



HEMMERA ENVIROCHEM INC.  
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Date Received: 28-JAN-16  
Report Date: 09-FEB-16 13:18 (MT)  
Version: FINAL

Client Phone: 867-456-4865

## Certificate of Analysis

Lab Work Order #: L1728272  
Project P.O. #: NOT SUBMITTED  
Job Reference: 1343-005.15  
C of C Numbers: 1  
Legal Site Desc:

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Brent Mack, B.Sc.  
Account Manager

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ALS CANADA LTD Part of the ALS Group A Campbell Brothers Limited Company

# ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1728272-1 Water  TRAVEL BLANK	L1728272-2 Water 25-JAN-16 12:55 GWCC-5	L1728272-3 Water 26-JAN-16 13:15 R2	L1728272-4 Water 26-JAN-16 10:40 R1	L1728272-5 Water 26-JAN-16 10:40 FB1	
Grouping	Analyte					
<b>WATER</b>						
<b>Physical Tests</b>	Conductivity (uS/cm)	<2.0	887	853	959	<2.0
	Hardness (as CaCO3) (mg/L)	<0.50	324	562	609	<0.50
	pH (pH)	5.50	7.37	7.68	7.29	5.60
	Total Suspended Solids (mg/L)	<3.0	<3.0	<3.0	<3.0	<3.0
<b>Anions and Nutrients</b>	Ammonia, Total (as N) (mg/L)	0.0079 <sup>RRV</sup>	0.0180	0.0202	0.0897	<0.0050
	Nitrate (as N) (mg/L)	<0.0050	0.053	0.074 <sup>DLA</sup>	0.028 <sup>DLA</sup>	<0.0050
	Nitrite (as N) (mg/L)	<0.0010	<0.0020 <sup>DLA</sup>	<0.0020 <sup>DLA</sup>	<0.0020 <sup>DLA</sup>	<0.0010
	Phosphorus (P)-Total (mg/L)	<0.0020	0.0114	0.0063	<0.0020	<0.0020
	Sulfate (SO4) (mg/L)	<0.30	344	316	387	<0.30
<b>Organic / Inorganic Carbon</b>	Dissolved Organic Carbon (mg/L)		4.23	3.59	9.75	<0.50
	Total Organic Carbon (mg/L)	<0.50				
<b>Total Metals</b>	Aluminum (Al)-Total (mg/L)	<0.0030	0.0074	0.0304	0.0087	<0.0030
	Antimony (Sb)-Total (mg/L)	<0.00010	0.00060	0.00044	0.00017	<0.00010
	Arsenic (As)-Total (mg/L)	<0.00010	0.00069	0.00086	0.00039	<0.00010
	Barium (Ba)-Total (mg/L)	<0.000050	0.0571	0.0660	0.0902	<0.000050
	Beryllium (Be)-Total (mg/L)	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Total (mg/L)	<0.010	0.025	0.019	0.010	<0.010
	Cadmium (Cd)-Total (mg/L)	<0.000050	0.000123	0.0000364	0.000144	<0.000050
	Calcium (Ca)-Total (mg/L)	<0.050	126	101	125	<0.050
	Chromium (Cr)-Total (mg/L)	<0.00010	0.00083	0.00023	0.00026	<0.00010
	Cobalt (Co)-Total (mg/L)	<0.00010	0.00010	0.00030	0.00725	<0.00010
	Copper (Cu)-Total (mg/L)	<0.00050	0.00120	0.00071	0.00064	<0.00050
	Iron (Fe)-Total (mg/L)	<0.010	0.125	0.299	0.689	<0.010
	Lead (Pb)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Total (mg/L)	<0.0010	0.0083	0.0091	0.0100	<0.0010
	Magnesium (Mg)-Total (mg/L)	<0.10	54.1	79.3	72.9	<0.10
	Manganese (Mn)-Total (mg/L)	<0.00010	0.00716	0.210	3.34	<0.00010
	Mercury (Hg)-Total (mg/L)	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050
	Molybdenum (Mo)-Total (mg/L)	<0.000050	0.00175	0.000911	0.00143	<0.000050
	Nickel (Ni)-Total (mg/L)	<0.00050	0.0198	0.00296	0.0327	<0.00050
	Phosphorus (P)-Total (mg/L)	<0.050	<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Total (mg/L)	<0.10	1.16	1.26	1.02	<0.10
	Selenium (Se)-Total (mg/L)	<0.000050	0.00372	0.000448	0.000215	<0.000050
	Silicon (Si)-Total (mg/L)	<0.050	4.60	5.72	5.21	<0.050
Silver (Ag)-Total (mg/L)	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	

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

# ALS ENVIRONMENTAL ANALYTICAL REPORT

	Sample ID Description Sampled Date Sampled Time Client ID	L1728272-1 Water  TRAVEL BLANK	L1728272-2 Water 25-JAN-16 12:55 GWCC-5	L1728272-3 Water 26-JAN-16 13:15 R2	L1728272-4 Water 26-JAN-16 10:40 R1	L1728272-5 Water 26-JAN-16 10:40 FB1
Grouping	Analyte					
<b>WATER</b>						
<b>Total Metals</b>	Sodium (Na)-Total (mg/L)	<0.050	3.63	4.29	5.20	<0.050
	Strontium (Sr)-Total (mg/L)	<0.00020	0.701	0.569	0.710	<0.00020
	Sulfur (S)-Total (mg/L)	<0.50	105	100	122	<0.50
	Thallium (Tl)-Total (mg/L)	<0.000010	0.000017	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Total (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Total (mg/L)	<0.00030	<0.00030	<0.0012 <sup>DLM</sup>	<0.00030	<0.00030
	Uranium (U)-Total (mg/L)	<0.000010	0.00258	0.00807	0.00367	<0.000010
	Vanadium (V)-Total (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Total (mg/L)	<0.0030	<0.0030	<0.0030	<0.0030	<0.0030
	Zirconium (Zr)-Total (mg/L)	<0.00030	<0.00030	<0.00030	0.00054	<0.00030
<b>Dissolved Metals</b>	Dissolved Mercury Filtration Location		FIELD	FIELD	FIELD	FIELD
	Dissolved Metals Filtration Location		FIELD	FIELD	FIELD	FIELD
	Aluminum (Al)-Dissolved (mg/L)		<0.0010	0.0024	0.0063	<0.0010
	Antimony (Sb)-Dissolved (mg/L)		0.00034	0.00040	0.00015	<0.00010
	Arsenic (As)-Dissolved (mg/L)		0.00034	0.00072	0.00036	<0.00010
	Barium (Ba)-Dissolved (mg/L)		0.0326	0.0645	0.0919	<0.000050
	Beryllium (Be)-Dissolved (mg/L)		<0.000020	<0.000020	<0.000020	<0.000020
	Bismuth (Bi)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050
	Boron (B)-Dissolved (mg/L)		0.014	0.018	0.010	<0.010
	Cadmium (Cd)-Dissolved (mg/L)		0.0000597	0.0000333	0.000131	<0.0000050
	Calcium (Ca)-Dissolved (mg/L)		77.0	99.3	126	<0.050
	Chromium (Cr)-Dissolved (mg/L)		0.00028	0.00014	0.00019	<0.00010
	Cobalt (Co)-Dissolved (mg/L)		<0.00010	0.00028	0.00740	<0.00010
	Copper (Cu)-Dissolved (mg/L)		0.00050	0.00055	0.00056	<0.00020
	Iron (Fe)-Dissolved (mg/L)		0.012	0.175	0.643	<0.010
	Lead (Pb)-Dissolved (mg/L)		<0.000050	<0.000050	<0.000050	<0.000050
	Lithium (Li)-Dissolved (mg/L)		0.0048	0.0087	0.0098	<0.0010
	Magnesium (Mg)-Dissolved (mg/L)		32.0	76.3	71.4	<0.10
	Manganese (Mn)-Dissolved (mg/L)		0.00120	0.203	3.42	<0.00010
	Mercury (Hg)-Dissolved (mg/L)		<0.0000050	<0.0000050	<0.0000050	<0.0000050
	Molybdenum (Mo)-Dissolved (mg/L)		0.000951	0.000818	0.00139	<0.000050
	Nickel (Ni)-Dissolved (mg/L)		0.0110	0.00283	0.0334	<0.00050
	Phosphorus (P)-Dissolved (mg/L)		<0.050	<0.050	<0.050	<0.050
	Potassium (K)-Dissolved (mg/L)		0.65	1.05	0.91	<0.10
	Selenium (Se)-Dissolved (mg/L)		0.00205	0.000485	0.000229	<0.000050
	Silicon (Si)-Dissolved (mg/L)		2.71	5.52	5.12	<0.050
	Silver (Ag)-Dissolved (mg/L)		<0.000010	<0.000010	<0.000010	<0.000010

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

## ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample ID Description Sampled Date Sampled Time Client ID	L1728272-1 Water  TRAVEL BLANK	L1728272-2 Water 25-JAN-16 12:55 GWCC-5	L1728272-3 Water 26-JAN-16 13:15 R2	L1728272-4 Water 26-JAN-16 10:40 R1	L1728272-5 Water 26-JAN-16 10:40 FB1
Grouping	Analyte				
<b>WATER</b>					
<b>Dissolved Metals</b>	Sodium (Na)-Dissolved (mg/L)	2.09	4.16	5.31	<0.050
	Strontium (Sr)-Dissolved (mg/L)	0.406	0.551	0.705	<0.00020
	Sulfur (S)-Dissolved (mg/L)	61.9	97.5	119	<0.50
	Thallium (Tl)-Dissolved (mg/L)	0.000013	<0.000010	<0.000010	<0.000010
	Tin (Sn)-Dissolved (mg/L)	<0.00010	<0.00010	<0.00010	<0.00010
	Titanium (Ti)-Dissolved (mg/L)	<0.00030	<0.00030	<0.00030	<0.00030
	Uranium (U)-Dissolved (mg/L)	0.00145	0.00764	0.00356	<0.000010
	Vanadium (V)-Dissolved (mg/L)	<0.00050	<0.00050	<0.00050	<0.00050
	Zinc (Zn)-Dissolved (mg/L)	<0.0010	0.0011	0.0024	<0.0010
	Zirconium (Zr)-Dissolved (mg/L)	<0.00030	<0.00030	0.00054	<0.00030

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

## Reference Information

**QC Samples with Qualifiers & Comments:**

QC Type Description	Parameter	Qualifier	Applies to Sample Number(s)
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Calcium (Ca)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Silicon (Si)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sulfur (S)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Total Organic Carbon	MS-B	L1728272-1
Matrix Spike	Dissolved Organic Carbon	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Molybdenum (Mo)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Total	MS-B	L1728272-1, -2, -3, -4, -5
Matrix Spike	Barium (Ba)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Manganese (Mn)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Sodium (Na)-Dissolved	MS-B	L1728272-2, -3, -4, -5
Matrix Spike	Strontium (Sr)-Dissolved	MS-B	L1728272-2, -3, -4, -5

**Qualifiers for Individual Parameters Listed:**

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRV	Reported Result Verified By Repeat Analysis

**Test Method References:**

ALS Test Code	Matrix	Test Description	Method Reference**
<b>BE-D-L-CCMS-VA</b>	Water	Diss. Be (low) in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
<b>BE-T-L-CCMS-VA</b>	Water	Total Be (Low) in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
<b>CARBONS-DOC-VA</b>	Water	Dissolved organic carbon by combustion	APHA 5310B TOTAL ORGANIC CARBON (TOC)
This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)". Dissolved carbon (DOC) fractions are determined by filtering the sample through a 0.45 micron membrane filter prior to analysis.			

## Reference Information

<b>CARBONS-TOC-VA</b>	Water	Total organic carbon by combustion	APHA 5310B TOTAL ORGANIC CARBON (TOC)
This analysis is carried out using procedures adapted from APHA Method 5310 "Total Organic Carbon (TOC)".			
<b>EC-MAN-WR</b>	Water	Conductivity by Meter	APHA 2510 (B)
This analysis is carried out using procedures adapted from APHA Method 2510 "Conductivity". Conductivity is determined using an electrode.			
<b>HARDNESS-CALC-VA</b>	Water	Hardness	APHA 2340B
Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO <sub>3</sub> equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.			
<b>HG-D-CVAA-VA</b>	Water	Diss. Mercury in Water by CVAAS or CVAFS	APHA 3030B/EPA 1631E (mod)
Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
<b>HG-T-CVAA-VA</b>	Water	Total Mercury in Water by CVAAS or CVAFS	EPA 1631E (mod)
Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS or CVAFS.			
<b>MET-D-CCMS-VA</b>	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)
Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
<b>MET-DIS-LOW-ICP-VA</b>	Water	Dissolved Metals in Water by ICPOES	EPA 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedure involves filtration (EPA Method 3005A) and analysis by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
<b>MET-T-CCMS-VA</b>	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
<b>MET-TOT-LOW-ICP-VA</b>	Water	Total Metals in Water by ICPOES	EPA 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).			
<b>NH3-F-VA</b>	Water	Ammonia in Water by Fluorescence	APHA 4500 NH <sub>3</sub> -NITROGEN (AMMONIA)
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
<b>NH3-F-WA</b>	Water	Ammonia in Water by Fluorescence	J. ENVIRON. MONIT., 2005, 7, 37-42, RSC
This analysis is carried out, on sulfuric acid preserved samples, using procedures modified from J. Environ. Monit., 2005, 7, 37 - 42, The Royal Society of Chemistry, "Flow-injection analysis with fluorescence detection for the determination of trace levels of ammonium in seawater", Roslyn J. Waston et al.			
<b>NO2-L-IC-N-WR</b>	Water	Nitrite in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>NO3-L-IC-N-WR</b>	Water	Nitrate in Water by IC (Low Level)	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
<b>P-T-PRES-COL-VA</b>	Water	Total P in Water by Colour	APHA 4500-P Phosphorus
This analysis is carried out using procedures adapted from APHA Method 4500-P "Phosphorus". Total Phosphorus is determined colourimetrically after persulphate digestion of the sample.			
<b>PH-MAN-WR</b>	Water	pH by Meter	APHA 4500-H+
pH is determined by potentiometric measurement with a pH electrode, and is conducted at ambient laboratory temperature (normally 20 – 5°C). For high accuracy test results, pH should be measured in the field within the recommended 15 minute hold time.			
<b>S-DIS-ICP-VA</b>	Water	Dissolved Sulfur in Water by ICPOES	EPA SW-846 3005A/6010B
This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United			

## Reference Information

States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

**S-TOT-ICP-VA**                      Water              Total Sulfur in Water by ICPOES                      EPA SW-846 3005A/6010B

This analysis is carried out using procedures adapted from "Standard Methods for the Examination of Water and Wastewater" published by the American Public Health Association, and with procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846 published by the United States Environmental Protection Agency (EPA). The procedures may involve preliminary sample treatment by acid digestion, using either hotblock or microwave oven, or filtration (EPA Method 3005A). Instrumental analysis is by inductively coupled plasma - optical emission spectrophotometry (EPA Method 6010B).

Method Limitation: This method will not give total sulfur results for all samples. Sulfide or other volatile forms of sulfur that may be present in submitted samples, is often lost during the sampling, preservation and analysis process. The data reported as total and/or dissolved sulfur represents all non-volatile forms of sulfur present in a particular sample.

**SO4-IC-N-WR**                      Water              Sulfate in Water by IC                      EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

**TSS-MAN-WR**                      Water              Total Suspended Solids by Gravimetric                      APHA 2540 D

This analysis is carried out using procedures adapted from APHA Method 2540 "Solids". Solids are determined gravimetrically. Total Suspended Solids are determined by filtering a sample through a glass fibre filter and drying the filter at 104 degrees celsius.

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

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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:*

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Laboratory Definition Code	Laboratory Location
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### Chain of Custody Numbers:

1

### GLOSSARY OF REPORT TERMS

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

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

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

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

*mg/L - milligrams per litre.*

*< - Less than.*

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

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

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

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

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



<b>Report To</b>		<b>Report Format / Distribution</b>				* (Rush Turnaround Time (TAT) is not available for all tests)													
Company: Hemmera Environchem Inc.		Select Report Format: <input type="checkbox"/> PDF <input type="checkbox"/> EXCEL <input type="checkbox"/> EDD (DIGITAL)				R <input checked="" type="checkbox"/> Regular (Standard TAT If received by 3 pm - business days)													
Contact: Natasha Sandys		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				P <input type="checkbox"/> Priority (2-4 bus. days if received by 3pm) 50% surcharge - contact ALS to confirm TAT													
Address: 230 - 2237 2nd Avenue Whitehorse, YT		<input type="checkbox"/> Criteria on Report - provide details below if box checked				E <input type="checkbox"/> Emergency (1-2 bus. days if received by 3pm) 100% surcharge - contact ALS to confirm TAT													
Phone: 867-456-4865		Select Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				E2 <input type="checkbox"/> Same day or weekend emergency - contact ALS to confirm TAT and surcharge													
		Email 1 or Fax nsandys@hemmera.com				Specify Date Required for E2,E or P:													
		Email 2 chris@elr.ca				<b>Analysis Request</b>													
<b>Invoice To</b> Same as Report To <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<b>Invoice Distribution</b>				Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
Copy of Invoice with Report <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Select Invoice Distribution: <input type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																	
Company: Hemmera Environchem Inc.		Email 1 or Fax nsandys@hemmera.com																	
Contact: Natasha Sandys		Email 2 chris@elr.ca																	
<b>Project Information</b>		<b>Oil and Gas Required Fields (client use)</b>																	
ALS Quote #: Q51108		Approver ID:		Cost Center:															
Job #: 1343-005.15		GL Account:		Routing Code:															
PO / AFE:		Activity Code:																	
LSD:		Location:																	
ALS Lab Work Order # (lab use only)		ALS Contact:		Sampler: AN/CH															
<b>ALS Sample # (lab use only)</b>	<b>Sample Identification and/or Coordinates (This description will appear on the report)</b>			<b>Date (dd-mm-yy)</b>	<b>Time (hh:mm)</b>	<b>Sample Type</b>	Low Level Diss. Met (incl. Hg) and Hardness	Low Level Tot. Met (incl. Hg) and Hardness	Chromium Speciation (III/VI) - Total	Chromium Speciation (III/VI) - Dissolved	Ammonia - N	Dissolved Organic Carbon (DOC)	Nitrate - N	Nitrite - N	Total Phosphorus	Sulphate	pH, Conductivity, Total Susp Solids	Number of Containers	
	Travel Blank			-	-	Water		R			R		R	R	R	R	R		6
	GWCC-5			25 01 16	12:55	Water	R	R			R	R	R	R	R	R	R		9
	R2			26 01 16	13:15	Water	R	R			R	R	R	R	R	R	R		9
	R1			26 01 16	10:40	Water	R	R			R	R	R	R	R	R	R		9
	FB1			26 01 16	10:40	Water	R	R			R	R	R	R	R	R	R		9
<b>Drinking Water (DW) Samples<sup>1</sup> (client use)</b>		<b>Special Instructions / Specify Criteria to add on report (client Use)</b>				<b>SAMPLE CONDITION AS RECEIVED (lab use only)</b>													
Are samples taken from a Regulated DW System? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Please hold samples for total and dissolved Chromium III/VI pending regular metals analysis results.				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>													
Are samples for human drinking water use? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						Ice packs Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>													
						Cooling Initiated <input checked="" type="checkbox"/>													
						INITIAL COOLER TEMPERATURES °C						FINAL COOLER TEMPERATURES °C							
						5.6						5C							
<b>SHIPMENT RELEASE (client use)</b>				<b>INITIAL SHIPMENT RECEPTION (lab use only)</b>				<b>FINAL SHIPMENT RECEPTION (lab use only)</b>											
Released by: <i>[Signature]</i>		Date: Jan 28 2016		Time: 9:45		Received by: <i>[Signature]</i>		Date: 28 Jan 16		Time: 9:45		Received by: Jean				Date: JAN 29 2016		Time: 16:15	