



Environment Canada
ATTN: JOHN MACIVER
Eureka Weather Station
Eureka NU

Date Received: 06-MAR-17
Report Date: 13-MAR-17 12:34 (MT)
Version: FINAL

Client Phone: 613-945-3145

Certificate of Analysis

Lab Work Order #: L1897703
Project P.O. #: NOT SUBMITTED
Job Reference: EUREKA WEATHER STATION
C of C Numbers:
Legal Site Desc:



Hua Wo
Chemistry Laboratory Manager

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ADDRESS: 1329 Niakwa Road East, Unit 12, Winnipeg, MB R2J 3T4 Canada | Phone: +1 204 255 9720 | Fax: +1 204 255 9721
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ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1897703-1 LAGOON - EULAG0510							
Sampled By: CLIENT on 05-MAR-17 @ 07:35							
Matrix: water							
Miscellaneous Parameters							
Hardness (as CaCO3)	1180	HTC	0.54	mg/L		10-MAR-17	
Total Dissolved Solids	2410		20	mg/L		10-MAR-17	R3673991
Total Organic Carbon	3.73		0.50	mg/L		08-MAR-17	R3672916
Turbidity	0.83		0.10	NTU		06-MAR-17	R3668782
Total Coliform and E.coli							
Total Coliforms	0		0	MPN/100mL		06-MAR-17	R3668848
Escherichia Coli	0		0	MPN/100mL		06-MAR-17	R3668848
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.020		0.020	mg/L	09-MAR-17	09-MAR-17	R3673037
Antimony (Sb)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Arsenic (As)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Barium (Ba)-Total	0.0501		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Beryllium (Be)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Bismuth (Bi)-Total	<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Boron (B)-Total	0.217		0.030	mg/L	09-MAR-17	09-MAR-17	R3673037
Cadmium (Cd)-Total	<0.00020		0.00020	mg/L	09-MAR-17	09-MAR-17	R3673037
Calcium (Ca)-Total	272		0.20	mg/L	09-MAR-17	09-MAR-17	R3673037
Cesium (Cs)-Total	<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Chromium (Cr)-Total	<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Cobalt (Co)-Total	<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Copper (Cu)-Total	0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Iron (Fe)-Total	<0.10		0.10	mg/L	09-MAR-17	09-MAR-17	R3673037
Lead (Pb)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Lithium (Li)-Total	0.0464		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Magnesium (Mg)-Total	121		0.050	mg/L	09-MAR-17	09-MAR-17	R3673037
Manganese (Mn)-Total	0.0150		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Molybdenum (Mo)-Total	0.00062		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Nickel (Ni)-Total	0.0052		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Phosphorus (P)-Total	<0.50		0.50	mg/L	09-MAR-17	09-MAR-17	R3673037
Potassium (K)-Total	15.7		0.10	mg/L	09-MAR-17	09-MAR-17	R3673037
Rubidium (Rb)-Total	0.00398		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Selenium (Se)-Total	<0.0050		0.0050	mg/L	09-MAR-17	09-MAR-17	R3673037
Silicon (Si)-Total	1.63		0.30	mg/L	09-MAR-17	09-MAR-17	R3673037
Silver (Ag)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Sodium (Na)-Total	287		0.050	mg/L	09-MAR-17	09-MAR-17	R3673037
Strontium (Sr)-Total	1.14		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Tellurium (Te)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Thallium (Tl)-Total	<0.0050		0.0050	mg/L	09-MAR-17	09-MAR-17	R3673037
Thorium (Th)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Tin (Sn)-Total	<0.00060		0.00060	mg/L	09-MAR-17	09-MAR-17	R3673037
Titanium (Ti)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Tungsten (W)-Total	<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Uranium (U)-Total	0.00199		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Vanadium (V)-Total	<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Zinc (Zn)-Total	<0.020		0.020	mg/L	09-MAR-17	09-MAR-17	R3673037
Zirconium (Zr)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
THM by headspace							
Total Trihalomethanes (THMs)							
Total THMs	<0.0010		0.0010	mg/L		09-MAR-17	
VOC plus F1 by GCMS							
Bromodichloromethane	<0.00050		0.00050	mg/L		09-MAR-17	R3672598

* 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
L1897703-1	LAGOON - EULAG0510							
Sampled By: CLIENT on 05-MAR-17 @ 07:35								
Matrix: water								
VOC plus F1 by GCMS								
Bromoform		<0.00050		0.00050	mg/L		09-MAR-17	R3672598
Chloroform		<0.00050		0.00050	mg/L		09-MAR-17	R3672598
Dibromochloromethane		<0.00050		0.00050	mg/L		09-MAR-17	R3672598
Surrogate: 4-Bromofluorobenzene (SS)		91.4		70-130	%		09-MAR-17	R3672598
Surrogate: 1,4-Difluorobenzene (SS)		99.5		70-130	%		09-MAR-17	R3672598
L1897703-2	REVERSE OSMOSIS EURO0510							
Sampled By: CLIENT on 05-MAR-17 @ 07:05								
Matrix: water								
Miscellaneous Parameters								
Hardness (as CaCO3)		<0.54	HTC	0.54	mg/L		10-MAR-17	
Total Dissolved Solids		53		13	mg/L		10-MAR-17	R3673991
Total Organic Carbon		<0.50		0.50	mg/L		08-MAR-17	R3672916
Turbidity		<0.10		0.10	NTU		06-MAR-17	R3668782
Total Coliform and E.coli								
Total Coliforms		0		0	MPN/100mL		06-MAR-17	R3668848
Escherichia Coli		0		0	MPN/100mL		06-MAR-17	R3668848
Total Metals by ICP-MS								
Aluminum (Al)-Total		<0.020		0.020	mg/L	09-MAR-17	09-MAR-17	R3673037
Antimony (Sb)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Arsenic (As)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Barium (Ba)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Beryllium (Be)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Bismuth (Bi)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Boron (B)-Total		0.124		0.030	mg/L	09-MAR-17	09-MAR-17	R3673037
Cadmium (Cd)-Total		<0.00020		0.00020	mg/L	09-MAR-17	09-MAR-17	R3673037
Calcium (Ca)-Total		<0.20		0.20	mg/L	09-MAR-17	09-MAR-17	R3673037
Cesium (Cs)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Chromium (Cr)-Total		<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Cobalt (Co)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Copper (Cu)-Total		0.0272		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Iron (Fe)-Total		<0.10		0.10	mg/L	09-MAR-17	09-MAR-17	R3673037
Lead (Pb)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Lithium (Li)-Total		<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Magnesium (Mg)-Total		<0.050		0.050	mg/L	09-MAR-17	09-MAR-17	R3673037
Manganese (Mn)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Molybdenum (Mo)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Nickel (Ni)-Total		0.0059		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Phosphorus (P)-Total		<0.50		0.50	mg/L	09-MAR-17	09-MAR-17	R3673037
Potassium (K)-Total		<0.10		0.10	mg/L	09-MAR-17	09-MAR-17	R3673037
Rubidium (Rb)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Selenium (Se)-Total		<0.0050		0.0050	mg/L	09-MAR-17	09-MAR-17	R3673037
Silicon (Si)-Total		<0.30		0.30	mg/L	09-MAR-17	09-MAR-17	R3673037
Silver (Ag)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Sodium (Na)-Total		14.9		0.050	mg/L	09-MAR-17	09-MAR-17	R3673037
Strontium (Sr)-Total		<0.00050		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Tellurium (Te)-Total		<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Thallium (Tl)-Total		<0.0050		0.0050	mg/L	09-MAR-17	09-MAR-17	R3673037

* 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
L1897703-2 REVERSE OSMOSIS EURO0510 Sampled By: CLIENT on 05-MAR-17 @ 07:05 Matrix: water Total Metals by ICP-MS Uranium (U)-Total <0.00050 Vanadium (V)-Total <0.0020 Zinc (Zn)-Total 0.091 Zirconium (Zr)-Total <0.0010 THM by headspace Total Trihalomethanes (THMs) Total THMs 0.0304 VOC plus F1 by GCMS Bromodichloromethane 0.00912 Bromoform 0.00208 Chloroform 0.0142 Dibromochloromethane 0.00500 Surrogate: 4-Bromofluorobenzene (SS) 91.3 Surrogate: 1,4-Difluorobenzene (SS) 99.4							
L1897703-3 TAP EUTAP0510 Sampled By: CLIENT on 05-MAR-17 @ 07:00 Matrix: water Miscellaneous Parameters Hardness (as CaCO3) 11.4 Total Dissolved Solids 1670 Total Organic Carbon 2.86 Turbidity 0.45 Total Coliform and E.coli Total Coliforms 0 Escherichia Coli 0 Total Metals by ICP-MS Aluminum (Al)-Total <0.020 Antimony (Sb)-Total <0.0010 Arsenic (As)-Total <0.0010 Barium (Ba)-Total 0.00061 Beryllium (Be)-Total <0.0010 Bismuth (Bi)-Total <0.00050 Boron (B)-Total 0.152 Cadmium (Cd)-Total <0.00020 Calcium (Ca)-Total 2.80 Cesium (Cs)-Total <0.00050 Chromium (Cr)-Total <0.0020 Cobalt (Co)-Total <0.00050 Copper (Cu)-Total 0.0661 Iron (Fe)-Total <0.10 Lead (Pb)-Total <0.0010 Lithium (Li)-Total 0.0027 Magnesium (Mg)-Total 1.07 Manganese (Mn)-Total <0.0010 Molybdenum (Mo)-Total <0.00050 Nickel (Ni)-Total <0.0020 Phosphorus (P)-Total <0.50 Potassium (K)-Total 3.53 Rubidium (Rb)-Total 0.00101 Selenium (Se)-Total <0.0050 Silicon (Si)-Total 0.97		HTC					

* 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
L1897703-3 TAP EUTAP0510							
Sampled By: CLIENT on 05-MAR-17 @ 07:00							
Matrix: water							
Total Metals by ICP-MS							
Silver (Ag)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Sodium (Na)-Total	587		0.050	mg/L	09-MAR-17	09-MAR-17	R3673037
Strontium (Sr)-Total	0.0116		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Tellurium (Te)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Thallium (Tl)-Total	<0.0050		0.0050	mg/L	09-MAR-17	09-MAR-17	R3673037
Thorium (Th)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Tin (Sn)-Total	<0.00060		0.00060	mg/L	09-MAR-17	09-MAR-17	R3673037
Titanium (Ti)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
Tungsten (W)-Total	<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Uranium (U)-Total	0.00132		0.00050	mg/L	09-MAR-17	09-MAR-17	R3673037
Vanadium (V)-Total	<0.0020		0.0020	mg/L	09-MAR-17	09-MAR-17	R3673037
Zinc (Zn)-Total	<0.020		0.020	mg/L	09-MAR-17	09-MAR-17	R3673037
Zirconium (Zr)-Total	<0.0010		0.0010	mg/L	09-MAR-17	09-MAR-17	R3673037
THM by headspace							
Total Trihalomethanes (THMs)							
Total THMs	0.328		0.0010	mg/L		09-MAR-17	
VOC plus F1 by GCMS							
Bromodichloromethane	0.0529		0.00050	mg/L		09-MAR-17	R3672598
Bromoform	0.110		0.00050	mg/L		09-MAR-17	R3672598
Chloroform	0.0410		0.00050	mg/L		09-MAR-17	R3672598
Dibromochloromethane	0.125		0.00050	mg/L		09-MAR-17	R3672598
Surrogate: 4-Bromofluorobenzene (SS)	87.5		70-130	%		09-MAR-17	R3672598
Surrogate: 1,4-Difluorobenzene (SS)	98.5		70-130	%		09-MAR-17	R3672598

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
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**
C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP
Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO2 which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.			
HARDNESS-CALC-WP	Water	Hardness Calculated	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
MET-T-MS-WP	Water	Total Metals by ICP-MS	APHA 3030E/EPA 6020A-T
This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma - mass spectrometry (EPA Method 6020A).			
TC,EC-QT51-WP	Water	Total Coliform and E.coli	APHA 9223B QT51
This analysis is carried out using procedures adapted from APHA Method 9223B "Enzyme Substrate Coliform Test". E. coli and Total Coliform are determined simultaneously. The sample is mixed with a mixture of hydrolyzable substrates and then sealed in a 51-well packet. The packet is incubated at 35.0 – 0.5°C for 18 or 24 hours and then the number of wells exhibiting positive responses are counted. The final results are obtained by comparing the number of positive responses to a probability table.			
TDS-WP	Water	Total Dissolved Solids (TDS)	APHA 2540 SOLIDS C,E
A well-mixed sample is filtered through a glass fiber filter paper. The filtrate is then evaporated to dryness in a pre-weighed vial and dried at 180 – 2C. The increase in vial weight represents the total dissolved solids.			
THM-SUM-CALC-WP	Water	Total Trihalomethanes (THMs)	CALCULATION
Total Trihalomethanes (THMs) represents the sum of bromodichloromethane, bromoform, chlorodibromomethane and chloroform. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.			
TURBIDITY-WP	Water	Turbidity	APHA 2130B (modified)
Turbidity in aqueous matrices is determined by the nephelometric method.			
VOC+F1-HSMS-WP	Water	VOC plus F1 by GCMS	EPA 8260C / EPA 5021A
In this method samples are analyzed using a headspace autosampler interfaced to a dual column gas chromatograph with MS and Flame Ionization detectors.			

** 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:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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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 ww - 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: L1897703

Report Date: 13-MAR-17

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Client: Environment Canada
Eureka Weather Station
Eureka NU
Contact: JOHN MACIVER

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOC-HTC-WP								
Batch R3672916								
WG2491689-3 DUP		L1897703-2						
Total Organic Carbon		<0.50	<0.50	RPD-NA	mg/L	N/A	20	08-MAR-17
WG2491689-2 LCS								
Total Organic Carbon			94.9		%		80-120	08-MAR-17
WG2491689-6 LCS								
Total Organic Carbon			99.4		%		80-120	08-MAR-17
WG2491689-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	08-MAR-17
WG2491689-5 MB								
Total Organic Carbon			<0.50		mg/L		0.5	08-MAR-17
WG2491689-4 MS		L1897703-3						
Total Organic Carbon			99.8		%		70-130	08-MAR-17
MET-T-MS-WP								
Batch R3673037								
WG2491561-2 LCS								
Aluminum (Al)-Total			105.8		%		80-120	09-MAR-17
Antimony (Sb)-Total			100.9		%		80-120	09-MAR-17
Arsenic (As)-Total			99.8		%		80-120	09-MAR-17
Barium (Ba)-Total			104.0		%		80-120	09-MAR-17
Beryllium (Be)-Total			99.2		%		80-120	09-MAR-17
Bismuth (Bi)-Total			96.6		%		80-120	09-MAR-17
Boron (B)-Total			98.7		%		80-120	09-MAR-17
Cadmium (Cd)-Total			100.0		%		80-120	09-MAR-17
Calcium (Ca)-Total			97.1		%		80-120	09-MAR-17
Cesium (Cs)-Total			106.7		%		80-120	09-MAR-17
Chromium (Cr)-Total			100.1		%		80-120	09-MAR-17
Cobalt (Co)-Total			100.2		%		80-120	09-MAR-17
Copper (Cu)-Total			98.5		%		80-120	09-MAR-17
Iron (Fe)-Total			109.7		%		80-120	09-MAR-17
Lead (Pb)-Total			98.8		%		80-120	09-MAR-17
Lithium (Li)-Total			103.7		%		80-120	09-MAR-17
Magnesium (Mg)-Total			101.6		%		80-120	09-MAR-17
Manganese (Mn)-Total			103.6		%		80-120	09-MAR-17
Molybdenum (Mo)-Total			97.1		%		80-120	09-MAR-17
Nickel (Ni)-Total			101.1		%		80-120	09-MAR-17
Phosphorus (P)-Total			99.8		%		80-120	09-MAR-17

Quality Control Report

Workorder: L1897703

Report Date: 13-MAR-17

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP		Water						
Batch	R3673037							
WG2491561-2		LCS						
Potassium (K)-Total			104.6		%		80-120	09-MAR-17
Rubidium (Rb)-Total			98.6		%		80-120	09-MAR-17
Selenium (Se)-Total			96.2		%		80-120	09-MAR-17
Silicon (Si)-Total			96.0		%		80-120	09-MAR-17
Silver (Ag)-Total			103.2		%		80-120	09-MAR-17
Sodium (Na)-Total			102.8		%		80-120	09-MAR-17
Strontium (Sr)-Total			107.8		%		80-120	09-MAR-17
Tellurium (Te)-Total			96.4		%		80-120	09-MAR-17
Thallium (Tl)-Total			96.5		%		80-120	09-MAR-17
Thorium (Th)-Total			103.7		%		80-120	09-MAR-17
Tin (Sn)-Total			103.0		%		80-120	09-MAR-17
Titanium (Ti)-Total			98.4		%		80-120	09-MAR-17
Tungsten (W)-Total			107.5		%		80-120	09-MAR-17
Uranium (U)-Total			104.9		%		80-120	09-MAR-17
Vanadium (V)-Total			103.6		%		80-120	09-MAR-17
Zinc (Zn)-Total			93.9		%		80-120	09-MAR-17
Zirconium (Zr)-Total			97.3		%		80-120	09-MAR-17
WG2491561-1		MB						
Aluminum (Al)-Total			<0.020		mg/L		0.02	09-MAR-17
Antimony (Sb)-Total			<0.0010		mg/L		0.001	09-MAR-17
Arsenic (As)-Total			<0.0010		mg/L		0.001	09-MAR-17
Barium (Ba)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Beryllium (Be)-Total			<0.0010		mg/L		0.001	09-MAR-17
Bismuth (Bi)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Boron (B)-Total			<0.030		mg/L		0.03	09-MAR-17
Cadmium (Cd)-Total			<0.00020		mg/L		0.0002	09-MAR-17
Calcium (Ca)-Total			<0.20		mg/L		0.2	09-MAR-17
Cesium (Cs)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Chromium (Cr)-Total			<0.0020		mg/L		0.002	09-MAR-17
Cobalt (Co)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Copper (Cu)-Total			<0.0020		mg/L		0.002	09-MAR-17
Iron (Fe)-Total			<0.10		mg/L		0.1	09-MAR-17
Lead (Pb)-Total			<0.0010		mg/L		0.001	09-MAR-17
Lithium (Li)-Total			<0.0020		mg/L		0.002	09-MAR-17

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-MS-WP	Water							
Batch	R3673037							
WG2491561-1 MB								
Magnesium (Mg)-Total			<0.050		mg/L		0.05	09-MAR-17
Manganese (Mn)-Total			<0.0010		mg/L		0.001	09-MAR-17
Molybdenum (Mo)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Nickel (Ni)-Total			<0.0020		mg/L		0.002	09-MAR-17
Phosphorus (P)-Total			<0.50		mg/L		0.5	09-MAR-17
Potassium (K)-Total			<0.10		mg/L		0.1	09-MAR-17
Rubidium (Rb)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Selenium (Se)-Total			<0.0050		mg/L		0.005	09-MAR-17
Silicon (Si)-Total			<0.30		mg/L		0.3	09-MAR-17
Silver (Ag)-Total			<0.0010		mg/L		0.001	09-MAR-17
Sodium (Na)-Total			<0.050		mg/L		0.05	09-MAR-17
Strontium (Sr)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Tellurium (Te)-Total			<0.0010		mg/L		0.001	09-MAR-17
Thallium (Tl)-Total			<0.0050		mg/L		0.005	09-MAR-17
Thorium (Th)-Total			<0.0010		mg/L		0.001	09-MAR-17
Tin (Sn)-Total			<0.00060		mg/L		0.0006	09-MAR-17
Titanium (Ti)-Total			<0.0010		mg/L		0.001	09-MAR-17
Tungsten (W)-Total			<0.0020		mg/L		0.002	09-MAR-17
Uranium (U)-Total			<0.00050		mg/L		0.0005	09-MAR-17
Vanadium (V)-Total			<0.0020		mg/L		0.002	09-MAR-17
Zinc (Zn)-Total			<0.020		mg/L		0.02	09-MAR-17
Zirconium (Zr)-Total			<0.0010		mg/L		0.001	09-MAR-17
TC,EC-QT51-WP	Water							
Batch	R3668848							
WG2489732-4 MB								
Total Coliforms			0		MPN/100mL		1	06-MAR-17
Escherichia Coli			0		MPN/100mL		1	06-MAR-17
WG2489732-5 MB								
Total Coliforms			0		MPN/100mL		1	06-MAR-17
Escherichia Coli			0		MPN/100mL		1	06-MAR-17
WG2489732-6 MB								
Total Coliforms			0		MPN/100mL		1	06-MAR-17
Escherichia Coli			0		MPN/100mL		1	06-MAR-17
TDS-WP	Water							

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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
TDS-WP		Water						
Batch R3673991								
WG2490643-2 LCS								
Total Dissolved Solids			98.9		%		85-115	10-MAR-17
WG2490643-1 MB								
Total Dissolved Solids			<10		mg/L		10	10-MAR-17
TURBIDITY-WP		Water						
Batch R3668782								
WG2489970-3 DUP		L1897703-1						
Turbidity		0.83	0.82		NTU	1.2	15	06-MAR-17
WG2489970-2 LCS								
Turbidity			101.0		%		85-115	06-MAR-17
WG2489970-1 MB								
Turbidity			<0.10		NTU		0.1	06-MAR-17
VOC+F1-HSMS-WP		Water						
Batch R3672598								
WG2490966-2 LCS								
Bromodichloromethane			93.8		%		70-130	08-MAR-17
Bromoform			102.6		%		70-130	08-MAR-17
Chloroform			87.6		%		70-130	08-MAR-17
Dibromochloromethane			96.0		%		70-130	08-MAR-17
WG2490966-1 MB								
Bromodichloromethane			<0.00050		mg/L		0.0005	09-MAR-17
Bromoform			<0.00050		mg/L		0.0005	09-MAR-17
Chloroform			<0.00050		mg/L		0.0005	09-MAR-17
Dibromochloromethane			<0.00050		mg/L		0.0005	09-MAR-17
Surrogate: 4-Bromofluorobenzene (SS)			90.8		%		70-130	09-MAR-17
Surrogate: 1,4-Difluorobenzene (SS)			98.9		%		70-130	09-MAR-17

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Legend:

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

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

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Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Bacteriological Tests							
Total Coliform and E.coli							
	1	05-MAR-17 07:35	06-MAR-17 16:20	30	33	hours	EHTL
	2	05-MAR-17 07:05	06-MAR-17 16:20	30	33	hours	EHTL
	3	05-MAR-17 07:00	06-MAR-17 16:20	30	33	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 L1897703 were received on 06-MAR-17 12:10.

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.



COC #

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