 00:00	14	20	days	EHT
	3	16-SEP-11 09:45	06-OCT-11 00:00	14	20	days	EHT
	4	15-SEP-11 16:12	06-OCT-11 00:00	14	20	days	EHT
	5	15-SEP-11 16:30	06-OCT-11 00:00	14	20	days	EHT
	6	15-SEP-11 16:50	06-OCT-11 00:00	14	20	days	EHT
	7	15-SEP-11 15:10	06-OCT-11 00:00	14	20	days	EHT
	8	15-SEP-11 14:50	06-OCT-11 00:00	14	20	days	EHT
	9	15-SEP-11 15:00	06-OCT-11 00:00	14	20	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 L1062770 were received on 23-SEP-11 15:00.

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

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

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

ALS Environmental

L1062770-COFC

Chain of Custody / Analytical Request Form

In Canada Toll Free: 1 800 668 9878

www.alsglobal.com

COC # 17

Report To		Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Analysis Request
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60212435	Please indicate below Filtered, Preserved or both (F, P, F/P)
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	

Lab Work Order # (lab use only):

ALS Contact:

Sampler:

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers
	STC-01A	16-Sep-11	10:30	Sediment	X	X	X	X	X	X	X	X					2
	STC-01B	16-Sep-11	10:10	Sediment	X	X	X	X	X	X	X						1
	STC-01C	16-Sep-11	9:45	Sediment	X	X	X	X	X	X	X						1
	STC-02A	15-Sep-11	16:12	Sediment	X	X	X	X	X	X	X	X					2
	STC-02B	15-Sep-11	16:30	Sediment	X	X	X	X	X	X	X						1
	STC-02C	15-Sep-11	16:50	Sediment	X	X	X	X	X	X	X						1
	STC-03B	15-Sep-11	15:10	Sediment	X	X	X	X	X	X	X	X					2
	STC-03A	15-Sep-11	14:50	Sediment	X	X	X	X	X	X	X						1
	STC-03C	15-Sep-11	15:00	Sediment	X	X	X	X	X	X	X						1

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	10:09		23 Sep 11	15:00	2.4 °C				

AECOM Canada Ltd. (Winnipeg)
ATTN: Clifton Samoiloff
99 Commerce Drive
Winnipeg MB R3P 0Y7

Date Received: 23-SEP-11
Report Date: 13-OCT-11 13:36 (MT)
Version: FINAL

Client Phone: 204-928-7427

Certificate of Analysis

Lab Work Order #: L1062772

Project P.O. #: NOT SUBMITTED
Job Reference: 60213483
C of C Numbers:
Legal Site Desc:

Paul Nicolas
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1062772-1 ANB-01A							
Sampled By: CLIENT on 15-SEP-11 @ 14:16							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.18		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	17.2		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	1.50		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	17.4		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	89.3		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.33		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	760		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.84		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	75.2		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	23.0		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silt loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	18900		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	10.9		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	13.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	96.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.59		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.155		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	19.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	1.11		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	15500		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.72		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	52.2		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	16.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	54.5		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	25900		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	11.3		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8820		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	477		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.743		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	32.8		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	740		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	4180		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	36.0		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	3.72		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.13		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	390		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	40.7		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.32		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	818		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.185		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.41		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	41.0		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	781		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062772-1 ANB-01A							
Sampled By: CLIENT on 15-SEP-11 @ 14:16							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	14.5		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062772-2 ANB-01B							
Sampled By: CLIENT on 15-SEP-11 @ 14:28							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.20		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	15.9		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	1.69		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	16.1		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	12-OCT-11	12-OCT-11	R2268035
% Moisture	90.6		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.35		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	764		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	20000		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Antimony (Sb)	12.4		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Arsenic (As)	16.1		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Barium (Ba)	102		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Beryllium (Be)	0.62		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Bismuth (Bi)	0.156		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Boron (B)	22.8		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cadmium (Cd)	1.17		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Calcium (Ca)	15100		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cesium (Cs)	1.88		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Chromium (Cr)	58.7		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Cobalt (Co)	16.8		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Copper (Cu)	57.3		1.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Iron (Fe)	28200		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Lead (Pb)	11.4		0.20	mg/kg	03-OCT-11	03-OCT-11	R2262894
Magnesium (Mg)	8930		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Manganese (Mn)	532		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Molybdenum (Mo)	0.843		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Nickel (Ni)	36.4		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Phosphorus (P)	760		100	mg/kg	03-OCT-11	03-OCT-11	R2262894
Potassium (K)	4220		25	mg/kg	03-OCT-11	03-OCT-11	R2262894
Rubidium (Rb)	39.8		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Selenium (Se)	3.84		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Silver (Ag)	0.14		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Sodium (Na)	387		10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Strontium (Sr)	40.7		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tellurium (Te)	<0.10		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Thallium (Tl)	0.33		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tin (Sn)	<5.0		5.0	mg/kg	03-OCT-11	03-OCT-11	R2262894
Titanium (Ti)	935		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Tungsten (W)	0.202		0.050	mg/kg	03-OCT-11	03-OCT-11	R2262894
Uranium (U)	1.42		0.020	mg/kg	03-OCT-11	03-OCT-11	R2262894
Vanadium (V)	43.7		0.50	mg/kg	03-OCT-11	03-OCT-11	R2262894
Zinc (Zn)	848		10	mg/kg	03-OCT-11	03-OCT-11	R2262894

* 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
L1062772-2 ANB-01B							
Sampled By: CLIENT on 15-SEP-11 @ 14:28							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	14.8		0.10	mg/kg	03-OCT-11	03-OCT-11	R2262894
L1062772-3 ANB-01C							
Sampled By: CLIENT on 15-SEP-11 @ 14:40							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.12		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	13.6		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	1.03		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	13.7		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	<0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	77.2		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.13		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	617		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	21900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	4.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	9.46		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	111		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.59		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.140		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	18.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.714		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	13400		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	1.97		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	55.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	19.3		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	41.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	28200		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	9.92		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	9610		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	701		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.532		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	33.0		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	620		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4260		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	51.8		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.88		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.15		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	351		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	45.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.23		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	955		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.112		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.31		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	48.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	405		10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-3 ANB-01C							
Sampled By: CLIENT on 15-SEP-11 @ 14:40							
Matrix: SEDIMENT							
Metals							
Zirconium (Zr)	20.1		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-4 ANB-02A							
Sampled By: CLIENT on 15-SEP-11 @ 15:02							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	13.4		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	0.81		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	13.4		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.063		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	93.4		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.36		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	737		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	1.19		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	60.6		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	38.2		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silty clay loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	26900		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	2.87		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	16.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	151		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.81		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.198		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	19.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.810		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	11400		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.68		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	65.5		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	20.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	49.0		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	35100		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	13.0		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10800		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	811		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.622		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	44.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	710		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5260		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	67.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.89		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	423		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	45.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.29		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-4 ANB-02A							
Sampled By: CLIENT on 15-SEP-11 @ 15:02							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1220		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.135		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.32		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	56.6		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	400		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	20.8		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-5 ANB-02B							
Sampled By: CLIENT on 15-SEP-11 @ 15:20							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.11		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	14.2		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	0.88		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	14.4		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.072		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	93.8		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.48		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	835		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	25300		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	5.26		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	18.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	137		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.71		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.190		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	32.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	1.49		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	12500		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.42		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	62.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	28.5		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	62.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	33300		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	15.1		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	10400		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	880		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.729		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	43.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	850		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5220		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	61.4		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	3.03		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.15		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	460		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	44.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.32		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-5 ANB-02B							
Sampled By: CLIENT on 15-SEP-11 @ 15:20							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1030		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.140		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.22		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	54.3		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	851		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	14.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-6 ANB-02C							
Sampled By: CLIENT on 15-SEP-11 @ 15:30							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.10		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	13.1		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	0.86		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	13.2		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.061		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	91.2		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.41		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	751		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	26500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	3.27		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	17.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	145		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.75		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.211		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	21.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	1.05		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	11900		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.62		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	65.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	22.1		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	172		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	35600		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	15.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11100		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	776		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.686		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	53.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	750		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5290		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	65.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	2.18		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Sodium (Na)	407		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	41.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-6 ANB-02C							
Sampled By: CLIENT on 15-SEP-11 @ 15:30							
Matrix: SEDIMENT							
Metals							
Titanium (Ti)	1150		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.138		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.29		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	57.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	685		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	19.7		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-7 ANB-05A							
Sampled By: CLIENT on 15-SEP-11 @ 16:20							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	11.2		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	<0.70		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	11.2		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.058		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	93.0		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.23		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	833		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Particle size - Pipette removal OM & CO3							
% Sand (2.0mm - 0.05mm)	0.81		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Silt (0.05mm - 2um)	70.5		0.10	%	03-OCT-11	05-OCT-11	R2264046
% Clay (<2um)	28.7		0.10	%	03-OCT-11	05-OCT-11	R2264046
Texture	Silty clay loam				03-OCT-11	05-OCT-11	R2264046
Metals							
Aluminum (Al)	26500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	3.22		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	18.5		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	142		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.77		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.221		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	16.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.883		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9430		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.62		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	65.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	19.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	126		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	38100		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	15.1		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11500		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	811		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.474		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	49.9		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	800		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5200		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	64.9		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.95		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.17		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-7 ANB-05A							
Sampled By: CLIENT on 15-SEP-11 @ 16:20							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	355		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	36.4		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1120		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.152		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.20		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	55.8		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	504		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	18.0		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-8 ANB-05B							
Sampled By: CLIENT on 15-SEP-11 @ 16:28							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	<0.10		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	10.5		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	0.79		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	10.5		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.058		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	88.1		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.12		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	733		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	25000		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	2.14		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	16.9		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	138		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.80		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.219		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	12.1		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.747		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9060		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.49		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	62.7		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	18.0		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	44.8		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	38800		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.5		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11000		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	710		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.482		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	42.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	710		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	4730		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	60.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.59		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.18		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-8 ANB-05B							
Sampled By: CLIENT on 15-SEP-11 @ 16:28							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	320		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	33.1		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.30		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1020		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.145		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.24		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	52.7		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	356		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	19.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
L1062772-9 ANB-05C							
Sampled By: CLIENT on 15-SEP-11 @ 16:46							
Matrix: SEDIMENT							
Total Organic Carbon -Inorg & Total C							
Inorganic and Organic Carbon							
Inorganic Carbon	0.10		0.10	%	01-OCT-11	01-OCT-11	R2263032
Total Organic Carbon	10.5		0.10	%	01-OCT-11	01-OCT-11	R2263032
CaCO3 Equivalent	0.86		0.70	%	01-OCT-11	01-OCT-11	R2263032
Total Carbon by combustion method							
Total Carbon by Combustion	10.6		0.1	%	01-OCT-11	01-OCT-11	R2263031
Miscellaneous Parameters							
Mercury (Hg)-Total	0.050		0.050	mg/kg	06-OCT-11	06-OCT-11	R2266580
% Moisture	86.9		0.10	%	05-OCT-11	05-OCT-11	R2263666
Total Nitrogen by LECO	1.12		0.020	%	01-OCT-11	01-OCT-11	R2263031
Phosphorus, Total	751		50	mg/kg	04-OCT-11	04-OCT-11	R2263655
Metals							
Aluminum (Al)	28500		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Antimony (Sb)	1.63		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Arsenic (As)	16.2		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Barium (Ba)	149		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Beryllium (Be)	0.83		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Bismuth (Bi)	0.233		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Boron (B)	17.4		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cadmium (Cd)	0.605		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Calcium (Ca)	9180		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cesium (Cs)	2.83		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Chromium (Cr)	65.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Cobalt (Co)	16.9		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Copper (Cu)	41.9		1.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Iron (Fe)	40400		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Lead (Pb)	14.3		0.20	mg/kg	29-SEP-11	29-SEP-11	R2261045
Magnesium (Mg)	11700		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Manganese (Mn)	693		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Molybdenum (Mo)	0.473		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Nickel (Ni)	44.1		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Phosphorus (P)	720		100	mg/kg	29-SEP-11	29-SEP-11	R2261045
Potassium (K)	5410		25	mg/kg	29-SEP-11	29-SEP-11	R2261045
Rubidium (Rb)	66.6		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Selenium (Se)	1.37		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Silver (Ag)	0.18		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

* 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
L1062772-9 ANB-05C							
Sampled By: CLIENT on 15-SEP-11 @ 16:46							
Matrix: SEDIMENT							
Metals							
Sodium (Na)	353		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Strontium (Sr)	36.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tellurium (Te)	<0.10		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Thallium (Tl)	0.31		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tin (Sn)	<5.0		5.0	mg/kg	29-SEP-11	29-SEP-11	R2261045
Titanium (Ti)	1330		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Tungsten (W)	0.144		0.050	mg/kg	29-SEP-11	29-SEP-11	R2261045
Uranium (U)	1.33		0.020	mg/kg	29-SEP-11	29-SEP-11	R2261045
Vanadium (V)	58.2		0.50	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zinc (Zn)	274		10	mg/kg	29-SEP-11	29-SEP-11	R2261045
Zirconium (Zr)	20.3		0.10	mg/kg	29-SEP-11	29-SEP-11	R2261045

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
C-INORG-ORG-SK	Soil	Inorganic and Organic Carbon	SSSA (1996) P455-456

When carbonates are decomposed with acid in an open system, carbon dioxide is released to the atmosphere. The decrease in sample weight resulting from CO2 loss is proportional to the carbonate content of the soil.

Reference:
Loeppert, R.H. and Suarez, D.L. 1996. Gravimetric Method for Loss of Carbon Dioxide. P. 455-456 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

C-TOT-LECO-SK	Soil	Total Carbon by combustion method	SSSA (1996) P. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference:
Nelson, D.W. and Sommers, L.E. 1996. Total Carbon, organic carbon and organic matter. P. 973-974 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

HG-200.2-CVAF-WP	Soil	Mercury Total	EPA 7470A Rev 1,1994

A hydrochloric acid/nitric acid and potassium persulphate block digestion is employed to oxidize the organomercury to inorganic mercury. After digestion, samples are analyzed using cold vapour techniques.

MET-200.2-MS-WP	Soil	Metals	EPA 200.8/200.2 /BCMOE-S

This analysis is carried out using procedures adapted from US EPA method 200.2. Sample preparation procedure for spectrochemical determination of total recoverable elements . Soil samples are dried (<60 C) and homogenized and a representative subsample of the dry material is digested. The digested samples are analyzed by ICPMS.

The results are reported as mg/Kg dry weight or mg/Kg wet weight this is equivalent to ug/g dry weight or ug/g wet weight.

Method Limitation: This method is not a total digestion technique. It is a very strong acid digestion that is intended to dissolve those metals that maybe environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not mobile in the environment. This method has known stability issues for determining Silicon.

MOIST-SK	Soil	Moisture Content	ASTM D2216-80

The weighed portion of soil is placed in a 105°C oven overnight. The dried soil is allowed to cooled to room temperature, weighed and the % moisture is calculated.

Reference: ASTM D2216-80

N-TOT-LECO-SK	Soil	Total Nitrogen by combustion method	SSSA (1996) p. 973-974

The sample is introduced into a quartz tube where it undergoes combustion at 900 C in the presence of oxygen.
Combustion gases are first carried through a catalyst bed in the bottom of the combustion tube, where oxidation is completed and then carried through a reducing agent (copper), where the nitrogen oxides are reduced to elemental nitrogen.
This mixture of N2, CO2, and H2O is then passed through an absorber column containing magnesium perchlorate to remove water. N2 and CO2 gases are then separated in a gas chromatographic column and detected by thermal conductivity.

Reference: Bremner, J.M. 1996. Nitrogen - Total (Dumas Methods). P. 1088 In: J.M. Bartels et al. (ed.) Methods of soil analysis: Part 3 Chemical methods. (3rd ed.) ASA and SSSA, Madison, WI. Book series no. 5

P-SALM-ICP-SK	Soil	Total Phosphorus	EPA 200.2

This analysis is carried out using procedures from CSR Analytical Method: "Strong Acid Leachable Metals (SALM) in Soil", BC Ministry of Environment, 26 June 2009, and procedures adapted from EPA Method 200.2. The sample is dried at 40 C, then ground to < 2 mm particle size using a stainless steel flail grinder. A representative portion is digested with concentrated nitric and hydrochloric acids for 2 hours in an open vessel digestor at 95 degrees. Instrumental analysis of the digested extract is by ICP-OES.

PSA-3-SK	Soil	Particle size - Pipette removal OM & CO3	Forestry Canada (1991) p. 46-53

Dry, < 2 mm soil is treated hydrochloric acid top remove carbonates, then hydrogen peroxide to remove organic matter. The remaining soil is treated with sodium hexametaphosphate to ensure complete dispersion of primary soil particles. The homogenized suspension is allowed to settle in accordance with Stoke's Law so that only clay particles remain in suspension.To determine the clay fraction, an aliquot of the clay suspension is removed, then dried and weighed. The sand fraction is determined by wet sieving the remaining suspension, then drying and weighing the sand retained

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

on the sieve. The silt fraction is determined by calculation where % Silt = 100 - (%Sand+%Clay)

Reference:
Burt, R. (2009). Soil Survey Field and Laboratory Methods Manual. Soil Survey Investigations Report No. 5. Method 3.2.1.2.2. United States Department of Agriculture Natural Resources Conservation Service.

** 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
SK	ALS ENVIRONMENTAL - SASKATOON, SASKATCHEWAN, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, 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: L1062772 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-INORG-ORG-SK	**Soil**							
Batch R2263032								
WG1360101-1 DUP		**L1062772-3**						
Inorganic Carbon		0.12	0.14		%	9.2	30	01-OCT-11
CaCO3 Equivalent		1.03	1.13		%	9.2	25	01-OCT-11
WG1360101-2 IRM		**0.4%IC**						
Inorganic Carbon			0.38		%		0.28-0.52	01-OCT-11
CaCO3 Equivalent			3.17		%		2.33-4.33	01-OCT-11
WG1360101-3 MB								
Inorganic Carbon			<0.10		%		0.1	01-OCT-11
CaCO3 Equivalent			<0.70		%		1	01-OCT-11
C-TOT-LECO-SK	**Soil**							
Batch R2263031								
WG1360069-1 DUP		**L1062772-4**						
Total Carbon by Combustion		13.4	13.1		%	2.0	10	01-OCT-11
WG1360069-2 IRM		**08-109_SOIL**						
Total Carbon by Combustion			1.4		%		1.1-1.7	01-OCT-11
WG1360069-3 MB								
Total Carbon by Combustion			<0.1		%		0.1	01-OCT-11
HG-200.2-CVAF-WP	**Soil**							
Batch R2266580								
WG1364408-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			109		%		70-130	06-OCT-11
WG1364408-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			101		%		70-130	06-OCT-11
WG1364408-4 DUP		**L1062760-5**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	06-OCT-11
WG1364408-5 DUP		**L1062716-9**						
Mercury (Hg)-Total		0.066	0.078		mg/kg	16	40	06-OCT-11
WG1364408-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	06-OCT-11
Batch R2268035								
WG1367486-2 CRM		**NRC PACS-2**						
Mercury (Hg)-Total			112		%		70-130	12-OCT-11
WG1367486-3 CRM		**NRC MESS-3**						
Mercury (Hg)-Total			87		%		70-130	12-OCT-11
WG1367486-4 DUP		**L1062769-1**						
Mercury (Hg)-Total		0.057	0.057		mg/kg	0.53	40	12-OCT-11
WG1367486-5 DUP		**L1062770-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAF-WP	**Soil**							
Batch R2268035								
WG1367486-5 DUP		**L1062770-3**						
Mercury (Hg)-Total		<0.050	<0.050	RPD-NA	mg/kg	N/A	40	12-OCT-11
WG1367486-1 MB								
Mercury (Hg)-Total			<0.050		mg/kg		0.05	12-OCT-11
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-2 CRM		**NRC PACS-2**						
Aluminum (Al)			94		%		70-130	29-SEP-11
Antimony (Sb)			113		%		70-130	29-SEP-11
Arsenic (As)			95		%		70-130	29-SEP-11
Barium (Ba)			93		%		70-130	29-SEP-11
Boron (B)			90		%		70-130	29-SEP-11
Cadmium (Cd)			95		%		70-130	29-SEP-11
Calcium (Ca)			102		%		70-130	29-SEP-11
Chromium (Cr)			98		%		70-130	29-SEP-11
Cobalt (Co)			95		%		70-130	29-SEP-11
Copper (Cu)			108		%		70-130	29-SEP-11
Iron (Fe)			101		%		70-130	29-SEP-11
Lead (Pb)			105		%		70-130	29-SEP-11
Magnesium (Mg)			96		%		70-130	29-SEP-11
Manganese (Mn)			103		%		70-130	29-SEP-11
Molybdenum (Mo)			102		%		70-130	29-SEP-11
Nickel (Ni)			100		%		70-130	29-SEP-11
Phosphorus (P)			94		%		70-130	29-SEP-11
Potassium (K)			89		%		70-130	29-SEP-11
Selenium (Se)			101		%		70-130	29-SEP-11
Silver (Ag)			99		%		70-130	29-SEP-11
Sodium (Na)			94		%		70-130	29-SEP-11
Strontium (Sr)			103		%		70-130	29-SEP-11
Tin (Sn)			97		%		70-130	29-SEP-11
Titanium (Ti)			112		%		70-130	29-SEP-11
Uranium (U)			82		%		70-130	29-SEP-11
Vanadium (V)			100		%		70-130	29-SEP-11
Zinc (Zn)			90		%		70-130	29-SEP-11
WG1359420-3 CRM		**NRC MESS-3**						

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-3 CRM		**NRC MESS-3**						
Aluminum (Al)			73		%		70-130	29-SEP-11
Antimony (Sb)			97		%		70-130	29-SEP-11
Arsenic (As)			86		%		70-130	29-SEP-11
Barium (Ba)			101		%		70-130	29-SEP-11
Cadmium (Cd)			82		%		70-130	29-SEP-11
Calcium (Ca)			106		%		70-130	29-SEP-11
Chromium (Cr)			81		%		70-130	29-SEP-11
Cobalt (Co)			98		%		70-130	29-SEP-11
Copper (Cu)			96		%		70-130	29-SEP-11
Iron (Fe)			108		%		70-130	29-SEP-11
Lead (Pb)			81		%		70-130	29-SEP-11
Magnesium (Mg)			95		%		70-130	29-SEP-11
Manganese (Mn)			123		%		70-130	29-SEP-11
Molybdenum (Mo)			95		%		70-130	29-SEP-11
Nickel (Ni)			97		%		70-130	29-SEP-11
Phosphorus (P)			85		%		70-130	29-SEP-11
Potassium (K)			72		%		70-130	29-SEP-11
Selenium (Se)			98		%		70-130	29-SEP-11
Silver (Ag)			100		%		70-130	29-SEP-11
Sodium (Na)			102		%		70-130	29-SEP-11
Strontium (Sr)			99		%		70-130	29-SEP-11
Tin (Sn)			87		%		70-130	29-SEP-11
Uranium (U)			79		%		70-130	29-SEP-11
Vanadium (V)			75		%		70-130	29-SEP-11
Zinc (Zn)			94		%		70-130	29-SEP-11
WG1359420-5 DUP		**WG1359420-4**						
Aluminum (Al)		6440	6690		mg/kg	3.8	40	29-SEP-11
Arsenic (As)		7.64	7.96		mg/kg	4.1	30	29-SEP-11
Barium (Ba)		60.5	65.4		mg/kg	7.8	40	29-SEP-11
Bismuth (Bi)		0.087	0.075		mg/kg	15	30	29-SEP-11
Boron (B)		2.8	3.4		mg/kg	20	30	29-SEP-11
Cadmium (Cd)		4.76	4.86		mg/kg	1.9	30	29-SEP-11
Calcium (Ca)		3140	3540		mg/kg	12	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-5 DUP		**WG1359420-4**						
Cesium (Cs)		0.407	0.423		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		11.8	13.2		mg/kg	11	30	29-SEP-11
Cobalt (Co)		117	136		mg/kg	16	30	29-SEP-11
Copper (Cu)		427	462		mg/kg	8.0	30	29-SEP-11
Iron (Fe)		25800	25200		mg/kg	2.3	30	29-SEP-11
Lead (Pb)		10.9	9.63		mg/kg	13	40	29-SEP-11
Magnesium (Mg)		1760	1940		mg/kg	9.3	30	29-SEP-11
Manganese (Mn)		105	126		mg/kg	18	30	29-SEP-11
Molybdenum (Mo)		0.764	0.848		mg/kg	11	40	29-SEP-11
Nickel (Ni)		38.4	43.2		mg/kg	12	30	29-SEP-11
Phosphorus (P)		510	530		mg/kg	3.9	30	29-SEP-11
Potassium (K)		575	595		mg/kg	3.4	40	29-SEP-11
Rubidium (Rb)		4.56	5.53		mg/kg	19	30	29-SEP-11
Selenium (Se)		2.66	2.73		mg/kg	2.9	30	29-SEP-11
Silver (Ag)		0.14	0.15		mg/kg	11	40	29-SEP-11
Sodium (Na)		231	282		mg/kg	20	40	29-SEP-11
Strontium (Sr)		9.69	12.1		mg/kg	22	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		187	200		mg/kg	6.5	40	29-SEP-11
Tungsten (W)		0.090	0.084		mg/kg	6.8	30	29-SEP-11
Uranium (U)		0.613	0.563		mg/kg	8.5	30	29-SEP-11
Vanadium (V)		17.3	19.1		mg/kg	9.9	30	29-SEP-11
Zinc (Zn)		4890	5140		mg/kg	5.1	30	29-SEP-11
Zirconium (Zr)		2.82	3.07		mg/kg	8.5	30	29-SEP-11
WG1359420-7 DUP		**WG1359420-6**						
Aluminum (Al)		30500	29800		mg/kg	2.1	40	29-SEP-11
Antimony (Sb)		3.19	3.15		mg/kg	1.2	30	29-SEP-11
Arsenic (As)		9.46	9.15		mg/kg	3.3	30	29-SEP-11
Barium (Ba)		133	130		mg/kg	2.8	40	29-SEP-11
Beryllium (Be)		0.86	0.88		mg/kg	2.8	30	29-SEP-11
Bismuth (Bi)		0.189	0.177		mg/kg	6.4	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-7 DUP		**WG1359420-6**						
Boron (B)		14.7	15.0		mg/kg	2.1	30	29-SEP-11
Cadmium (Cd)		0.574	0.513		mg/kg	11	30	29-SEP-11
Calcium (Ca)		9960	9830		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		2.47	2.43		mg/kg	1.8	30	29-SEP-11
Chromium (Cr)		72.9	73.2		mg/kg	0.35	30	29-SEP-11
Cobalt (Co)		19.9	19.3		mg/kg	3.1	30	29-SEP-11
Copper (Cu)		43.9	43.0		mg/kg	2.2	30	29-SEP-11
Iron (Fe)		37500	38900		mg/kg	3.8	30	29-SEP-11
Lead (Pb)		14.9	13.6		mg/kg	9.6	40	29-SEP-11
Magnesium (Mg)		12800	12900		mg/kg	0.32	30	29-SEP-11
Manganese (Mn)		454	448		mg/kg	1.4	30	29-SEP-11
Molybdenum (Mo)		0.327	0.330		mg/kg	1.1	40	29-SEP-11
Nickel (Ni)		45.7	44.9		mg/kg	1.9	30	29-SEP-11
Phosphorus (P)		500	500		mg/kg	1.0	30	29-SEP-11
Potassium (K)		5850	5880		mg/kg	0.64	40	29-SEP-11
Rubidium (Rb)		67.7	66.9		mg/kg	1.2	30	29-SEP-11
Selenium (Se)		1.54	1.43		mg/kg	7.3	30	29-SEP-11
Silver (Ag)		0.18	0.19		mg/kg	4.7	40	29-SEP-11
Sodium (Na)		436	468		mg/kg	7.0	40	29-SEP-11
Strontium (Sr)		38.3	38.7		mg/kg	0.94	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.32	0.29		mg/kg	11	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		1320	1330		mg/kg	1.2	40	29-SEP-11
Tungsten (W)		0.141	0.134		mg/kg	5.2	30	29-SEP-11
Uranium (U)		1.32	1.24		mg/kg	6.5	30	29-SEP-11
Vanadium (V)		65.6	66.1		mg/kg	0.83	30	29-SEP-11
Zinc (Zn)		670	660		mg/kg	1.6	30	29-SEP-11
Zirconium (Zr)		24.9	26.4		mg/kg	5.6	30	29-SEP-11
WG1359420-9 DUP		**WG1359420-8**						
Aluminum (Al)		21900	21200		mg/kg	3.3	40	29-SEP-11
Antimony (Sb)		4.10	4.16		mg/kg	1.5	30	29-SEP-11
Arsenic (As)		9.46	9.43		mg/kg	0.32	30	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-9 DUP		**WG1359420-8**						
Barium (Ba)		111	110		mg/kg	1.2	40	29-SEP-11
Beryllium (Be)		0.59	0.54		mg/kg	9.6	30	29-SEP-11
Bismuth (Bi)		0.140	0.144		mg/kg	3.1	30	29-SEP-11
Boron (B)		18.9	17.5		mg/kg	7.9	30	29-SEP-11
Cadmium (Cd)		0.714	0.714		mg/kg	0.020	30	29-SEP-11
Calcium (Ca)		13400	13200		mg/kg	1.3	30	29-SEP-11
Cesium (Cs)		1.97	1.90		mg/kg	3.8	30	29-SEP-11
Chromium (Cr)		55.1	53.0		mg/kg	3.8	30	29-SEP-11
Cobalt (Co)		19.3	18.5		mg/kg	4.0	30	29-SEP-11
Copper (Cu)		41.0	40.9		mg/kg	0.23	30	29-SEP-11
Iron (Fe)		28200	29200		mg/kg	3.4	30	29-SEP-11
Lead (Pb)		9.92	10.5		mg/kg	6.1	40	29-SEP-11
Magnesium (Mg)		9610	9490		mg/kg	1.3	30	29-SEP-11
Manganese (Mn)		701	656		mg/kg	6.5	30	29-SEP-11
Molybdenum (Mo)		0.532	0.535		mg/kg	0.44	40	29-SEP-11
Nickel (Ni)		33.0	32.7		mg/kg	1.1	30	29-SEP-11
Phosphorus (P)		620	620		mg/kg	0.48	30	29-SEP-11
Potassium (K)		4260	4280		mg/kg	0.47	40	29-SEP-11
Rubidium (Rb)		51.8	48.3		mg/kg	7.1	30	29-SEP-11
Selenium (Se)		1.88	1.90		mg/kg	1.1	30	29-SEP-11
Silver (Ag)		0.15	0.16		mg/kg	7.2	40	29-SEP-11
Sodium (Na)		351	354		mg/kg	0.81	40	29-SEP-11
Strontium (Sr)		45.8	42.9		mg/kg	6.7	40	29-SEP-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	29-SEP-11
Thallium (Tl)		0.23	0.24		mg/kg	4.7	30	29-SEP-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	29-SEP-11
Titanium (Ti)		955	979		mg/kg	2.6	40	29-SEP-11
Tungsten (W)		0.112	0.125		mg/kg	11	30	29-SEP-11
Uranium (U)		1.31	1.33		mg/kg	1.5	30	29-SEP-11
Vanadium (V)		48.8	48.5		mg/kg	0.73	30	29-SEP-11
Zinc (Zn)		405	413		mg/kg	2.0	30	29-SEP-11
Zirconium (Zr)		20.1	20.1		mg/kg	0.13	30	29-SEP-11
WG1359420-1 MB								

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	29-SEP-11
Antimony (Sb)			<0.10		mg/kg		0.1	29-SEP-11
Arsenic (As)			<0.10		mg/kg		0.1	29-SEP-11
Barium (Ba)			<0.50		mg/kg		0.5	29-SEP-11
Beryllium (Be)			<0.10		mg/kg		0.1	29-SEP-11
Bismuth (Bi)			<0.020		mg/kg		0.02	29-SEP-11
Boron (B)			<1.0		mg/kg		1	29-SEP-11
Cadmium (Cd)			<0.020		mg/kg		0.02	29-SEP-11
Calcium (Ca)			<100		mg/kg		100	29-SEP-11
Cesium (Cs)			<0.020		mg/kg		0.02	29-SEP-11
Chromium (Cr)			<1.0		mg/kg		1	29-SEP-11
Cobalt (Co)			<0.020		mg/kg		0.02	29-SEP-11
Copper (Cu)			<1.0		mg/kg		1	29-SEP-11
Iron (Fe)			<25		mg/kg		25	29-SEP-11
Lead (Pb)			<0.20		mg/kg		0.2	29-SEP-11
Magnesium (Mg)			<10		mg/kg		10	29-SEP-11
Manganese (Mn)			<0.50		mg/kg		0.5	29-SEP-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	29-SEP-11
Nickel (Ni)			<0.50		mg/kg		0.5	29-SEP-11
Phosphorus (P)			<100		mg/kg		100	29-SEP-11
Potassium (K)			<25		mg/kg		25	29-SEP-11
Rubidium (Rb)			<0.020		mg/kg		0.02	29-SEP-11
Selenium (Se)			<0.50		mg/kg		0.5	29-SEP-11
Silver (Ag)			<0.10		mg/kg		0.1	29-SEP-11
Sodium (Na)			<10		mg/kg		10	29-SEP-11
Strontium (Sr)			<0.10		mg/kg		0.1	29-SEP-11
Tellurium (Te)			<0.10		mg/kg		0.1	29-SEP-11
Thallium (Tl)			<0.10		mg/kg		0.1	29-SEP-11
Tin (Sn)			<5.0		mg/kg		5	29-SEP-11
Titanium (Ti)			<0.50		mg/kg		0.5	29-SEP-11
Tungsten (W)			<0.050		mg/kg		0.05	29-SEP-11
Uranium (U)			<0.020		mg/kg		0.02	29-SEP-11
Vanadium (V)			<0.50		mg/kg		0.5	29-SEP-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2261045								
WG1359420-1 MB								
Zinc (Zn)			<10		mg/kg		10	29-SEP-11
Zirconium (Zr)			<0.10		mg/kg		0.1	29-SEP-11
Batch R2262894								
WG1361496-2 CRM		**NRC PACS-2**						
Aluminum (Al)			96		%		70-130	03-OCT-11
Antimony (Sb)			119		%		70-130	03-OCT-11
Arsenic (As)			96		%		70-130	03-OCT-11
Barium (Ba)			90		%		70-130	03-OCT-11
Beryllium (Be)			80		%		70-130	03-OCT-11
Boron (B)			90		%		70-130	03-OCT-11
Cadmium (Cd)			94		%		70-130	03-OCT-11
Calcium (Ca)			93		%		70-130	03-OCT-11
Chromium (Cr)			92		%		70-130	03-OCT-11
Cobalt (Co)			89		%		70-130	03-OCT-11
Copper (Cu)			100		%		70-130	03-OCT-11
Iron (Fe)			96		%		70-130	03-OCT-11
Lead (Pb)			91		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			92		%		70-130	03-OCT-11
Molybdenum (Mo)			98		%		70-130	03-OCT-11
Nickel (Ni)			94		%		70-130	03-OCT-11
Phosphorus (P)			87		%		70-130	03-OCT-11
Potassium (K)			82		%		70-130	03-OCT-11
Silver (Ag)			97		%		70-130	03-OCT-11
Sodium (Na)			88		%		70-130	03-OCT-11
Strontium (Sr)			91		%		70-130	03-OCT-11
Thallium (Tl)			88		%		70-130	03-OCT-11
Tin (Sn)			92		%		70-130	03-OCT-11
Titanium (Ti)			102		%		70-130	03-OCT-11
Uranium (U)			90		%		70-130	03-OCT-11
Vanadium (V)			98		%		70-130	03-OCT-11
Zinc (Zn)			91		%		70-130	03-OCT-11
WG1361496-3 CRM		**NRC MESS-3**						
Antimony (Sb)			93		%		70-130	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-3 CRM		**NRC MESS-3**						
Arsenic (As)			90		%		70-130	03-OCT-11
Barium (Ba)			103		%		70-130	03-OCT-11
Beryllium (Be)			72		%		70-130	03-OCT-11
Cadmium (Cd)			83		%		70-130	03-OCT-11
Calcium (Ca)			98		%		70-130	03-OCT-11
Chromium (Cr)			78		%		70-130	03-OCT-11
Cobalt (Co)			96		%		70-130	03-OCT-11
Copper (Cu)			98		%		70-130	03-OCT-11
Iron (Fe)			103		%		70-130	03-OCT-11
Lead (Pb)			90		%		70-130	03-OCT-11
Magnesium (Mg)			89		%		70-130	03-OCT-11
Manganese (Mn)			111		%		70-130	03-OCT-11
Molybdenum (Mo)			93		%		70-130	03-OCT-11
Nickel (Ni)			96		%		70-130	03-OCT-11
Phosphorus (P)			81		%		70-130	03-OCT-11
Potassium (K)			72		%		70-130	03-OCT-11
Selenium (Se)			118		%		70-130	03-OCT-11
Silver (Ag)			93		%		70-130	03-OCT-11
Sodium (Na)			101		%		70-130	03-OCT-11
Strontium (Sr)			88		%		70-130	03-OCT-11
Tin (Sn)			73		%		70-130	03-OCT-11
Uranium (U)			88		%		70-130	03-OCT-11
Vanadium (V)			74		%		70-130	03-OCT-11
Zinc (Zn)			95		%		70-130	03-OCT-11
WG1361496-5 DUP		**WG1361496-4**						
Aluminum (Al)		19900	17700		mg/kg	12	40	03-OCT-11
Antimony (Sb)		0.15	0.16		mg/kg	4.1	30	03-OCT-11
Arsenic (As)		14.8	14.0		mg/kg	5.6	30	03-OCT-11
Barium (Ba)		175	166		mg/kg	5.3	40	03-OCT-11
Beryllium (Be)		0.47	0.55		mg/kg	16	30	03-OCT-11
Bismuth (Bi)		0.097	0.102		mg/kg	4.5	30	03-OCT-11
Boron (B)		22.8	18.7		mg/kg	19	30	03-OCT-11
Cadmium (Cd)		1.30	1.22		mg/kg	6.0	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-5 DUP		**WG1361496-4**						
Calcium (Ca)		11700	10400		mg/kg	12	30	03-OCT-11
Cesium (Cs)		1.46	1.30		mg/kg	12	30	03-OCT-11
Chromium (Cr)		82.9	77.4		mg/kg	6.9	30	03-OCT-11
Cobalt (Co)		158	150		mg/kg	5.5	30	03-OCT-11
Copper (Cu)		271	263		mg/kg	3.1	30	03-OCT-11
Iron (Fe)		29800	28100		mg/kg	6.0	30	03-OCT-11
Lead (Pb)		6.94	6.65		mg/kg	4.3	40	03-OCT-11
Magnesium (Mg)		7780	7350		mg/kg	5.6	30	03-OCT-11
Manganese (Mn)		3540	3320		mg/kg	6.2	30	03-OCT-11
Molybdenum (Mo)		0.722	0.786		mg/kg	8.6	40	03-OCT-11
Nickel (Ni)		59.0	55.6		mg/kg	6.0	30	03-OCT-11
Phosphorus (P)		570	510		mg/kg	9.7	30	03-OCT-11
Potassium (K)		3490	2930		mg/kg	17	40	03-OCT-11
Rubidium (Rb)		34.6	31.3		mg/kg	9.9	30	03-OCT-11
Selenium (Se)		0.95	0.85		mg/kg	11	30	03-OCT-11
Silver (Ag)		<0.10	<0.10	RPD-NA	mg/kg	N/A	40	03-OCT-11
Sodium (Na)		248	211		mg/kg	16	40	03-OCT-11
Strontium (Sr)		40.1	36.7		mg/kg	8.9	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.18	0.16		mg/kg	7.3	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		790	681		mg/kg	15	40	03-OCT-11
Tungsten (W)		0.149	0.153		mg/kg	2.2	30	03-OCT-11
Uranium (U)		1.51	1.39		mg/kg	8.1	30	03-OCT-11
Vanadium (V)		41.9	36.7		mg/kg	13	30	03-OCT-11
Zinc (Zn)		1080	1040		mg/kg	3.7	30	03-OCT-11
Zirconium (Zr)		6.34	6.73		mg/kg	6.0	30	03-OCT-11
WG1361496-7 DUP		**WG1361496-6**						
Aluminum (Al)		22900	23100		mg/kg	1.2	40	03-OCT-11
Antimony (Sb)		2.52	2.67		mg/kg	5.8	30	03-OCT-11
Arsenic (As)		14.4	14.8		mg/kg	2.4	30	03-OCT-11
Barium (Ba)		121	124		mg/kg	2.4	40	03-OCT-11
Beryllium (Be)		0.79	0.73		mg/kg	8.5	30	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-7 DUP		**WG1361496-6**						
Bismuth (Bi)		0.215	0.214		mg/kg	0.36	30	03-OCT-11
Boron (B)		16.8	14.2		mg/kg	17	30	03-OCT-11
Cadmium (Cd)		0.918	0.908		mg/kg	1.1	30	03-OCT-11
Calcium (Ca)		10500	10100		mg/kg	4.0	30	03-OCT-11
Cesium (Cs)		2.40	2.36		mg/kg	1.8	30	03-OCT-11
Chromium (Cr)		56.9	53.5		mg/kg	6.0	30	03-OCT-11
Cobalt (Co)		17.3	16.6		mg/kg	4.2	30	03-OCT-11
Copper (Cu)		44.9	44.7		mg/kg	0.25	30	03-OCT-11
Iron (Fe)		32300	33600		mg/kg	3.7	30	03-OCT-11
Lead (Pb)		14.3	14.5		mg/kg	1.9	40	03-OCT-11
Magnesium (Mg)		9900	9240		mg/kg	6.8	30	03-OCT-11
Manganese (Mn)		522	499		mg/kg	4.4	30	03-OCT-11
Molybdenum (Mo)		0.468	0.477		mg/kg	2.0	40	03-OCT-11
Nickel (Ni)		37.2	35.4		mg/kg	4.8	30	03-OCT-11
Phosphorus (P)		700	630		mg/kg	11	30	03-OCT-11
Potassium (K)		4800	4260		mg/kg	12	40	03-OCT-11
Rubidium (Rb)		50.2	48.9		mg/kg	2.5	30	03-OCT-11
Selenium (Se)		1.90	1.79		mg/kg	6.0	30	03-OCT-11
Silver (Ag)		0.17	0.19		mg/kg	7.1	40	03-OCT-11
Sodium (Na)		376	313		mg/kg	19	40	03-OCT-11
Strontium (Sr)		34.8	33.9		mg/kg	2.4	40	03-OCT-11
Tellurium (Te)		<0.10	<0.10	RPD-NA	mg/kg	N/A	30	03-OCT-11
Thallium (Tl)		0.31	0.31		mg/kg	0.73	30	03-OCT-11
Tin (Sn)		<5.0	<5.0	RPD-NA	mg/kg	N/A	40	03-OCT-11
Titanium (Ti)		1070	1070		mg/kg	0.28	40	03-OCT-11
Tungsten (W)		0.141	0.134		mg/kg	4.9	30	03-OCT-11
Uranium (U)		1.24	1.25		mg/kg	0.57	30	03-OCT-11
Vanadium (V)		47.3	44.5		mg/kg	6.1	30	03-OCT-11
Zinc (Zn)		439	437		mg/kg	0.34	30	03-OCT-11
Zirconium (Zr)		19.0	19.6		mg/kg	3.2	30	03-OCT-11
WG1361496-1 MB								
Aluminum (Al)			<5.0		mg/kg		5	03-OCT-11
Antimony (Sb)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-MS-WP	**Soil**							
Batch R2262894								
WG1361496-1 MB								
Arsenic (As)			<0.10		mg/kg		0.1	03-OCT-11
Barium (Ba)			<0.50		mg/kg		0.5	03-OCT-11
Beryllium (Be)			<0.10		mg/kg		0.1	03-OCT-11
Bismuth (Bi)			<0.020		mg/kg		0.02	03-OCT-11
Boron (B)			<1.0		mg/kg		1	03-OCT-11
Cadmium (Cd)			<0.020		mg/kg		0.02	03-OCT-11
Calcium (Ca)			<100		mg/kg		100	03-OCT-11
Cesium (Cs)			<0.020		mg/kg		0.02	03-OCT-11
Chromium (Cr)			<1.0		mg/kg		1	03-OCT-11
Cobalt (Co)			<0.020		mg/kg		0.02	03-OCT-11
Copper (Cu)			<1.0		mg/kg		1	03-OCT-11
Iron (Fe)			<25		mg/kg		25	03-OCT-11
Lead (Pb)			<0.20		mg/kg		0.2	03-OCT-11
Magnesium (Mg)			<10		mg/kg		10	03-OCT-11
Manganese (Mn)			<0.50		mg/kg		0.5	03-OCT-11
Molybdenum (Mo)			<0.020		mg/kg		0.02	03-OCT-11
Nickel (Ni)			<0.50		mg/kg		0.5	03-OCT-11
Phosphorus (P)			<100		mg/kg		100	03-OCT-11
Potassium (K)			<25		mg/kg		25	03-OCT-11
Rubidium (Rb)			<0.020		mg/kg		0.02	03-OCT-11
Selenium (Se)			<0.50		mg/kg		0.5	03-OCT-11
Silver (Ag)			<0.10		mg/kg		0.1	03-OCT-11
Sodium (Na)			<10		mg/kg		10	03-OCT-11
Strontium (Sr)			<0.10		mg/kg		0.1	03-OCT-11
Tellurium (Te)			<0.10		mg/kg		0.1	03-OCT-11
Thallium (Tl)			<0.10		mg/kg		0.1	03-OCT-11
Tin (Sn)			<5.0		mg/kg		5	03-OCT-11
Titanium (Ti)			<0.50		mg/kg		0.5	03-OCT-11
Tungsten (W)			<0.050		mg/kg		0.05	03-OCT-11
Uranium (U)			<0.020		mg/kg		0.02	03-OCT-11
Vanadium (V)			<0.50		mg/kg		0.5	03-OCT-11
Zinc (Zn)			<10		mg/kg		10	03-OCT-11
Zirconium (Zr)			<0.10		mg/kg		0.1	03-OCT-11

Quality Control Report

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N-TOT-LECO-SK	**Soil**							
Batch R2263031								
WG1360069-1 DUP		**L1062772-4**						
Total Nitrogen by LECO		1.36	1.34	J	%	0.023	0.05	01-OCT-11
WG1360069-2 IRM		**08-109_SOIL**						
Total Nitrogen by LECO			0.110		%		0.085-0.135	01-OCT-11
WG1360069-3 MB								
Total Nitrogen by LECO			<0.020		%		0.02	01-OCT-11
P-SALM-ICP-SK	**Soil**							
Batch R2263655								
WG1359965-2 CRM		**SS-1_SOIL**						
Phosphorus, Total			1100		mg/kg		750-1530	04-OCT-11
WG1359965-3 DUP		**L1062761-6**						
Phosphorus, Total		1160	1140		mg/kg	1.5	30	04-OCT-11
WG1359965-5 DUP		**L1062767-9**						
Phosphorus, Total		520	535		mg/kg	2.8	30	04-OCT-11
WG1359965-1 MB								
Phosphorus, Total			<50		mg/kg		50	04-OCT-11
PSA-3-SK	**Soil**							
Batch R2264046								
WG1360047-1 DUP		**L1062770-1**						
% Sand (2.0mm - 0.05mm)		67.9	68.7	J	%	0.83	10	05-OCT-11
% Silt (0.05mm - 2um)		9.98	10.3	J	%	0.32	10	05-OCT-11
% Clay (<2um)		22.1	21.0	J	%	1.16	10	05-OCT-11
WG1360047-2 IRM		**FARM2009**						
% Sand (2.0mm - 0.05mm)			50.9		%		45-55	05-OCT-11
% Silt (0.05mm - 2um)			31.4		%		29-39	05-OCT-11
% Clay (<2um)			17.7		%		10-20	05-OCT-11

Quality Control Report

Workorder: L1062772 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Legend:

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

Sample Parameter Qualifier Definitions:

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

Quality Control Report

Workorder: L1062772 Report Date: 13-OCT-11

Client: AECOM Canada Ltd. (Winnipeg)
99 Commerce Drive
Winnipeg MB R3P 0Y7
Contact: Clifton Samoiloff

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
Moisture Content							
	1	15-SEP-11 14:16	05-OCT-11 00:00	14	19	days	EHT
	2	15-SEP-11 14:28	05-OCT-11 00:00	14	19	days	EHT
	3	15-SEP-11 14:40	05-OCT-11 00:00	14	19	days	EHT
	4	15-SEP-11 15:02	05-OCT-11 00:00	14	19	days	EHT
	5	15-SEP-11 15:20	05-OCT-11 00:00	14	19	days	EHT
	6	15-SEP-11 15:30	05-OCT-11 00:00	14	19	days	EHT
	7	15-SEP-11 16:20	05-OCT-11 00:00	14	19	days	EHT
	8	15-SEP-11 16:28	05-OCT-11 00:00	14	19	days	EHT
	9	15-SEP-11 16:46	05-OCT-11 00:00	14	19	days	EHT
Organic / Inorganic Carbon							
Inorganic and Organic Carbon							
	1	15-SEP-11 14:16	01-OCT-11 00:00	14	15	days	EHT
	2	15-SEP-11 14:28	01-OCT-11 00:00	14	15	days	EHT
	3	15-SEP-11 14:40	01-OCT-11 00:00	14	15	days	EHT
	4	15-SEP-11 15:02	01-OCT-11 00:00	14	15	days	EHT
	5	15-SEP-11 15:20	01-OCT-11 00:00	14	15	days	EHT
	6	15-SEP-11 15:30	01-OCT-11 00:00	14	15	days	EHT
	7	15-SEP-11 16:20	01-OCT-11 00:00	14	15	days	EHT
	8	15-SEP-11 16:28	01-OCT-11 00:00	14	15	days	EHT
	9	15-SEP-11 16:46	01-OCT-11 00:00	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 L1062772 were received on 23-SEP-11 15:00.

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

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

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

ALS Environmental

L1062772-COFC

ody / Analytical Request Form
Toll Free: 1 800 668 9878
www.alsglobal.com

COC # 5

Page 1 of 1

Report To		Report / Distribution		Service Requested (Rush for routine analysis subject to availability)
Company:	AECOM -W172	☐ Standard ☐ Other		◉ Regular (Standard Turnaround Times - Business Days)
Contact:	Cliff Samoiloff	☑ PDF ☑ Excel ☐ Digital ☐ Fax		○ Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
Address:	99 Commerce Dr	Email 1:	cliff.samoiloff@aecom.com	○ Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
		Email 2:	shawna.kjartanson@aecom.com	○ Same Day or Weekend Emergency - Contact ALS to Confirm TAT
Phone:	Fax:	Email 3:	mark.hadfield@aecom.com	Analysis Request
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information		Please indicate below Filtered, Preserved or both (F, P, F/P)
Hardcopy of Invoice with Report?	☐ Yes ☐ No	Job #:	60213483	
Company:		PO / AFE:		
Contact:		LSD:		
Address:				
Phone:	Fax:	Quote #:	Q24534	
Lab Work Order # (lab use only)		ALS Contact:	Sampler:	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	C-TOT-ORG-SK	MOIST-SK	N-TOT-LECO-SK	P-SALM-ICP-SK	MET-200.2-MS-WP	HG-200.2-CVAF-WP	PREP-DRY/GRIND	PSA-1 (Or 3 if 1 not possible					Number of Containers	
	ANB-01A	15-Sep-11	14:16	Sediment	X	X	X	X	X	X	X	X					2	✓
	ANB-01B	15-Sep-11	14:28	Sediment	X	X	X	X	X	X	X						1	✓
	ANB-01C	15-Sep-11	14:40	Sediment	X	X	X	X	X	X	X						1	✓
	ANB-02A	15-Sep-11	15:02	Sediment	X	X	X	X	X	X	X	X					2	✓
	ANB-02B	15-Sep-11	15:20	Sediment	X	X	X	X	X	X	X						1	✓
	ANB-02C	15-Sep-11	15:30	Sediment	X	X	X	X	X	X	X						1	✓
	ANB-05A	15-Sep-11	16:20	Sediment	X	X	X	X	X	X	X	X					2	✓
	ANB-05B	15-Sep-11	16:28	Sediment	X	X	X	X	X	X	X						1	✓
	ANB-05C	15-Sep-11	16:46	Sediment	X	X	X	X	X	X	X						1	✓

Special Instructions / Regulations with water or land use (CCME-Freshwater Aquatic Life/BC CSR - Commercial/AB Tier 1 - Natural, etc) / 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 provided on a separate Excel tab.

Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

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
	23-Sep-11	10:14		23 SEP 11	1500	20.8 °C				

GENF 18.01 Front

RECHECK ANALYSIS REPORT

RC24776 **Date: 30-JUN-11 10:15**

Loginnum	L1008005	**Requestby**	CLIENT
Acctnum	W172	**Due Date**	17-JUN-11
Client	AECOM Canada Ltd. (Winnipeg)	**Issued To**	GHILL
Deptnum	61200	**Issued By**	CHILL
		Date Initiated	10-JUN-11

Recheck Comments

Samples were trip blanks Sb out of range (total Sb's were <dl)

L1008005-7 & L1007954-5
Samples were syringed filtered from Brown bottle and rerun on 13-June-11 DGordon.
16-JUN-11 Cherrod Added L1007855-5 & L1009420-6 - please confirm results run from Routine bottle.

Samples syringe filtered from blue bottle 20 June 11

Recheck Reason

Quality control sample(s) failure (in-house or client QC)

Action to Take

Do whats necessary

Samplenum	Prod	Mat	Parm Syn	Result	Units	Measdate	RCResult	UCL	RC RPD	RCWork#	RCMeasdate	Initials
L1007855-5	MET-D-L-MS-WP	1	Antimony (Sb)-Dissolved	0.00038	mg/L	26-MAY-11	<0.0002	No Charl 20	NA NA		20-JUN-11	DAG
L1007954-5	MET-D-L-MS-WP	1	Antimony (Sb)-Dissolved	0.00038	mg/L	26-MAY-11	<0.0002	No Charl 20	NA NA		20-JUN-11	DAG
L1008005-7	MET-D-L-MS-WP	1	Antimony (Sb)-Dissolved	0.00046	mg/L	26-MAY-11	0.00044	No Charl 20	4.4 4.4		20-JUN-11	DAG
L1009420-6	MET-D-L-MS-WP	1	Antimony (Sb)-Dissolved	0.00040	mg/L	28-MAY-11	<0.0002	No Charl 20	NA NA		20-JUN-11	DAG

Sample Comments:

Analyst Comments:

RECHECK ANALYSIS REPORT

RC25699 **Date: 25-OCT-11 14:35**

Loginnum	L1062763	**Requestby**	CLIENT
Acctnum	W172	**Due Date**	31-OCT-11
Client	AECOM Canada Ltd. (Winnipeg)	**Issued To**	NCRUSE
Deptnum	41200	**Issued By**	CHILL
		Date Initiated	25-OCT-11

Recheck Comments

Recheck Reason

Result does not agree with historical data

Action to Take

Do whats necessary

Samplenum	Prod	Mat	Parm Syn	Result	Units	Measdate	RCResult	UCL	RC RPD	RCWork#	RCMeasdate	Initials
L1062763-4	C-INORG-ORG-SK	2	Total Organic Carbon	5.35	%	04-OCT-11	4.82	No Chart	10.4		25-OCT-11	LZH
L1062763-4	C-TOT-LECO-SK	2	Total Carbon by Combustion	5.5	%	03-OCT-11	4.94	10	10.7		25-OCT-11	XHY

Sample Comments:

Analyst Comments:

RECHECK ANALYSIS REPORT

RC24882 **Date: 30-JUN-11 09:38**

Loginnum	L1014705	**Requestby**	CLIENT
Acctnum	W172	**Due Date**	29-JUN-11
Client	AECOM Canada Ltd. (Winnipeg)	**Issued To**	GHILL
Deptnum	61200	**Issued By**	CHILL
		Date Initiated	24-JUN-11

Recheck Comments

Client duplicte RPDs >25%

Samples redigested DGordon 28June11.

Recheck Reason

Quality control sample(s) failure (in-house or client QC)

Action to Take

Do whats necessary

Samplenum	Prod	Mat	Parm Syn	Result	Units	Measdate	RCResult	UCL	RC RPD	RCWork#	RCMeasdate	Initials
L1014705-4	MET-200.2-MS-WP	2	Bismuth (Bi)	0.268	mg/kg	13-JUN-11	0.08	30	108		28-JUN-11	DAG
L1014705-12	MET-200.2-MS-WP	2	Manganese (Mn)	716	mg/kg	13-JUN-11	653	30	9.2		28-JUN-11	DAG
L1014705-13	MET-200.2-MS-WP	2	Zinc (Zn)	497	mg/kg	13-JUN-11	469	30	5.8		28-JUN-11	DAG

Sample Comments:

Analyst Comments:

RECHECK ANALYSIS REPORT

RC25621 **Date: 26-OCT-11 12:08**

Loginnum	L1060062	**Requestby**	CLIENT
Acctnum	W172	**Due Date**	20-OCT-11
Client	AECOM Canada Ltd. (Winnipeg)	**Issued To**	GHILL
Deptnum	61200	**Issued By**	CHILL
		Date Initiated	17-OCT-11

Recheck Comments

please review BOD data and rerun metals.
Metals rerun results within analytical error with one exception. Fraction -8 Total Silicon result variability due to the fact that 1/100 dilution was used for reporting (no dilution=outside linar range) Diluted result close to LOR.

BOD data bundles reviewed. L1060062-7 was picked for a lab duplicate. Duplication was acceptable. (2.0 and 2.1 mg/L) No problems found with fraction -8 analysiis. For this concentration level of cBOD only one dilution contributed to the reported result.

Recheck Reason

Quality control sample(s) failure (in-house or client QC) - Client duplicates

Action to Take

Do whats necessary

Samplenum	Prod	Mat	Parm Syn	Result	Units	Measdate	RCResult	UCL	RC RPD	RCWork#	RCMeasdate	Initials
L1060062-7	CONSULT-BOD-CBOD-WP	1	BOD Carbonaceous	2.0	mg/L	22-SEP-11		20	NA			JVV
L1060062-7	MET-D-L-MS-WP	1	Manganese (Mn)-Dissolved	0.00327	mg/L	23-SEP-11	0.00031	20	165.4		20-OCT-11	DAG
								No Chart	165.4			
L1060062-7	MET-T-L-MS-WP	1	Silicon (Si)-Total	0.860	mg/L	24-SEP-11	0.7877	No Chart	8.8		19-OCT-11	DAG
								20	8.8			
L1060062-8	CONSULT-BOD-CBOD-WP	1	BOD Carbonaceous	5.9	mg/L	22-SEP-11		20	NA			JVV
L1060062-8	MET-D-L-MS-WP	1	Manganese (Mn)-Dissolved	0.00042	mg/L	23-SEP-11	0.00037	No Chart	12.7		19-OCT-11	DAG
								20	12.7			
L1060062-8	MET-T-L-MS-WP	1	Silicon (Si)-Total	1.09	mg/L	24-SEP-11	0.7685	20	34.6		19-OCT-11	DAG
								No Chart	34.6			

Sample Comments:

L1060062-7 20110926 Redo:POTASSIUM,POTASSIUM

Analyst Comments:

RECHECK ANALYSIS REPORT

RC25700 **Date: 28-OCT-11 16:04**

Loginnum	L1062772	**Requestby**	CLIENT
Acctnum	W172	**Due Date**	31-OCT-11
Client	AECOM Canada Ltd. (Winnipeg)	**Issued To**	GHILL
Deptnum	61200	**Issued By**	CHILL
		Date Initiated	25-OCT-11

Recheck Comments

L1062772, L1062763, L1062716, L1062732
Samples were digested from the original ground sample. L1062772-6 is not homogeneous, there are some larger flakes.

All rerun results withing analytical error (+/-20%) with the exception of Copper

Recheck Reason

Result does not agree with historical data

Action to Take

Do whats necessary

Samplenum	Prod	Mat	Parm Syn	Result	Units	Measdate	RCResult	UCL	RC RPD	RCWork#	RCMeasdate	Initials
L1062716-2	MET-200.2-MS-WP	2	Iron (Fe)	94000	mg/kg	30-SEP-11	85400	30	9.6		27-OCT-11	DAG
L1062732-4	MET-200.2-MS-WP	2	Lead (Pb)	2.41	mg/kg	01-OCT-11	2.32	40	3.8		27-OCT-11	DAG
L1062732-9	MET-200.2-MS-WP	2	Bismuth (Bi)	0.029	mg/kg	29-SEP-11	0.030	30	3.4		27-OCT-11	DAG
L1062763-3	MET-200.2-MS-WP	2	Boron (B)	22.0	mg/kg	03-OCT-11	23.1	30	4.9		27-OCT-11	DAG
L1062763-9	MET-200.2-MS-WP	2	Arsenic (As)	6.41	mg/kg	03-OCT-11	7.57	30	16.6		27-OCT-11	DAG
L1062772-6	MET-200.2-MS-WP	2	Copper (Cu)	172	mg/kg	29-SEP-11	47.0	30	114.2		27-OCT-11	DAG

Sample Comments:

Analyst Comments: