YEAR BEING REPORTED: 2016

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. **3AM-ARV1016** issued to the **Hamlet of Arviat**.

i)- iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are results for Monitoring Stations ARV-1, as well as detailed chemical, physical and biological analysis required at ARV-2a, ARV-4, ARV-5 and ARV-6 (for the months of July to September).

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (m³)
January	8,228.66142	Same
February	7,824.40590	Same
March	8,383.62280	Same
April	7,961.36380	Same
May	8,131.34500	Same
June	7,965.90810	Same
July	8,205.04350	Same
August	8,414.33550	Same
September	7,956.45710	Same
October	8,270.04940	Same
November	8,059.16200	Same
December	8,285.03710	Same
ANNUAL TOTAL	97,685.39162	97,685.39162

Note: No meter exists to measure the sewage discharge volume, therefore water consumption volume is considered as equal volume to the Sewage discharge volume.

- iv. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
 - No modifications and/or major maintenance work was carried out in 2016.
 - Segregation continues to improve at the Solid Waste Site and Bulky Metals Dump. Batteries are collected and being stored in a seacan. Non-metals have been removed from the Bulky Metals Dump and brought to the Solid Waste Site. A wood recycling area is in use.
- v. a list of unauthorized discharges and summary of follow-up action taken;

The following spills were reported to the NT-NU Spill Report Line and are listed on the Hazardous Materials Spills Database for Arviat in 2016:

- 2016127, 2016-04-19, Arviat, 802 10th Avenue, unit 271,No. 2 Home heating fuel 0L
- 2016173, 2016-05-16, Southwest of the Northern Store, Diesel, 100L
- 2016193, 2016-05-26, 801 8th street, Heating Oil, 100L
- 2016194, 2015-05-26, 801 8th street, Heating Fuel, 100L
- 2016225, 2016-06-17, 404 A 5th street, Heating Fuel, 100L
- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - Abandonment and Restoration will take place during 2017 for the Old Sewage Lagoons, as per the *Old Sewage Lagoons Abandonment and Restoration Plan*, *Hamlet of Arviat* prepared by Nuna Burnside, December 2010.
 - Samples from the Old Sewage Lagoon were collected on July 21, 2015 and June 22, 2016. All parameters are below the effluent quality limits outlined in the Licence.
- vii. a summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;
 - An Amendment/Renewal Application was submitted to the NWB February 27, 2015.

- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
- ix. updates or revisions to the approved Operation and Maintenance Plans.
 - The Water Supply Operation and Maintenance (O&M) Plan, Hamlet of Arviat prepared by Nuna Burnside, May 2009 is currently being updated. The updated O&M Plan will be submitted to the NWB in 2017.
 - The Sewage Treatment Facility Operation and Maintenance (O&M) Plan, Hamlet of Arviat prepared by Nuna Burnside, January 2009, revised May 2009 is currently being updated. The updated O&M Plan will be submitted to the NWB in 2017.
 - The Solid Waste Management Facility Operation and Maintenance (O&M) Plan, Hamlet of Arviat prepared by Nuna Burnside, January 2009, revised May 2009 is currently being updated. The updated O&M Plan will be submitted to the NWB in 2016.
 - The Environmental Monitoring Program and Quality Assurance/Quality Control Plan, Hamlet of Arviat prepared by Nuna Burnside, December 2010 is currently being updated. The updated QA/QC Plan will be submitted to the NWB in 2017.
 - The *Environmental Emergency Contingency Plan, Hamlet of Arviat* prepared by Nuna Burnside, May 2009, revised May 2010 is currently being updated. The updated Plan will be submitted to the NWB in 2017.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- The Hamlet is working with the Water Compliance Working Group to implement the Solid Waste Workplan goals.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- The 3AM-ARV1016 INAC Inspection took place on July 20, 2015. A copy of the inspection report has not been received.

Appendix A: ARV-4 Effluent Quality Limits – 1 page

Appendix B: Weekly Inspections at Monitoring Program Stations – 1 page

Appendix C: Certificate of Analysis June 22, 2016 – 21 pages Appendix D: Certificate of Analysis July 17, 2016 – 17 pages

Appendix E: Certificate of Analysis August 25, 2016 – 18 pages

Appendix F: Certificate of Analysis September 16, 2016 – 10 pages

Appendix G: Hazardous Materials Spill Database, Arviat 2015 – 1 page

ARV-4 Effluent Quality Limits

Parameter	Maximum Concentration of any Grab Sample
Fecal Coliform	1 x 10 ⁴ CFU/dl
BOD ₅	80 mg/l
Total Suspended Solids	100 mg/l
Oil and Grease	No visible sheen
pH	Between 6 and 9

Nunavut Water Board Licence No. $\underline{3AM-ARV1015}$ Arviat, NU

Part H, Item 8: Weekly Inspections at Monitoring Program Sations, May to August

			ARV-2a	1		ARV-4			ARV-5		ARV-6			
		Water	Present	(check)										
Week	Starting Date	Yes	No	Frozen	Checked By									
1	02-May-16													
2	09-May-16													
3	16-May-16													
4	23-May-16													
5	30-May-16													
6	06-Jun-16													
7	13-Jun-16													
8	20-Jun-16													
9	27-Jun-16													
10	04-Jul-16													
11	11-Jul-16													
12	18-Jul-16													
13	25-Jul-16													
14	01-Aug-16													
15	08-Aug-16													
16	15-Aug-16													
17	22-Aug-16													
18	29-Aug-16													

Monitoring Program Station Locations:

ARV-2a: Effluent discharge from the Discharge Point of the Solid Waste Disposal Facility

ARV-4: Effluent from the discharge point of the Sewage Disposal Facility (end of wetland)

ARV-5: Discharge from the Bulky Metal Waste Area

ARV-6: Discharge from the Hazardous Waste Storage Area



Hamlet of Arviat

ATTN: STEVE ENGLAND

PO Box 150

Arviat NU XOC 0E0

Date Received: 24-JUN-16

Report Date: 08-JUL-16 10:59 (MT)

Version: FINAL

Client Phone: 867-857-2841

Certificate of Analysis

Lab Work Order #: L1788659
Project P.O. #: NOT SUBMITTED

Job Reference: C of C Numbers: Legal Site Desc:

Whe

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

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



Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1788659-1 ARV-2							
Sampled By: LAURA on 22-JUN-16 @ 13:54							
Matrix: EFF BTEX plus F1-F4							
BTX plus F1 by GCMS Benzene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
Toluene	<0.0010		0.0010	mg/L		29-JUN-16	R3495638
Ethyl benzene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
o-Xylene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
m+p-Xylenes	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
F1 (C6-C10)	<0.10		0.10	mg/L		29-JUN-16	R3495638
Surrogate: 4-Bromofluorobenzene (SS)	98.9		70-130	%		29-JUN-16	R3495638
CCME PHC F2-F4 in Water							
F2 (C10-C16)	0.17		0.10	mg/L	30-JUN-16	30-JUN-16	R3495489
F3 (C16-C34)	0.37		0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
F4 (C34-C50)	<0.25		0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
Surrogate: 2-Bromobenzotrifluoride	93.9		60-140	%	30-JUN-16	30-JUN-16	R3495489
CCME Total Hydrocarbons	_			**			
F1-BTEX	<0.10		0.10	mg/L		05-JUL-16	
F2-Naphth	0.17		0.10	mg/L		05-JUL-16	
F3-PAH	0.37		0.25	mg/L		05-JUL-16	
Total Hydrocarbons (C6-C50)	0.54		0.38	mg/L		05-JUL-16	
Sum of Xylene Isomer Concentrations Xylenes (Total)	<0.0015		0.0015	mg/L		04-JUL-16	
Ayleries (Total)	<0.0013		0.0013	IIIg/L		04-30L-10	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthylene	0.000039	EMPC	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Acridine	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Chrysene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluoranthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluorene	<0.000020		0.000020	mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L			R3496277
Naphthalene Phenanthrene	<0.000050 <0.000050		0.000050 0.000050	mg/L mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Pyrene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16 30-JUN-16	R3496277 R3496277
Quinoline	0.000070		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
B(a)P Total Potency Equivalent	<0.000007		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acenaphthene d10	90.9		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acridine d9	93.6		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Chrysene d12	89.8		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Naphthalene d8	126.1		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Phenanthrene d10	91.9		40-130	%	28-JUN-16	30-JUN-16	R3496277
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	490		1.2	mg/L		04-JUL-16	
Alkalinity, Carbonate							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1788659-1 ARV-2							
Sampled By: LAURA on 22-JUN-16 @ 13:54							
Matrix: EFF							
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		04-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		04-JUL-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	401		1.0	mg/L		29-JUN-16	R3493894
Ammonia by colour Ammonia, Total (as N)	9.2		1.0	mg/L		27-JUN-16	R3491152
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	20.3		6.0	mg/L		24-JUN-16	R3492952
Carbonaceous BOD BOD Carbonaceous	17.5		6.0	mg/L		24-JUN-16	R3492952
Chloride in Water by IC							
Chloride (Cl) Conductivity	414		5.0	mg/L		30-JUN-16	R3496234
Conductivity Fecal Coliform	2460		1.0	umhos/cm		29-JUN-16	R3493894
Fecal Coliforms Hardness Calculated	110	PEHT	3	MPN/100mL		24-JUN-16	R3493282
Hardness (as CaCO3) Mercury Total	726		0.30	mg/L		29-JUN-16	
Mercury (Hg)-Total Nitrate in Water by IC	0.000029		0.000020	mg/L	27-JUN-16	27-JUN-16	R3490656
Nitrate (as N)	<0.20	DLM	0.20	mg/L		30-JUN-16	R3496234
Nitrate+Nitrite Nitrate and Nitrite as N	<0.22		0.22	mg/L		05-JUL-16	
Nitrite in Water by IC Nitrite (as N)	<0.10	DLM	0.10	mg/L		30-JUN-16	R3496234
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		27-JUN-16	R3491620
Phenol (4AAP) Phenols (4AAP)	0.0083		0.0010	mg/L		29-JUN-16	R3492703
Phosphorus, Total Phosphorus (P)-Total	1.09		0.010	mg/L		07-JUL-16	R3498236
Sulfate in Water by IC Sulfate (SO4)	297		3.0	mg/L		30-JUN-16	R3496234
Total Metals by ICP-MS			-				
Aluminum (Al)-Total	0.0353		0.0050	mg/L	28-JUN-16	28-JUN-16	R3491764
Arsenic (As)-Total	0.00396		0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Cadmium (Cd)-Total Calcium (Ca)-Total	0.000258		0.000010	mg/L	28-JUN-16 28-JUN-16	28-JUN-16	R3491764
Calcium (Ca)-1 otal Chromium (Cr)-Total	217 0.0015		0.10 0.0010	mg/L mg/L	28-JUN-16 28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Cobalt (Co)-Total	0.0015				28-JUN-16	28-JUN-16 28-JUN-16	l l
Copper (Cu)-Total	0.00202		0.00020 0.00020	mg/L mg/L	28-JUN-16 28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Iron (Fe)-Total	5.13		0.00020	mg/L	28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Lead (Pb)-Total	0.00546		0.00090	mg/L	28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Magnesium (Mg)-Total	44.7		0.00090	mg/L	28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Manganese (Mn)-Total	0.964		0.00030	mg/L	28-JUN-16	28-JUN-16	R3491764
Nickel (Ni)-Total	0.0072		0.00030	mg/L	28-JUN-16	28-JUN-16	R3491764
Potassium (K)-Total	41.4		0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Sodium (Na)-Total	248		0.020	mg/L	28-JUN-16	28-JUN-16	R3491764
Zinc (Zn)-Total	0.143		0.030	mg/L	28-JUN-16	28-JUN-16	R3491764
Total Organic Carbon by Combustion	0.143		0.0020	1119/L	20 0011-10	20 0011-10	110731704
Total Organic Carbon by Combustion							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1788659-1 ARV-2							
Sampled By: LAURA on 22-JUN-16 @ 13:54							
Matrix: EFF							
Total Organic Carbon by Combustion							
Total Organic Carbon Total Organic Carbon	30.3		0.50	mg/L		28-JUN-16	R3491831
Total Suspended Solids							
Total Suspended Solids	26.0		5.0	mg/L		27-JUN-16	R3491105
рН рН	7.57		0.10	pH units		29-JUN-16	R3493894
<u>'</u>	7.57		0.10	priunis		29-3011-10	K3493694
L1788659-2 ARV-4							
Sampled By: LAURA on 22-JUN-16 @ 13:20							
Matrix: EFF BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
Toluene	<0.0010		0.0010	mg/L		29-JUN-16	R3495638
Ethyl benzene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
o-Xylene	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
m+p-Xylenes	<0.00050		0.00050	mg/L		29-JUN-16	R3495638
F1 (C6-C10)	<0.10		0.10	mg/L		29-JUN-16	R3495638
Surrogate: 4-Bromofluorobenzene (SS)	98.0		70-130	%		29-JUN-16	R3495638
CCME PHC F2-F4 in Water							
F2 (C10-C16)	<0.10		0.10	mg/L	30-JUN-16	30-JUN-16	R3495489
F3 (C16-C34)	0.28		0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
F4 (C34-C50)	<0.25		0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
Surrogate: 2-Bromobenzotrifluoride	102.7		60-140	%	30-JUN-16	30-JUN-16	R3495489
CCME Total Hydrocarbons	0.40		0.40			05 1111 40	
F1-BTEX	<0.10		0.10	mg/L		05-JUL-16	
F2-Naphth F3-PAH	<0.10		0.10	mg/L		05-JUL-16 05-JUL-16	
Total Hydrocarbons (C6-C50)	0.28 <0.38		0.25 0.38	mg/L mg/L		05-JUL-16	
Sum of Xylene Isomer Concentrations	<0.36		0.36	IIIg/L		03-30L-10	
Xylenes (Total)	<0.0015		0.0015	mg/L		04-JUL-16	
, ,				3			
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthylene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Acridine	0.000056		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(h);iftuoranthene	<0.000050		0.0000050	mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Benzo(b&j)fluoranthene Benzo(g,h,i)perylene	<0.000010 <0.000020		0.000010	mg/L mg/l	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277 R3496277
Benzo(k)fluoranthene	<0.000020		0.000020	mg/L mg/L	28-JUN-16	30-JUN-16	R3496277
Chrysene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Dibenzo(a,h)anthracene	<0.000050		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluoranthene	<0.000020		0.000000	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluorene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Naphthalene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Phenanthrene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Quinoline	0.000022	EMPC	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1788659-2 ARV-4							
Sampled By: LAURA on 22-JUN-16 @ 13:20							
Matrix: EFF							
Polyaromatic Hydrocarbons (PAHs) B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acenaphthene d10	99.7		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acridine d9	103.5		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Chrysene d12	101.8		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Naphthalene d8	102.3		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Phenanthrene d10	101.6		40-130	%	28-JUN-16	30-JUN-16	R3496277
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	203		1.2	mg/L		04-JUL-16	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		04-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		04-JUL-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	167		1.0	mg/L		29-JUN-16	R3493894
Ammonia by colour Ammonia, Total (as N)	17.0		2.0	mg/L		28-JUN-16	R3492031
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	15.4		6.0	mg/L		24-JUN-16	R3492952
Carbonaceous BOD							
BOD Carbonaceous Chloride in Water by IC	14.0		6.0	mg/L		24-JUN-16	R3492952
Chloride (CI) Conductivity	188		2.5	mg/L		30-JUN-16	R3496234
Conductivity Fecal Coliform	968		1.0	umhos/cm		29-JUN-16	R3493894
Fecal Coliforms Hardness Calculated	93	PEHT	3	MPN/100mL		24-JUN-16	R3493282
Hardness (as CaCO3) Mercury Total	124		0.30	mg/L		29-JUN-16	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	27-JUN-16	27-JUN-16	R3490656
Nitrate in Water by IC Nitrate (as N)	<0.10	DLM	0.10	mg/L		30-JUN-16	R3496234
Nitrate+Nitrite Nitrate and Nitrite as N	<0.11		0.11	mg/L		05-JUL-16	
Nitrite in Water by IC Nitrite (as N)	<0.050	DLM	0.050	mg/L		30-JUN-16	R3496234
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		27-JUN-16	R3491620
Phenol (4AAP) Phenols (4AAP)	0.0015		0.0010	mg/L		29-JUN-16	R3492703
Phosphorus, Total Phosphorus (P)-Total	5.15		0.050	mg/L		07-JUL-16	R3498236
Sulfate in Water by IC Sulfate (SO4)	7.2	DLM	1.5	mg/L		30-JUN-16	R3496234
Total Metals by ICP-MS	1.2		1.5	illy/L		00 0014-10	110730204
Aluminum (Al)-Total	0.0818		0.0050	mg/L	28-JUN-16	28-JUN-16	R3491764
Arsenic (As)-Total	0.00647		0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Cadmium (Cd)-Total	0.000027		0.000010	mg/L	28-JUN-16	28-JUN-16	R3491764
Calcium (Ca)-Total	23.1		0.10	mg/L	28-JUN-16	28-JUN-16	R3491764
Chromium (Cr)-Total Cobalt (Co)-Total	<0.0010 0.00286		0.0010 0.00020	mg/L mg/L	28-JUN-16 28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Gobalt (Go)-Total	0.00200		0.00020	IIIg/L	20-JUIN- 10	20-JUN-10	N3491704

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

Sample Details/Parameters	Result	Qualifier* D.L.	Units	Extracted	Analyzed	Batch
L1788659-2 ARV-4						
Sampled By: LAURA on 22-JUN-16 @ 13:20						
Matrix: EFF						
Total Metals by ICP-MS Copper (Cu)-Total	0.00843	0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Iron (Fe)-Total	4.04	0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Lead (Pb)-Total	0.000452	0.000090	mg/L	28-JUN-16	28-JUN-16	R3491764
Magnesium (Mg)-Total	16.1	0.010	mg/L	28-JUN-16	28-JUN-16	R3491764
Manganese (Mn)-Total	0.550	0.00030	mg/L	28-JUN-16	28-JUN-16	R3491764
Nickel (Ni)-Total	0.0067	0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Potassium (K)-Total	21.3	0.020	mg/L	28-JUN-16	28-JUN-16	R3491764
Sodium (Na)-Total	111	0.030	mg/L	28-JUN-16	28-JUN-16	R3491764
Zinc (Zn)-Total	0.0054	0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Total Organic Carbon by Combustion						
Total Organic Carbon	26.0	0.50	mg/L		28-JUN-16	R3491831
Total Suspended Solids						
Total Suspended Solids	30.0	5.0	mg/L		27-JUN-16	R3491105
pH	7.40	0.40	nLl		20 11 14 40	D2400004
pH	7.16	0.10	pH units		29-JUN-16	R3493894
L1788659-3 ARV-5						
Sampled By: LAURA on 22-JUN-16 @ 14:09						
Matrix: EFF						
BTEX plus F1-F4						
BTX plus F1 by GCMS	0.00050	0.00050			00 11 151 40	D0 405000
Benzene	<0.00050	0.00050	mg/L		29-JUN-16	R3495638
Toluene Ethyl benzene	<0.0010	0.0010	mg/L		29-JUN-16 29-JUN-16	R3495638
o-Xylene	<0.00050 <0.00050	0.00050 0.00050	mg/L mg/L		29-JUN-16 29-JUN-16	R3495638 R3495638
m+p-Xylenes	<0.00050	0.00050	mg/L		29-JUN-16	R3495638
F1 (C6-C10)	<0.10	0.00030	mg/L		29-JUN-16	R3495638
Surrogate: 4-Bromofluorobenzene (SS)	97.0	70-130	%		29-JUN-16	R3495638
CCME PHC F2-F4 in Water	07.0	10.00	,,,		20 00.1 10	11010000
F2 (C10-C16)	<0.10	0.10	mg/L	30-JUN-16	30-JUN-16	R3495489
F3 (C16-C34)	<0.25	0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
F4 (C34-C50)	<0.25	0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
Surrogate: 2-Bromobenzotrifluoride	124.7	60-140	%	30-JUN-16	30-JUN-16	R3495489
CCME Total Hydrocarbons						
F1-BTEX	<0.10	0.10	mg/L		05-JUL-16	
F2-Naphth	<0.10	0.10	mg/L		05-JUL-16	
F3-PAH	<0.25	0.25	mg/L		05-JUL-16	
Total Hydrocarbons (C6-C50)	<0.38	0.38	mg/L		05-JUL-16	
Sum of Xylene Isomer Concentrations Xylenes (Total)	<0.0015	0.0015	mg/L		04-JUL-16	
Ayionos (Total)	<0.0015	0.0015	illy/L		04-JUL-10	
Polyaromatic Hydrocarbons (PAHs)						
1-Methyl Naphthalene	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
2-Methyl Naphthalene	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthene	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthylene	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Anthracene	<0.000010	0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Acridine	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)anthracene	<0.000010	0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)pyrene	<0.000050	0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(b&j)fluoranthene	<0.000010	0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(g,h,i)perylene	<0.000020	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1788659-3 ARV-5							
L1788659-3 ARV-5 Sampled By: LAURA on 22-JUN-16 @ 14:09							
Polyaromatic Hydrocarbons (PAHs) Benzo(k)fluoranthene	<0.00010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Chrysene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	-	28-JUN-16	30-JUN-16	R3496277
Fluoranthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluorene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Naphthalene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Phenanthrene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Quinoline	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
B(a)P Total Potency Equivalent Surrogate: Acenaphthene d10	<0.000030 91.5		0.000030 40-130	mg/L %	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277 R3496277
Surrogate: Acertapritierie d 10 Surrogate: Acridine d9	91.5		40-130	%	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Surrogate: Chrysene d12	96.1		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Naphthalene d8	93.2		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Phenanthrene d10	92.7		40-130	%	28-JUN-16	30-JUN-16	R3496277
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	38.4		1.2	mg/L		04-JUL-16	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		04-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		04-JUL-16	
Alkalinity, Total (as CaCO3)	\(\cdot\).54		0.54	IIIg/L		04 00L 10	
Alkalinity, Total (as CaCO3)	31.5		1.0	mg/L		29-JUN-16	R3493894
Ammonia by colour							
Ammonia, Total (as N)	<0.010		0.010	mg/L		27-JUN-16	R3491152
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	2.3		2.0	mg/L		24-JUN-16	R3492952
Carbonaceous BOD BOD Carbonaceous	<2.0		2.0	ma/l		24-JUN-16	R3492952
Chloride in Water by IC	<2.0		2.0	mg/L		24-JUN-10	R3492952
Chloride (Cl)	94.5		0.50	mg/L		30-JUN-16	R3496234
Conductivity				J -		· · -	
Conductivity	386		1.0	umhos/cm		29-JUN-16	R3493894
Fecal Coliform							
Fecal Coliforms	<3	PEHT	3	MPN/100mL		24-JUN-16	R3493282
Hardness Calculated Hardness (as CaCO3)	64.3		0.20	ma/l		20 1110 46	
Mercury Total	64.3		0.30	mg/L		29-JUN-16	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	27-JUN-16	27-JUN-16	R3490656
Nitrate in Water by IC				<i>y</i> –			
Nitrate (as N)	<0.020		0.020	mg/L		30-JUN-16	R3496234
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		05-JUL-16	
Nitrite in Water by IC	0.040		0.040			00 1111 40	D0400004
Nitrite (as N)	<0.010		0.010	mg/L		30-JUN-16	R3496234
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		27-JUN-16	R3491620
Phenol (4AAP)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		5.0	9, 2		2, 3014-10	1.0-01020
Phenols (4AAP)	<0.0010		0.0010	mg/L		29-JUN-16	R3492703
Phosphorus, Total							
-							

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

Sulfate in Water by IC Sulfate in Water by IC Sulfate (SO4) 7.51 0.30 mg/L 30-JUN-16 R349 Aluminum (Al)-Total 0.352 0.0050 mg/L 28-JUN-16 28-JUN-16 28-JUN-16 28-JUN-16 R349 Arsenic (As)-Total 0.000010 0.000010 mg/L 28-JUN-16 28-JUN-16 R349 Cadimim (Cd)-Total 0.000010 0.00010 mg/L 28-JUN-16 28-JUN-16 R349 Chromium (Cd)-Total 0.00010 0.00010 mg/L 28-JUN-16 28-JUN-16 R349 Chromium (Cd)-Total 0.00010 0.00010 mg/L 28-JUN-16 28-JUN-16 R349 Chromium (Cd)-Total 0.00040 0.00020 mg/L 28-JUN-16 28-JUN-16 R349 Copper (Cu)-Total 0.00043 0.00020 mg/L 28-JUN-16 28-JUN-16 R349 Lad (Pb)-Total 0.00043 0.000020 mg/L 28-JUN-16 28-JUN-16 R349 Lad (Pb)-Total 0.00043 0.000030 mg/L 28-JUN-16 28-JUN-16 R349 Lad (Pb)-Total 0.00043 0.000030 mg/L 28-JUN-16 28-JUN-16 R349 Magnesium (Mg)-Total 0.144 0.00030 mg/L 28-JUN-16 28-JUN-16 R349 Magnesium (Mg)-Total 0.144 0.00030 mg/L 28-JUN-16 28-JUN-16 R349	Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
Sampled By: LAURA on 22-JUN-16 @ 14-09 Matrix:	I 1788659-3 ARV-5							
Matrix: EFF								
Phosphorus (P)-Total	, ,							
Phosphorus (P)-Total 0.060 0.010 mg/L 07-JUL-16 R349 Sulfate in Mater by (C Sulfate (SO4) 7.51 0.30 mg/L 30-JUN-16 R349 R								
Sulfate (SOA) 7.51		0.060		0.010	ma/L		07-JUL-16	R3498236
Sulfate (SO4) 7.51		0.000		0.010	9/ =		0.002.0	110100200
Aluminum (Al)-Total 0.352 0.0050 mg/L 28-JUN-16 R349 R349		7.51		0.30	mg/L		30-JUN-16	R3496234
Arsenic (As)-Total 0.00051 0.00020 mg/L 28-JUN-16 28-JUN-16 R349	Total Metals by ICP-MS							
Cadimum (Cd)-Total < 0,000010 0,000010 mg/L 28-JUN-16 28-JUN-16 R349 Calcium (Ca)-Total 11.7 0.10 mg/L 28-JUN-16 28-JUN-16 R349 Cobalt (Co)-Total 0,00010 mg/L 28-JUN-16 28-JUN-16 R349 Cobalt (Co)-Total 0,000040 0,00020 mg/L 28-JUN-16 28-JUN-16 R349 Cobalt (Co)-Total 0,000040 0,00020 mg/L 28-JUN-16 28-JUN-16 R349 R34		0.352			_		28-JUN-16	R3491764
Calcium (Ca)-Total	, ,				_			R3491764
Chromium (Cr)-Total	, ,				_			R3491764
Cobatt (Co)-Total 0.00040	, ,				_			R3491764
Copper (Cu)-Total 10,00123 10,00020 mg/L 28-JUN-16 28-JUN-16 R349 10 (Fe)-Total 10,000439 10,000909 mg/L 28-JUN-16 28-JUN-1	` '				_			R3491764 R3491764
Iron (Fe)-Total	` '				_			R3491764
Lead (Pb)-Total					_			R3491764
Magnesium (Mg)-Total 8.54 0.010 mg/L 28-JUN-16 28-JUN-16 R349	, ,				_			R3491764
Nickel (Ni)-Total	Magnesium (Mg)-Total	8.54		0.010	_	28-JUN-16	28-JUN-16	R3491764
Potassium (K)-Total 3.33 0.020 mg/L 28-JUN-16 28-JUN-16 8349 28-JUN-16 28-JUN-16 8349 28-JUN-16 28-JUN-16 8349 3.33 0.030 mg/L 28-JUN-16 28-JUN-16 8349 3.33 0.030 mg/L 28-JUN-16 28-JUN-16 8349 3.33 0.030 mg/L 28-JUN-16 28-JUN-16 8349 3.33 3.33 0.030 mg/L 28-JUN-16 28-JUN-16 8349 3.33 3.33 0.030 mg/L 30-JUN-16 8349 3.33 3.33 0.030 mg/L 30-JUN-16 8349 3.33 3.33 0.030 mg/L 3.33 3.33 3.030 mg/L 3.33 3.33 3.030 mg/L 3.33 3.33 3.030 3.33 3.3	Manganese (Mn)-Total	0.144		0.00030	mg/L	28-JUN-16	28-JUN-16	R3491764
Sodium (Na)-Total 28-JUN-16 28-JUN-1	, ,				_			R3491764
Zinc (Zn)-Total Zinc (Zn)-	, ,				_			R3491764
Total Organic Carbon by Combustion Total Organic Carbon 7.46 0.50 mg/L 30-JUN-16 R349 Total Suspended Solids 124 5.0 mg/L 27-JUN-16 R349 pH pH pH 7.02 0.10 pH units 29-JUN-16 R349 L1788659-4 ARV-6 Sampled By: LAURA on 22-JUN-16 @ 14:23 Aurix: EFF BTX plus F1-F4 BTX plus F1-F4 BTX plus F1-F4 BTX plus F1-F4 BTX plus F1 by GCMS 80-29-JUN-16 R349 Benzene <0.00050 0.00050 mg/L 29-JUN-16 R349 Tolluene 0.0030 0.0010 mg/L 29-JUN-16 R349 Ethyl benzene 0.00614 0.00050 mg/L 29-JUN-16 R349 σ-Xylene 0.00614 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) 0.00897 0.00050 mg/L 29-JUN-16 R349 Surrogate: 4-Bromofluorobenzene (SS) 94.0 70-130 % 29-JUN-16 R349 CCME PTC-F4 in Water F2 (C10-C16) 0.12 0.10	· '				_			R3491764
Total Organic Carbon Total Suspended Solids Total Hydrocarbons		0.0098		0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Total Suspended Solids 124 5.0 mg/L 27-JUN-16 R349 pH pH 7.02 0.10 pH units 29-JUN-16 R349 L1788659-4 ARV-6 ARV-6 29-JUN-16 @ 14:23 29-JUN-16 @ 14:23 29-JUN-16 @ 14:23 Matrix: EFF BTEX plus F1-F4 BTX plus F1 by GCMS mg/L 29-JUN-16 R349 Benzene <0.0030 0.0010 mg/L 29-JUN-16 R349 0-Xylene 0.00240 0.00050 mg/L 29-JUN-16 R349 o-Xylenes 0.00897 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) <0.10 0.10 mg/L 29-JUN-16 R349 CCME PHC F2-F4 in Water F2 (C10-C16) 0.12 0.10 mg/L 30-JUN-16 R349 F3 (C16-C34) 0.69 0.25 mg/L 30-JUN-16 R349 F4 (C34-C50) 0.25 0.25 mg/L 30-JUN-16 R349 F4 (C34-C50) 0.69 0.25 mg/L 30-JUN-16 R349 CCME Total Hydrocarbons 94.1 60-140 %		7.46		0.50	mg/L		30-JUN-16	R3494858
pH pH 7.02 0.10 pH units 29-JUN-16 R349 L1788659-4 ARV-6 ARV-10-10 ARV								
pH 7.02 0.10 pH units 29-JUN-16 R349 L1788659-4 ARV-6 ARV-6 29-JUN-16 @ 14:23 R349 Matrix: EFF EFF BTX plus F1 by GCMS 29-JUN-16 R349 Benzene 0.0030 0.0010 mg/L 29-JUN-16 R349 Toluene 0.00240 0.00050 mg/L 29-JUN-16 R349 o-Xylene 0.00614 0.00050 mg/L 29-JUN-16 R349 m+p-Xylenes 0.00897 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) <0.10		124		5.0	mg/L		27-JUN-16	R3491105
Sampled By: LAURA on 22-JUN-16 @ 14:23 Matrix: EFF		7.02		0.10	pH units		29-JUN-16	R3493894
Matrix: EFF BTEX plus F1-F4 BTX plus F1 by GCMS Benzene <0.00050	L1788659-4 ARV-6							
BTEX plus F1-F4	Sampled By: LAURA on 22-JUN-16 @ 14:23							
BTX plus F1 by GCMS Benzene								
Benzene	-							
Ethyl benzene 0.00240 0.00050 mg/L 29-JUN-16 R349 o-Xylene 0.00614 0.00050 mg/L 29-JUN-16 R349 m+p-Xylenes 0.00897 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) <0.10		<0.00050		0.00050	mg/L		29-JUN-16	R3495638
o-Xylene 0.00614 0.00050 mg/L 29-JUN-16 R349 m+p-Xylenes 0.00897 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) <0.10	Toluene	0.0030		0.0010	mg/L		29-JUN-16	R3495638
m+p-Xylenes 0.00897 0.00050 mg/L 29-JUN-16 R349 F1 (C6-C10) 0.10 mg/L 29-JUN-16 R349 Surrogate: 4-Bromofluorobenzene (SS) 94.0 70-130 % 29-JUN-16 R349 CCME PHC F2-F4 in Water 0.12 0.10 mg/L 30-JUN-16 30-JUN-16 R349 F3 (C16-C34) 0.69 0.25 mg/L 30-JUN-16 30-JUN-16 R349 F4 (C34-C50) <0.25	Ethyl benzene	0.00240		0.00050	mg/L		29-JUN-16	R3495638
F1 (C6-C10)	1	0.00614		0.00050	mg/L			R3495638
Surrogate: 4-Bromofluorobenzene (SS) 94.0 70-130 % 29-JUN-16 R349 CCME PHC F2-F4 in Water 0.12 0.10 mg/L 30-JUN-16 30-JUN-16 R349 F3 (C16-C34) 0.69 0.25 mg/L 30-JUN-16 30-JUN-16 R349 F4 (C34-C50) 0.25 0.25 mg/L 30-JUN-16 R349 Surrogate: 2-Bromobenzotrifluoride 94.1 60-140 % 30-JUN-16 R349 CCME Total Hydrocarbons 40.10 0.10 mg/L 05-JUL-16 05-JUL-16 05-JUL-16 F2-Naphth 0.69 0.25 mg/L 05-JUL-16 05-JUL-16 05-JUL-16 F3-PAH 0.69 0.25 mg/L 05-JUL-16 05-JUL-16 05-JUL-16 Sum of Xylene Isomer Concentrations 0.81 0.38 mg/L 05-JUL-16 05-JUL-16					_			R3495638
CCME PHC F2-F4 in Water 0.12 0.10 mg/L 30-JUN-16 30-JUN-16 R349 F3 (C16-C34) 0.69 0.25 mg/L 30-JUN-16 30-JUN-16 R349 F4 (C34-C50) <0.25	,							R3495638
F2 (C10-C16) 0.12 0.10 mg/L 30-JUN-16 30-JUN-16 R349 F3 (C16-C34) 0.69 0.25 mg/L 30-JUN-16 30-JUN-16 R349 F4 (C34-C50) 0.25 0.25 mg/L 30-JUN-16 R349 Surrogate: 2-Bromobenzotrifluoride 94.1 60-140 % 30-JUN-16 R349 CCME Total Hydrocarbons F1-BTEX <0.10		94.0		70-130	%		29-JUN-16	R3495638
F4 (C34-C50) <0.25		0.12		0.10	mg/L	30-JUN-16	30-JUN-16	R3495489
Surrogate: 2-Bromobenzotrifluoride 94.1 60-140 % 30-JUN-16 R349 CCME Total Hydrocarbons COMETOTAL Hydrocarbons COMETOTAL Hydrocarbons COMETOTAL HYDROCARBONS COMETOTAL HYDROCARBONS R349 F1-BTEX COMETOTAL HYDROCARBONS COMETOTAL H	F3 (C16-C34)	0.69		0.25	mg/L	30-JUN-16	30-JUN-16	R3495489
CCME Total Hydrocarbons </td <td>, , ,</td> <td></td> <td></td> <td>0.25</td> <td>mg/L</td> <td></td> <td></td> <td>R3495489</td>	, , ,			0.25	mg/L			R3495489
F1-BTEX <0.10	_	94.1		60-140	%	30-JUN-16	30-JUN-16	R3495489
F2-Naphth 0.12 0.10 mg/L 05-JUL-16 F3-PAH 0.69 0.25 mg/L 05-JUL-16 Total Hydrocarbons (C6-C50) 0.81 0.38 mg/L 05-JUL-16 Sum of Xylene Isomer Concentrations 0.38 mg/L 05-JUL-16		-0.10		0.10	ma/l		05-1111-16	
F3-PAH 0.69 0.25 mg/L 05-JUL-16 Total Hydrocarbons (C6-C50) 0.81 0.38 mg/L 05-JUL-16 Sum of Xylene Isomer Concentrations 0.38 mg/L 05-JUL-16					_			
Total Hydrocarbons (C6-C50) 0.81 0.38 mg/L 05-JUL-16 Sum of Xylene Isomer Concentrations					_			
Sum of Xylene Isomer Concentrations	Total Hydrocarbons (C6-C50)				_			
Xylenes (Total) 0.0151 0.0015 mg/L 04-JUL-16								
	Xylenes (Total)	0.0151		0.0015	mg/L		04-JUL-16	
Polyaromatic Hydrocarbons (PAHs)	Polyaromatic Hydrocarbons (PAHs)							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14709650 4 ADV C							
L1788659-4 ARV-6 Sampled By: LAURA on 22-JUN-16 @ 14:23							
Matrix: EFF							
Polyaromatic Hydrocarbons (PAHs) 1-Methyl Naphthalene	0.000337		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
2-Methyl Naphthalene	0.000417		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthylene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Acridine	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	28-JUN-16 28-JUN-16	30-JUN-16	R3496277
Benzo(g,h,i)perylene Benzo(k)fluoranthene	<0.000020		0.000020	mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Chrysene	<0.000010 <0.000020		0.000010 0.000020	mg/L mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277 R3496277
Dibenzo(a,h)anthracene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluoranthene	<0.000020		0.0000030	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluorene	0.000084		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Naphthalene	0.000451		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Phenanthrene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Pyrene	0.000011	EMPC	0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Quinoline	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acenaphthene d10	94.8		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acridine d9	95.2		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Chrysene d12	105.9		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Naphthalene d8	84.1		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Phenanthrene d10	93.5		40-130	%	28-JUN-16	30-JUN-16	R3496277
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	31.0		1.2	mg/L		04-JUL-16	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		04-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		04-JUL-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	25.4		1.0	mg/L		29-JUN-16	R3493894
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		27-JUN-16	R3491152
Biochemical Oxygen Demand (BOD)	10.010		0.010	9, -			
Biochemical Oxygen Demand	3.1		2.0	mg/L		25-JUN-16	R3495890
Carbonaceous BOD BOD Carbonaceous	2.3		2.0	mg/L		25-JUN-16	R3495890
Chloride in Water by IC Chloride (CI)	112		0.50	mg/L		30-JUN-16	R3496234
Conductivity Conductivity	427		1.0	umhos/cm		29-JUN-16	R3493894
Fecal Coliform Fecal Coliforms		PEHT		MPN/100mL			
Hardness Calculated	<3	FEMI	3			24-JUN-16	R3493282
Hardness (as CaCO3) Mercury Total	139		0.30	mg/L		29-JUN-16	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	27-JUN-16	27-JUN-16	R3490656
Nitrate in Water by IC							

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

L1788659-4 ARV-6 Sampled By: LAURA on 22-JUN-16 @ 14:23 Matrix: EFF Nitrate in Water by IC Nitrate (as N)	R3496234 R3496234 R3492272 R3492703
Sampled By: LAURA on 22-JUN-16 @ 14:23 Matrix: EFF Nitrate in Water by IC 0.020 0.020 mg/L 30-JUN-16 Nitrate+Nitrite 0.070 0.070 mg/L 05-JUL-16 Nitrite in Water by IC 0.010 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric 0.010 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3496234 R3492272
Matrix: EFF Nitrate in Water by IC <0.020 0.020 mg/L 30-JUN-16 Nitrate+Nitrite 0.070 mg/L 05-JUL-16 Nitrite in Water by IC 0.010 mg/L 30-JUN-16 Nitrite (as N) <0.010 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3496234 R3492272
Nitrate in Water by IC <0.020 0.020 mg/L 30-JUN-16 Nitrate+Nitrite 0.070 mg/L 30-JUN-16 Nitrate and Nitrite as N <0.070 0.070 mg/L 05-JUL-16 Nitrite in Water by IC 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric 0il and Grease <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3496234 R3492272
Nitrate (as N) <0.020	R3496234 R3492272
Nitrate+Nitrite <0.070 0.070 mg/L 05-JUL-16 Nitrite in Water by IC 0.010 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3496234 R3492272
Nitrate and Nitrite as N <0.070 0.070 mg/L 05-JUL-16 Nitrite in Water by IC 0.010 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric <5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3492272
Nitrite in Water by IC <0.010 0.010 mg/L 30-JUN-16 Oil & Grease - Gravimetric <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3492272
Oil & Grease - Gravimetric <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3492272
Oil and Grease <5.0 5.0 mg/L 28-JUN-16 Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	
Phenol (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	
Phenols (4AAP) 0.0031 0.0010 mg/L 29-JUN-16	R3492703
	R3492703
Phosphorus, Total 0.122 0.010 mg/L 07-JUL-16	R3498236
Sulfate in Water by IC	
Sulfate (SO4) 0.46 0.30 mg/L 30-JUN-16	R3496234
Total Metals by ICP-MS	
Aluminum (Al)-Total 0.120 0.0050 mg/L 28-JUN-16 28-JUN-16	R3491764
Arsenic (As)-Total 0.00052 0.00020 mg/L 28-JUN-16 28-JUN-16	R3491764
Cadmium (Cd)-Total 0.000032 0.000010 mg/L 28-JUN-16 28-JUN-16 Calcium (Ca)-Total 45.8 0.10 mg/L 28-JUN-16 28-JUN-16	R3491764 R3491764
Calcium (Ca)-Total 45.8 0.10 mg/L 28-JUN-16 28-JUN-16 Chromium (Cr)-Total <0.0010 mg/L 28-JUN-16 28-JUN-	R3491764 R3491764
Cobalt (Co)-Total 0.00194 0.00020 mg/L 28-JUN-16 28-JUN-16	R3491764
Copper (Cu)-Total 0.00114 0.00020 mg/L 28-JUN-16 28-JUN-16	R3491764
Iron (Fe)-Total 6.73 0.010 mg/L 28-JUN-16 28-JUN-16	R3491764
Lead (Pb)-Total 0.000220 0.000090 mg/L 28-JUN-16 28-JUN-16	R3491764
Magnesium (Mg)-Total 6.08 0.010 mg/L 28-JUN-16 28-JUN-16	R3491764
Manganese (Mn)-Total 1.14 0.00030 mg/L 28-JUN-16 28-JUN-16	R3491764
Nickel (Ni)-Total <0.0020 0.0020 mg/L 28-JUN-16 28-JUN-16	R3491764
Potassium (K)-Total 3.72 0.020 mg/L 28-JUN-16 28-JUN-16	R3491764
Sodium (Na)-Total 10.4 0.030 mg/L 28-JUN-16 28-JUN-16	R3491764
Zinc (Zn)-Total 0.0020 mg/L 28-JUN-16 28-JUN-16 Total Organic Carbon by Combustion	R3491764
Total Organic Carbon by Combustion Total Organic Carbon 8.54 0.50 mg/L 28-JUN-16	R3491831
Total Suspended Solids	
Total Suspended Solids 23.0 5.0 mg/L 27-JUN-16	R3491105
pH	
pH 6.56 0.10 pH units 29-JUN-16	R3493894
L1788659-5 OLD LAGOON	
Sampled By: LAURA on 22-JUN-16 @ 13:38	
Matrix: EFF	
BTEX plus F1-F4	
BTX plus F1 by GCMS Benzene <0.00050	D2405620
Benzene <0.00050 0.00050 mg/L 29-JUN-16 Toluene <0.0010 0.0010 mg/L 29-JUN-16	R3495638 R3495638
Tolderie <0.0010 0.0010 mg/L 29-30N-16	R3495638
o-Xylene	R3495638
m+p-Xylenes	R3495638
F1 (C6-C10) <0.10	R3495638
Surrogate: 4-Bromofluorobenzene (SS) 95.1 70-130 % 29-JUN-16	R3495638
CCME PHC F2-F4 in Water	
F2 (C10-C16) 0.12 0.10 mg/L 30-JUN-16 30-JUN-16	R3495489
F3 (C16-C34) 10.4 0.25 mg/L 30-JUN-16 30-JUN-16	R3495489
F4 (C34-C50) 0.27 0.25 mg/L 30-JUN-16 30-JUN-16	R3495489

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
1.47000F0 F							
L1788659-5 OLD LAGOON							
Sampled By: LAURA on 22-JUN-16 @ 13:38							
Matrix: EFF							
CCME PHC F2-F4 in Water				0.4	00 11 11 40	00 11 11 40	
Surrogate: 2-Bromobenzotrifluoride	95.2		60-140	%	30-JUN-16	30-JUN-16	R3495489
CCME Total Hydrocarbons F1-BTEX	-0.40		0.10	ma/l		05-JUL-16	
F2-Naphth	<0.10 0.12		0.10 0.10	mg/L mg/L		05-JUL-16	
F3-PAH	10.4		0.10	mg/L		05-JUL-16	
Total Hydrocarbons (C6-C50)	10.4		0.23	mg/L		05-JUL-16	
Sum of Xylene Isomer Concentrations	10.0		0.00	9, =		00 002 10	
Xylenes (Total)	<0.0015		0.0015	mg/L		04-JUL-16	
				, and the second			
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Acenaphthylene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Anthracene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Acridine	0.000052		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Benzo(a)anthracene	<0.000010		0.000010	mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	28-JUN-16 28-JUN-16		R3496277
Benzo(b&j)fluoranthene Benzo(g,h,i)perylene	<0.000010 <0.000020		0.000010 0.000020	mg/L mg/L	28-JUN-16 28-JUN-16	30-JUN-16 30-JUN-16	R3496277 R3496277
Benzo(k)fluoranthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Chrysene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Dibenzo(a,h)anthracene	<0.000050		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluoranthene	<0.000020		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Fluorene	0.000022		0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Naphthalene	<0.000050		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Phenanthrene	0.000066		0.000050	mg/L	28-JUN-16	30-JUN-16	R3496277
Pyrene	<0.000010		0.000010	mg/L	28-JUN-16	30-JUN-16	R3496277
Quinoline	0.000052	EMPC	0.000020	mg/L	28-JUN-16	30-JUN-16	R3496277
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acenaphthene d10	105.2		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Acridine d9	103.5		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Chrysene d12	107.2		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Naphthalene d8	102.6		40-130	%	28-JUN-16	30-JUN-16	R3496277
Surrogate: Phenanthrene d10 Nunavut WW Group 1	101.5		40-130	%	28-JUN-16	30-JUN-16	R3496277
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	115		1.2	mg/L		04-JUL-16	
Alkalinity, Carbonate				<i>g</i> , –			
Carbonate (CO3)	<0.60		0.60	mg/L		04-JUL-16	
Alkalinity, Hydroxide				•			
Hydroxide (OH)	<0.34		0.34	mg/L		04-JUL-16	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	93.9		1.0	mg/L		29-JUN-16	R3493894
Ammonia by colour							
Ammonia, Total (as N)	5.0		1.0	mg/L		27-JUN-16	R3491152
Biochemical Oxygen Demand (BOD)	00.5		0.0	m= ==/1		05 ILIN 40	D0405000
Biochemical Oxygen Demand	22.5		6.0	mg/L		25-JUN-16	R3495890
Carbonaceous BOD BOD Carbonaceous	12.0		6.0	mg/L		25-JUN-16	R3495890
Chloride in Water by IC	12.0		0.0	my/L		20 0014-10	179490090
Omorius in water by io	<u> </u>				<u> </u>		

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14700050 5 OLD 1400000							
L1788659-5 OLD LAGOON							
Sampled By: LAURA on 22-JUN-16 @ 13:38							
Matrix: EFF							
Chloride in Water by IC Chloride (Cl)	55.0		0.50	mg/L		30-JUN-16	R3496234
Conductivity							
Conductivity	374		1.0	umhos/cm		29-JUN-16	R3493894
Fecal Coliform Fecal Coliforms	4	PEHT	3	MPN/100mL		24-JUN-16	R3493282
Hardness Calculated Hardness (as CaCO3)	70.9		0.30	mg/L		29-JUN-16	
Mercury Total Mercury (Hg)-Total	0.000022		0.000020	mg/L	27-JUN-16	27-JUN-16	R3490656
Nitrate in Water by IC Nitrate (as N)	0.426		0.020	mg/L		30-JUN-16	R3496234
Nitrate+Nitrite Nitrate and Nitrite as N	0.507		0.070	mg/L		05-JUL-16	
Nitrite in Water by IC Nitrite (as N)	0.081		0.010	mg/L		30-JUN-16	R3496234
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		28-JUN-16	R3492272
Phenol (4AAP)							
Phenols (4AAP) Phosphorus, Total	0.0011		0.0010	mg/L		29-JUN-16	R3492703
Phosphorus (P)-Total Sulfate in Water by IC	1.63		0.010	mg/L		07-JUL-16	R3498236
Sulfate (SO4)	2.67		0.30	mg/L		30-JUN-16	R3496234
Total Metals by ICP-MS	0.440		0.0050	ma/l	28-JUN-16	28-JUN-16	D2404764
Aluminum (Al)-Total Arsenic (As)-Total	0.112 0.00168		0.0050 0.00020	mg/L	28-JUN-16 28-JUN-16	28-JUN-16 28-JUN-16	R3491764 R3491764
Cadmium (Cd)-Total	0.00168		0.00020	mg/L mg/L	28-JUN-16	28-JUN-16	R3491764
Calcium (Ca)-Total	16.8		0.000010	mg/L	28-JUN-16	28-JUN-16	R3491764
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	28-JUN-16	28-JUN-16	R3491764
Cobalt (Co)-Total	0.00050		0.0010	mg/L	28-JUN-16	28-JUN-16	R3491764
Copper (Cu)-Total	0.00030		0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Iron (Fe)-Total	0.899		0.00020	mg/L	28-JUN-16	28-JUN-16	R3491764
Lead (Pb)-Total	0.000423		0.000090	mg/L	28-JUN-16	28-JUN-16	R3491764
Magnesium (Mg)-Total	7.04		0.010	mg/L	28-JUN-16	28-JUN-16	R3491764
Manganese (Mn)-Total	0.138		0.00030	mg/L	28-JUN-16	28-JUN-16	R3491764
Nickel (Ni)-Total	0.0027		0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Potassium (K)-Total	10.0		0.020	mg/L	28-JUN-16	28-JUN-16	R3491764
Sodium (Na)-Total	36.5		0.030	mg/L	28-JUN-16	28-JUN-16	R3491764
Zinc (Zn)-Total	0.0074		0.0020	mg/L	28-JUN-16	28-JUN-16	R3491764
Total Organic Carbon by Combustion Total Organic Carbon	18.9		0.50	mg/L		28-JUN-16	R3491831
Total Suspended Solids Total Suspended Solids	44.0		5.0	mg/L		27-JUN-16	R3491105
pH	77.0		0.0	9, _		2. 0011-10	1.0-01100
рН	8.05		0.10	pH units		29-JUN-16	R3493894

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

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Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
EMPC	Estimated Maximum Possible Concentration. Parameter detected but didn't meet all criteria for positive identification.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHT	Parameter Exceeded Recommended Holding Time Prior to Analysis

Test Method References:

Tool mounda monorones	· · ·			
ALS Test Code	Matrix	Test Description	Method Reference**	
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION	

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.

ALK-HCO3HCO3-CALC- Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L

ALK-OHOH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO3) APHA 2320B

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

BOD-CBOD-WP Water Carbonaceous BOD APHA 5210 B

Samples are diluted and seeded, have TCMP added to inhibit nitrogenous demands, and then are incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BOD-WP Water Biochemical Oxygen Demand (BOD) APHA 5210 B

Samples are diluted and seeded and then incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BTEXS+F1-HSMS-WP Water BTX plus F1 by GCMS EPA 8260C / EPA 5021A

The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transfered into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

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.

CL-IC-N-WP Water Chloride in Water by IC EPA 300.1 (mod)

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

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-TOT-WP Water Hardness Calculated HARDNESS CALCULATED

F1-F4-CALC-WP Water CCME Total Hydrocarbons CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

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Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
- 3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
- 3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
- 4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F2-F4-FID-WP Water CCME PHC F2-F4 in Water EPA 3511

Petroleum hydrocarbons in water are determined by liquid-liquid micro-scale solvent extraction using a reciprocal shaker extraction apparatus prior to capillary column gas chromatography with flame ionization detection (GC-FID) analysis.

FC-MPN-WP Water Fecal Coliform APHA 9221E

The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. The results of examination of replicate tubes and dilutions of a sample are reported after confirmations specific to total coliform, fecal coliform and E. coli are performed. Results are reported in MPN/100 mL for water and MPN/gram for food and solid samples.

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-T-L-MS-WP Water Total Metals by ICP-MS APHA 3030E/EPA 6020A-TL

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

NH3-COL-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-N-WP Water Nitrite in Water by IC EPA 300.1 (mod)

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

NO3-IC-N-WP Water Nitrate in Water by IC EPA 300.1 (mod)

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

OG-GRAV-WP Water Oil & Grease - Gravimetric EPA 1664 (modified)

Water samples are acidified and extracted with hexane; the hexane extract is collected in a pre-weighed vial. The solvent is evaporated and Total Oil &

Grease is determined from the weight of the residue in the vial.

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 Phosphorus is determined colourimetrically after

persulphate digestion of the sample.

PAH,PANH-WP Water Polyaromatic Hydrocarbons (PAHs) EPA SW 846/8270-GC/MS

Water is spiked with a surrogate spike mix and extracted using solvent extraction techniques. Analysis is performed by GC/MS in the selected ion

monitoring (SIM) mode.

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.

PHENOLS-4AAP-WT Water Phenol (4AAP) EPA 9066

An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a

red complex which is measured colorimetrically.

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

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

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

L1788659 CONTD....

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Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.

XYLENES-SUM-CALC- Water Sum of Xylene Isomer Concentrations CALCULATED RESULT

WP

Total xylenes represents the sum of o-xylene and m&p-xylene.

** 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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, 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.

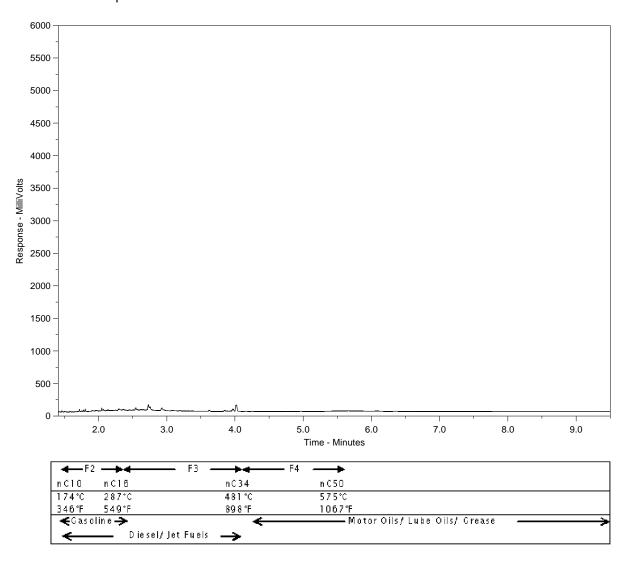
Test results reported relate only to the samples as received by the laboratory.

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.



ALS Sample ID: L1788659-1 Client Sample ID: ARV-2



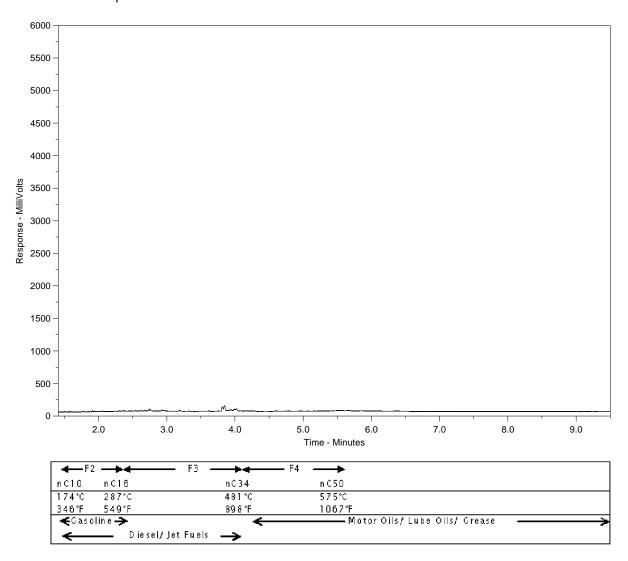
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1788659-2 Client Sample ID: ARV-4



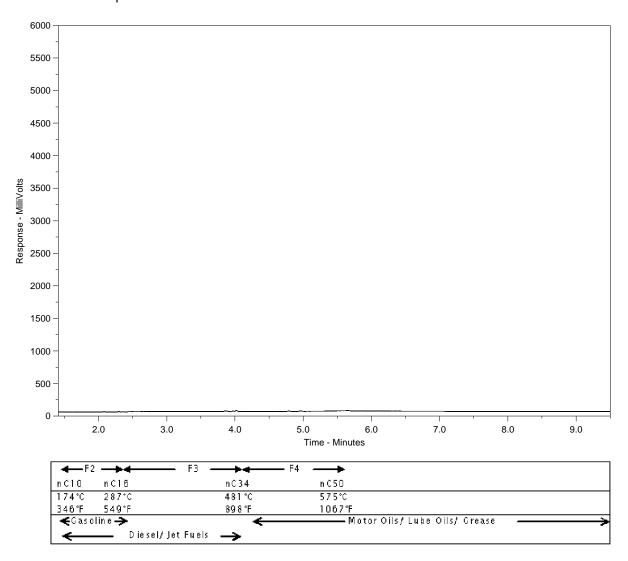
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1788659-3 Client Sample ID: ARV-5



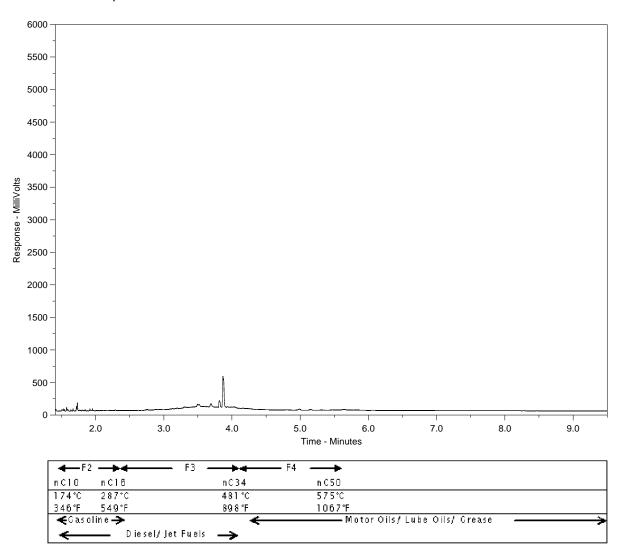
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1788659-4 Client Sample ID: ARV-6



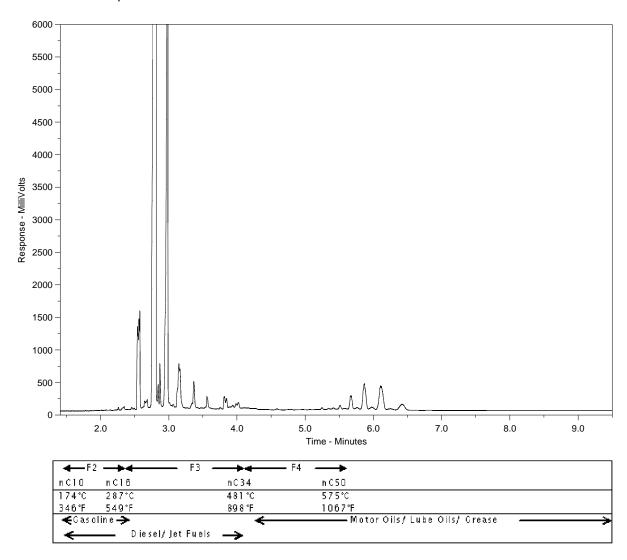
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1788659-5 Client Sample ID: OLD LAGOON



The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



Chain of Custody (COC) / Analytical Request Form

L1788659-COFC

tions as specified on the back page of the white - report copy

COC Number:	15 -	5/	1	144

Page / of

Canada Toll Free: 1 800 668 9878

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 Condi

1. If any water samples are taken from a Regulated Drinking Water (DW). System, please submit using an Authorized DW COC form

Contact and company name below will appear on the final report Report Format / Distribution P TATs with your AM - surcharges will apply Report To Regular [R] Ständard TAT if received by 3 pm - business days - no surcharges apply Select Report Format: PDF EXCEL EDD (DIGITAL) Company: TYES T NO Quality Control (QC) Report with Report 4 day [P4] 1 Business day [E1] Contact: Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Phone: Same Day, Weekend or Statutory EMAIL MAIL FAX holiday [E0] Select Distribution: Company address below will appear on the final report 2 day [P2] Email 1 or Fax arriatsage @ 911019.com Date and Time Required for all E&P TATs: Street: ARNIAT, NU For tests that can not be performed according to the service level suiscited, you will be contacted. City/Province: Analysis Request Email 3 Postal Code: Same as Report To YES NO Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Invoice To YES ANO EMAIL MAIL FAX Copy of Invoice with Report Select Invoice Distribution: Email 1 or Fax Company: Email 2 Contact: Project Information Oil and Gas Required Fields (client use) ALS Account # / Quote #: AFE/Cost Center: PO# Job#: Major/Minor Code: Routing Code: PO / AFE: Requisitioner: SD: Location: ALS Lab Work Order # (lab use only) ALŞ Contact: Sampler: aure. Sample Identification and/or Coordinates Date Time ALS Sample # Sample Type (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples' (client use) (electronic COC only) Frozen SIF Observations No Are samples taken from a Regulated DW System? П ice Packs Ice Cubes Custody seal intact Yes YES NO Cooling Initiated Are samples for human drinking water use? INITIAL COOLER TEMPERATURES °C -----------------FINAL COOLER TEMPERATURES °C YES NO SHIPMENT RELEASE (client use) FINAL SHIPMENT RECEPTION (lab use only) INITIAL SHIPMENT RECEPTION (lab use only) Received by: Time: 991. Released by: Received by: Date: Time: Time: QUERCY OCTOBER 2015 FROM



Hamlet of Arviat

ATTN: STEVE ENGLAND

PO Box 150

Arviat NU XOC 0E0

Date Received: 14-JUL-16

Report Date: 26-JUL-16 09:48 (MT)

Version: FINAL

Client Phone: 867-857-2841

Certificate of Analysis

Lab Work Order #: L1798407
Project P.O. #: NOT SUBMITTED

Job Reference: C of C Numbers: Legal Site Desc:

Whe

Hua Wo

Chemistry Laboratory Manager

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

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

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



Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14700407.4							
L1798407-1 ARV-2							
Sampled By: LAURA on 12-JUL-16 @ 13:40							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS Benzene	<0.00050		0.00050	mg/L		20-JUL-16	R3509938
Toluene	<0.0010		0.0010	mg/L		20-JUL-16	R3509938
Ethyl benzene	<0.00050		0.00050	mg/L		20-JUL-16	R3509938
o-Xylene	< 0.00050		0.00050	mg/L		20-JUL-16	R3509938
m+p-Xylenes	< 0.00050		0.00050	mg/L		20-JUL-16	R3509938
F1 (C6-C10)	<0.10		0.10	mg/L		20-JUL-16	R3509938
Surrogate: 4-Bromofluorobenzene (SS)	80.9		70-130	%		20-JUL-16	R3509938
CCME PHC F2-F4 in Water							
F2 (C10-C16)	0.17		0.10	mg/L	15-JUL-16	15-JUL-16	R3504549
F3 (C16-C34)	0.47		0.25	mg/L	15-JUL-16	15-JUL-16	R3504549
F4 (C34-C50) Surrogate: 2-Bromobenzotrifluoride	<0.25		0.25	mg/L %	15-JUL-16 15-JUL-16	15-JUL-16 15-JUL-16	R3504549 R3504549
CCME Total Hydrocarbons	113.2		60-140	70	10-JUL-10	10-JUL-10	K3004549
F1-BTEX	<0.10		0.10	mg/L		22-JUL-16	
F2-Naphth	0.17		0.10	mg/L		22-JUL-16	
F3-PAH	0.47		0.25	mg/L		22-JUL-16	
Total Hydrocarbons (C6-C50)	0.65		0.38	mg/L		22-JUL-16	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.0015		0.0015	mg/L		22-JUL-16	
Polyaromatic Hydrocarbons (PAHs)		DI M		"	45 1111 40	40 1111 40	
1-Methyl Naphthalene	<0.00020	DLM DLM	0.00020	mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
2-Methyl Naphthalene Acenaphthene	<0.00020 <0.00020	DLM	0.00020 0.00020	mg/L mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759 R3506759
Acenaphthylene	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
Anthracene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Acridine	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)anthracene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)pyrene	< 0.000050	DLM	0.000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(b&j)fluoranthene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(g,h,i)perylene	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(k)fluoranthene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Chrysene	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
Dibenzo(a,h)anthracene Fluoranthene	<0.000050	DLM DLM	0.000050	mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Fluorene	<0.00020 <0.00020	DLM	0.00020 0.00020	mg/L mg/L	15-JUL-16	18-JUL-16	R3506759 R3506759
Indeno(1,2,3-cd)pyrene	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
Naphthalene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Phenanthrene	<0.00050	DLM	0.00050	mg/L	15-JUL-16	18-JUL-16	R3506759
Pyrene	<0.00010	DLM	0.00010	mg/L	15-JUL-16	18-JUL-16	R3506759
Quinoline	<0.00020	DLM	0.00020	mg/L	15-JUL-16	18-JUL-16	R3506759
B(a)P Total Potency Equivalent	< 0.000072		0.000072	mg/L	15-JUL-16	18-JUL-16	R3506759
Surrogate: Acenaphthene d10	88.1		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Acridine d9	100.9		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Chrysene d12	100.4		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Naphthalene d8 Surrogate: Phenanthrene d10	91.7		40-130	% %	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Nunavut WW Group 1	100.9		40-130	7/0	10-JUL-10	10-JUL-10	R3506759
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	429		1.2	mg/L		20-JUL-16	
Alkalinity, Carbonate							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
1 4709 407 4 A D V 2							
L1798407-1 ARV-2 Sampled By: LAURA on 12-JUL-16 @ 13:40							
Matrix: EFF							
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		20-JUL-16	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		20-JUL-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	352		1.0	mg/L		18-JUL-16	R3507037
Ammonia by colour							
Ammonia, Total (as N)	6.16		0.20	mg/L		21-JUL-16	R3509741
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	31.8		6.0	mg/L		15-JUL-16	R3509408
Carbonaceous BOD	01.0		0.0	1119/12		10 002 10	113303400
BOD Carbonaceous	21.4		6.0	mg/L		15-JUL-16	R3509408
Chloride in Water by IC	450		10	ma/l		15-JUL-16	Daeueooa
Chloride (CI) Conductivity	450		10	mg/L		10-JUL-10	R3505903
Conductivity	2670		1.0	umhos/cm		18-JUL-16	R3507037
Fecal Coliform		DELIT	_	MDN///CC		44 11 11 15	
Fecal Coliforms Hardness Calculated	23	PEHT	3	MPN/100mL		14-JUL-16	R3506568
Hardness (as CaCO3)	791		0.30	mg/L		22-JUL-16	
Mercury Total							
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	15-JUL-16	15-JUL-16	R3504411
Nitrate in Water by IC Nitrate (as N)	<0.40	DLM	0.40	mg/L		15-JUL-16	R3505903
Nitrate+Nitrite	VO.40	52	0.40	1119/12		10 002 10	10000000
Nitrate and Nitrite as N	<0.45		0.45	mg/L		18-JUL-16	
Nitrite in Water by IC	0.00	DLM	0.00			45 II II 46	Dararaa
Nitrite (as N) Oil & Grease - Gravimetric	<0.20	DLIVI	0.20	mg/L		15-JUL-16	R3505903
Oil and Grease	<5.0		5.0	mg/L		15-JUL-16	R3508748
Phenol (4AAP)							
Phenols (4AAP)	0.0043		0.0010	mg/L		21-JUL-16	R3508711
Phosphorus, Total Phosphorus (P)-Total	0.704		0.010	mg/L		22-JUL-16	R3509889
Sulfate in Water by IC							
Sulfate (SO4)	445		6.0	mg/L		15-JUL-16	R3505903
Total Metals by ICP-MS Aluminum (Al)-Total	0.0425		0.0050	mg/L	21-JUL-16	21-JUL-16	R3509194
Arsenic (As)-Total	0.0423		0.0030	mg/L	21-JUL-16	21-JUL-16	R3509194
Cadmium (Cd)-Total	0.000082		0.000010	mg/L	21-JUL-16	21-JUL-16	R3509194
Calcium (Ca)-Total	217		0.10	mg/L	21-JUL-16	21-JUL-16	R3509194
Chromium (Cr)-Total	0.0018		0.0010	mg/L	21-JUL-16	21-JUL-16	R3509194
Cobalt (Co)-Total Copper (Cu)-Total	0.00128 0.0164		0.00020 0.00020	mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Iron (Fe)-Total	1.43		0.00020	mg/L mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Lead (Pb)-Total	0.00250		0.000090	mg/L	21-JUL-16	21-JUL-16	R3509194
Magnesium (Mg)-Total	60.6		0.010	mg/L	21-JUL-16	21-JUL-16	R3509194
Manganese (Mn)-Total	0.547		0.00030	mg/L	21-JUL-16	21-JUL-16	R3509194
Nickel (Ni)-Total	0.0074		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Potassium (K)-Total Sodium (Na)-Total	67.6 305		0.020 0.030	mg/L mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Zinc (Zn)-Total	0.0436		0.030	mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Total Organic Carbon by Combustion	3.5.55		2.0020				

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1798407-1 ARV-2							
Total Organic Carbon by Combustion Total Organic Carbon	56.0		0.50	mg/L		21-JUL-16	R3511779
Total Suspended Solids			40			45 1111 40	B0505000
Total Suspended Solids	98		13	mg/L		15-JUL-16	R3505696
pH pH	7.56		0.10	pH units		18-JUL-16	R3507037
L1798407-2 ARV-4	7.00		0.10	p do		.002.0	110007007
Sampled By: LAURA on 12-JUL-16 @ 13:27							
Matrix: EFF							
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Acenaphthene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Acenaphthylene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Anthracene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Acridine	<0.000050	DLM	0.000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)anthracene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Chrysene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Dibenzo(a,h)anthracene	<0.000050		0.0000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Fluoranthene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Fluorene	<0.000020		0.000020	mg/L	15-JUL-16 15-JUL-16	18-JUL-16	R3506759
Indeno(1,2,3-cd)pyrene Naphthalene	<0.000010		0.000010	mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Phenanthrene	<0.000050 <0.000050		0.000050 0.000050	mg/L mg/L	15-JUL-16	18-JUL-16	R3506759 R3506759
Pyrene	<0.000030		0.000030	mg/L	15-JUL-16	18-JUL-16	R3506759
Quinoline	<0.000010		0.000010	mg/L	15-30L-16	18-JUL-16	R3506759
B(a)P Total Potency Equivalent	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Surrogate: Acenaphthene d10	88.6		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Acridine d9	89.6		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Chrysene d12	89.0		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Naphthalene d8	88.9		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Phenanthrene d10	89.6		40-130	%	15-JUL-16	18-JUL-16	R3506759
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	238		1.2	mg/L		20-JUL-16	
Alkalinity, Carbonate				J			
Carbonate (CO3)	<0.60		0.60	mg/L		20-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		20-JUL-16	
Alkalinity, Total (as CaCO3)	\U.54		0.04	mg/L		20-30L-10	
Alkalinity, Total (as CaCO3)	195		1.0	mg/L		18-JUL-16	R3507037
Ammonia by colour Ammonia, Total (as N)	25.2		2.0	mg/L		21-JUL-16	R3509741
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	34.6		6.0	mg/L		15-JUL-16	R3509408
Carbonaceous BOD BOD Carbonaceous	20.6		6.0	mg/L		15-JUL-16	R3509408
Chloride in Water by IC	20.0		0.0	mg/L		10-00L-10	13303400
Chiloride in Water by IC	1				1	1	

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1798407-2 ARV-4							
Sampled By: LAURA on 12-JUL-16 @ 13:27							
Matrix: EFF							
Chloride in Water by IC							
Chloride (Cl)	291		2.5	mg/L		15-JUL-16	R3505903
Conductivity Conductivity	4070		4.0	umb o o /om		10 1111 16	D0507007
Fecal Coliform	1370		1.0	umhos/cm		18-JUL-16	R3507037
Fecal Coliforms	430	PEHT	3	MPN/100mL		14-JUL-16	R3506568
Hardness Calculated Hardness (as CaCO3)	174		0.30	mg/L		22-JUL-16	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	15-JUL-16	15-JUL-16	R3504411
Nitrate in Water by IC Nitrate (as N)	<0.10	DLM	0.10	mg/L		15-JUL-16	R3505903
Nitrate+Nitrite							
Nitrate and Nitrite as N Nitrite in Water by IC	<0.11		0.11	mg/L		18-JUL-16	
Nitrite (as N)	<0.050	DLM	0.050	mg/L		15-JUL-16	R3505903
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		15-JUL-16	R3508748
Phenol (4AAP) Phenols (4AAP)	0.0018		0.0010	mg/L		21-JUL-16	R3508711
Phosphorus, Total Phosphorus (P)-Total	4.60		0.010	mg/L		22-JUL-16	R3509889
Sulfate in Water by IC Sulfate (SO4)	14.6		1.5	mg/L		15-JUL-16	R3505903
Total Metals by ICP-MS				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	04 1111 40	04 1111 40	
Aluminum (Al)-Total Arsenic (As)-Total	0.138 0.00665		0.0050 0.00020	mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Cadmium (Cd)-Total	0.000059		0.00020	mg/L mg/L	21-JUL-16 21-JUL-16	21-JUL-16	R3509194
Calcium (Ca)-Total	31.5		0.000010	mg/L	21-JUL-16	21-JUL-16	R3509194
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	21-JUL-16	21-JUL-16	R3509194
Cobalt (Co)-Total	0.00286		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Copper (Cu)-Total	0.0213		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Iron (Fe)-Total	4.80		0.010	mg/L	21-JUL-16	21-JUL-16	R3509194
Lead (Pb)-Total	0.000972		0.000090	mg/L	21-JUL-16	21-JUL-16	R3509194
Magnesium (Mg)-Total	23.1		0.010	mg/L	21-JUL-16	21-JUL-16	R3509194
Manganese (Mn)-Total	0.622		0.00030	mg/L	21-JUL-16	21-JUL-16	R3509194
Nickel (Ni)-Total	0.0076		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Potassium (K)-Total	27.3		0.020	mg/L	21-JUL-16	21-JUL-16	R3509194
Sodium (Na)-Total	175		0.030	mg/L	21-JUL-16	21-JUL-16	R3509194
Zinc (Zn)-Total	0.0141		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Total Organic Carbon by Combustion Total Organic Carbon	37.5		0.50	mg/L		21-JUL-16	R3511779
Total Suspended Solids Total Suspended Solids	73		13	mg/L		15-JUL-16	R3505696
pH pH	7.24		0.10	pH units		18-JUL-16	R3507037
L1798407-3 ARV-5	/			,			
Sampled By: LAURA on 12-JUL-16 @ 13:51							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		20-JUL-16	R3509938
Toluene	<0.0010		0.0010	mg/L		20-JUL-16	R3509938

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

Sample Details/Parameters	Result	Qualifier* D.L.	Units	Extracted	Analyzed	Batch
L1798407-3 ARV-5						
Sampled By: LAURA on 12-JUL-16 @ 13:51						
Matrix: EFF						
BTX plus F1 by GCMS						
Ethyl benzene	<0.00050	0.0005	0 mg/L		20-JUL-16	R3509938
o-Xylene	<0.00050	0.0005			20-JUL-16	R3509938
m+p-Xylenes	<0.00050	0.0005			20-JUL-16	R3509938
F1 (C6-C10)	<0.10	0.10	mg/L		20-JUL-16	R3509938
Surrogate: 4-Bromofluorobenzene (SS)	101.7	70-130) %		20-JUL-16	R3509938
CCME PHC F2-F4 in Water						
F2 (C10-C16)	<0.10	0.10	mg/L	15-JUL-16	15-JUL-16	R3504549
F3 (C16-C34)	<0.25	0.25	mg/L	15-JUL-16	15-JUL-16	R3504549
F4 (C34-C50)	<0.25	0.25	mg/L	15-JUL-16	15-JUL-16	R3504549
Surrogate: 2-Bromobenzotrifluoride	100.8	60-140) %	15-JUL-16	15-JUL-16	R3504549
CCME Total Hydrocarbons F1-BTEX	<0.10	0.10	mg/L		22-JUL-16	
F2-Naphth	<0.10	0.10	mg/L		22-JUL-16 22-JUL-16	
F3-PAH	<0.10	0.10	mg/L		22-JUL-16	
Total Hydrocarbons (C6-C50)	<0.25	0.23	mg/L		22-JUL-16	
Sum of Xylene Isomer Concentrations	10.00	0.00	9, =			
Xylenes (Total)	<0.0015	0.0015	mg/L		22-JUL-16	
Polyaromatic Hydrocarbons (PAHs)						
1-Methyl Naphthalene	<0.000020	0.00002	20 mg/L	15-JUL-16	18-JUL-16	R3506759
2-Methyl Naphthalene	<0.000020	0.00002		15-JUL-16	18-JUL-16	R3506759
Acenaphthene	<0.000020	0.00002		15-JUL-16	18-JUL-16	R3506759
Acenaphthylene	<0.000020	0.00002		15-JUL-16	18-JUL-16	R3506759
Anthracene	<0.000010	0.00001	•	15-JUL-16	18-JUL-16	R3506759
Acridine	<0.000020	0.00002	I	15-JUL-16	18-JUL-16	R3506759
Benzo(a)anthracene Benzo(a)pyrene	<0.000010	0.00001		15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Benzo(b&j)fluoranthene	<0.000050 <0.000010	0.00000		15-JUL-16	18-JUL-16	R3506759 R3506759
Benzo(g,h,i)perylene	<0.000010	0.00001	_	15-30L-16	18-JUL-16	R3506759
Benzo(k)fluoranthene	<0.000020	0.00002		15-JUL-16	18-JUL-16	R3506759
Chrysene	<0.000020	0.00002		15-JUL-16	18-JUL-16	R3506759
Dibenzo(a,h)anthracene	<0.000050	0.00000		15-JUL-16	18-JUL-16	R3506759
Fluoranthene	<0.000020	0.00002	_	15-JUL-16	18-JUL-16	R3506759
Fluorene	<0.000020	0.00002	_	15-JUL-16	18-JUL-16	R3506759
Indeno(1,2,3-cd)pyrene	<0.000010	0.00001		15-JUL-16	18-JUL-16	R3506759
Naphthalene	<0.000050	0.00005	mg/L	15-JUL-16	18-JUL-16	R3506759
Phenanthrene	<0.000050	0.00005	_	15-JUL-16	18-JUL-16	R3506759
Pyrene	<0.000010	0.00001	-	15-JUL-16	18-JUL-16	R3506759
Quinoline	<0.000020	0.00002	_	15-JUL-16	18-JUL-16	R3506759
B(a)P Total Potency Equivalent	<0.000030	0.00003	-	15-JUL-16	18-JUL-16	R3506759
Surrogate: Acriding do	91.7	40-130		15-JUL-16	18-JUL-16	R3506759
Surrogate: Acridine d9 Surrogate: Chrysene d12	91.6	40-130		15-JUL-16 15-JUL-16	18-JUL-16	R3506759
Surrogate: Chrysene d12 Surrogate: Naphthalene d8	94.1 95.7	40-130 40-130		15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759 R3506759
Surrogate: Naphthalerie do Surrogate: Phenanthrene d10	95.7	40-130		15-JUL-16	18-JUL-16	R3506759 R3506759
Nunavut WW Group 1	31.0	40-130	, /0	10.002-10	10 00L-10	1,0000139
Alkalinity, Bicarbonate						
Bicarbonate (HCO3)	73.2	1.2	mg/L		20-JUL-16	
Alkalinity, Carbonate						
Carbonate (CO3)	<0.60	0.60	mg/L		20-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34	0.34	mg/L		20-JUL-16	
• · · · · · · · · · · · · · · · · · · ·		1 0.01				

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14700407.2 ADV.5							
L1798407-3 ARV-5 Sampled By: LAURA on 12-JUL-16 @ 13:51							
' '							
Matrix: EFF Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	60.0		1.0	mg/L		18-JUL-16	R3507037
Ammonia by colour Ammonia, Total (as N)	0.029		0.010	mg/L		20-JUL-16	R3508782
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	3.1		2.0	mg/L		15-JUL-16	R3509408
Carbonaceous BOD			2.0				K3509406
BOD Carbonaceous	3.0		2.0	mg/L		15-JUL-16	R3509408
Chloride in Water by IC Chloride (CI)	846		10	mg/L		15-JUL-16	R3505903
Conductivity Conductivity	2670		1.0	umhos/cm		18-JUL-16	R3507037
Fecal Coliform Fecal Coliforms	<3	PEHT	3	MPN/100mL		14-JUL-16	R3506568
Hardness Calculated			3	I WIOOIIL		1100210	
Hardness (as CaCO3) Mercury Total	399		0.30	mg/L		22-JUL-16	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	15-JUL-16	15-JUL-16	R3504411
Nitrate in Water by IC Nitrate (as N)	<0.40	DLM	0.40	mg/L		15-JUL-16	R3505903
Nitrate+Nitrite Nitrate and Nitrite as N	<0.45		0.45	mg/L		18-JUL-16	
Nitrite in Water by IC		DIM					Document
Nitrite (as N) Oil & Grease - Gravimetric	<0.20	DLM	0.20	mg/L		15-JUL-16	R3505903
Oil and Grease	<5.0		5.0	mg/L		15-JUL-16	R3508748
Phenol (4AAP) Phenols (4AAP)	0.0038		0.0010	mg/L		21-JUL-16	R3508711
Phosphorus, Total Phosphorus (P)-Total	0.170		0.010	mg/L		22-JUL-16	R3509889
Sulfate in Water by IC			0.010	mg/L		22-30L-10	K3309009
Sulfate (SO4)	30.4	DLM	6.0	mg/L		15-JUL-16	R3505903
Total Metals by ICP-MS Aluminum (Al)-Total	0.463		0.0050	mg/L	21-JUL-16	21-JUL-16	R3509194
Arsenic (As)-Total	0.00085		0.0000	mg/L	21-JUL-16	21-JUL-16	R3509194
Cadmium (Cd)-Total	0.000016		0.000010	mg/L	21-JUL-16	21-JUL-16	R3509194
Calcium (Ca)-Total	47.0		0.10	mg/L	21-JUL-16	21-JUL-16	R3509194
Chromium (Cr)-Total	0.0014		0.0010	mg/L	21-JUL-16	21-JUL-16	R3509194
Cobalt (Co)-Total	0.00057		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Copper (Cu)-Total	0.00152		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Iron (Fe)-Total	7.56		0.010	mg/L	21-JUL-16	21-JUL-16	R3509194
Lead (Pb)-Total	0.000611		0.000090	mg/L	21-JUL-16	21-JUL-16	R3509194
Magnesium (Mg)-Total	68.5		0.010	mg/L	21-JUL-16	21-JUL-16	R3509194
Manganese (Mn)-Total	0.260		0.00030	mg/L	21-JUL-16	21-JUL-16	R3509194
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Potassium (K)-Total	14.0		0.020	mg/L	21-JUL-16	21-JUL-16	R3509194
Sodium (Na)-Total	430		0.030	mg/L	21-JUL-16	21-JUL-16	R3509194
Zinc (Zn)-Total	0.0113		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Total Organic Carbon by Combustion							
Total Organic Carbon	7.52		0.50	mg/L		21-JUL-16	R3511779
Total Suspended Solids Total Suspended Solids	53.8		6.3	mg/L		15-JUL-16	R3505696
рН							
<u> </u>							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1798407-3 ARV-5							
Sampled By: LAURA on 12-JUL-16 @ 13:51							
Matrix: EFF							
pH pH	7.53		0.10	pH units		18-JUL-16	R3507037
L1798407-4 ARV-6							
Sampled By: LAURA on 12-JUL-16 @ 14:01							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	< 0.00050		0.00050	mg/L		20-JUL-16	R3509938
Toluene	0.0023	EMPC	0.0010	mg/L		20-JUL-16	R3509938
Ethyl benzene	0.00077		0.00050	mg/L		20-JUL-16	R3509938
o-Xylene	0.00216		0.00050	mg/L		20-JUL-16	R3509938
m+p-Xylenes	0.00267		0.00050	mg/L		20-JUL-16	R3509938
F1 (C6-C10)	0.10		0.10	mg/L		20-JUL-16	R3509938
Surrogate: 4-Bromofluorobenzene (SS)	118.8		70-130	%		20-JUL-16	R3509938
CCME PHC F2-F4 in Water F2 (C10-C16)	2.47		0.10	ma/l	15-JUL-16	15-JUL-16	P3504540
F3 (C16-C34)	2.47 13.9		0.10	mg/L mg/L	15-JUL-16 15-JUL-16	15-JUL-16 15-JUL-16	R3504549 R3504549
F4 (C34-C50)	0.72		0.25	mg/L	15-JUL-16	15-30L-16	R3504549
Surrogate: 2-Bromobenzotrifluoride	102.2		60-140	//////////////////////////////////////	15-JUL-16	15-JUL-16	R3504549
CCME Total Hydrocarbons	102.2		00 140	70	1000210	10 002 10	11000-10-10
F1-BTEX	<0.10		0.10	mg/L		22-JUL-16	
F2-Naphth	2.47		0.10	mg/L		22-JUL-16	
F3-PAH	13.9		0.25	mg/L		22-JUL-16	
Total Hydrocarbons (C6-C50)	17.2		0.38	mg/L		22-JUL-16	
Sum of Xylene Isomer Concentrations				, and the second			
Xylenes (Total)	0.0048		0.0015	mg/L		22-JUL-16	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	< 0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Acenaphthene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Acenaphthylene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Anthracene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Acridine	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)anthracene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Chrysene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Fluoranthene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Fluorene	<0.000020		0.000020	mg/L	15-JUL-16	18-JUL-16	R3506759
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	15-JUL-16	18-JUL-16	R3506759
Naphthalene Phenanthrene	<0.000050		0.000050	mg/L	15-JUL-16	18-JUL-16	R3506759
Pyrene Pyrene	<0.000050		0.000050	mg/L mg/l	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Quinoline	<0.000010		0.000010	mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
B(a)P Total Potency Equivalent	<0.000020 <0.000030		0.000020 0.000030	mg/L	15-JUL-16 15-JUL-16	18-JUL-16 18-JUL-16	R3506759
Surrogate: Acenaphthene d10	<0.000030 90.9		40-130	mg/L %	15-JUL-16 15-JUL-16	18-JUL-16	R3506759 R3506759
Surrogate: Aceriaprimene d 10 Surrogate: Acridine d9	90.9 92.2		40-130	%	15-JUL-16 15-JUL-16	18-JUL-16	R3506759
Surrogate: Chrysene d12	96.9		40-130	%	15-JUL-16	18-JUL-16	R3506759
San Sgato. Striyoono atz	50.9		1 0-130	/0	10 001-10	10 001-10	10000709

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1798407-4 ARV-6							
Sampled By: LAURA on 12-JUL-16 @ 14:01							
Matrix: EFF							
Polyaromatic Hydrocarbons (PAHs)							
Surrogate: Naphthalene d8	93.8		40-130	%	15-JUL-16	18-JUL-16	R3506759
Surrogate: Phenanthrene d10	92.2		40-130	%	15-JUL-16	18-JUL-16	R3506759
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	112		1.2	mg/L		20-JUL-16	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		20-JUL-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		20-JUL-16	
Alkalinity, Total (as CaCO3)	<0.34		0.34	IIIg/L		20-30L-10	
Alkalinity, Total (as CaCO3)	91.5		1.0	mg/L		18-JUL-16	R3507037
Ammonia by colour							
Ammonia, Total (as N)	0.425		0.010	mg/L		21-JUL-16	R3509741
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	7.3		2.0	mg/L		15-JUL-16	R3509408
Carbonaceous BOD	7.0		2.0			.5 552 15	. 100000
BOD Carbonaceous	4.7		2.0	mg/L		15-JUL-16	R3509408
Chloride in Water by IC				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		45 1111 40	
Chloride (CI) Conductivity	159		0.50	mg/L		15-JUL-16	R3505903
Conductivity	685		1.0	umhos/cm		18-JUL-16	R3507037
Fecal Coliform							
Fecal Coliforms	<3	PEHT	3	MPN/100mL		14-JUL-16	R3506568
Hardness Calculated Hardness (as CaCO3)	205		0.30	mg/L		25-JUL-16	
Mercury Total	200		0.00	9/ =		20 002 10	
Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	15-JUL-16	15-JUL-16	R3504411
Nitrate in Water by IC	0.000		0.000	/1		45 1111 40	Dococoo
Nitrate (as N) Nitrate+Nitrite	<0.020		0.020	mg/L		15-JUL-16	R3505903
Nitrate and Nitrite as N	<0.070		0.070	mg/L		18-JUL-16	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		15-JUL-16	R3505903
Oil & Grease - Gravimetric Oil and Grease	33.0		5.0	mg/L		15-JUL-16	R3508748
Phenol (4AAP)	05.0		0.0	9/ -		10 001 10	.100001 40
Phenols (4AAP)	0.0036		0.0010	mg/L		21-JUL-16	R3508711
Phosphorus, Total Phosphorus (P)-Total	0.440		0.040	ma/l		22 11 11 46	Daroono
Sulfate in Water by IC	0.119		0.010	mg/L		22-JUL-16	R3509889
Sulfate (SO4)	<0.30		0.30	mg/L		15-JUL-16	R3505903
Total Metals by ICP-MS			_			.	
Aluminum (Al)-Total	0.995		0.0050	mg/L	21-JUL-16	21-JUL-16	R3509194
Arsenic (As)-Total Cadmium (Cd)-Total	0.00156 0.000089		0.00020 0.000010	mg/L mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Calcium (Ca)-Total	58.2		0.10	mg/L	21-JUL-16	21-JUL-16	R3509194
Chromium (Cr)-Total	0.0032		0.0010	mg/L	21-JUL-16	21-JUL-16	R3509194
Cobalt (Co)-Total	0.00384		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Copper (Cu)-Total	0.00601		0.00020	mg/L	21-JUL-16	21-JUL-16	R3509194
Iron (Fe)-Total Lead (Pb)-Total	59.7 0.00153		0.010 0.000090	mg/L mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
Magnesium (Mg)-Total	14.6		0.00090	mg/L	21-JUL-16 21-JUL-16	21-JUL-16 21-JUL-16	R3509194 R3509194
agooidiii (iiig) Totali	1-7.0		0.010	9/ -	USL 10	2.002.10	1.0000104

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1798407-4 ARV-6							
Sampled By: LAURA on 12-JUL-16 @ 14:01							
Matrix: EFF							
Total Metals by ICP-MS							
Manganese (Mn)-Total	2.85		0.030	mg/L	21-JUL-16	22-JUL-16	R3510655
Nickel (Ni)-Total	0.0026		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Potassium (K)-Total	6.67		0.020	mg/L	21-JUL-16	21-JUL-16	R3509194
Sodium (Na)-Total	66.4		0.030	mg/L	21-JUL-16	21-JUL-16	R3509194
Zinc (Zn)-Total	0.0335		0.0020	mg/L	21-JUL-16	21-JUL-16	R3509194
Total Organic Carbon by Combustion Total Organic Carbon	16.0		0.50	mg/L		21-JUL-16	R3511779
Total Suspended Solids	10.0		0.00	9/ =			110011770
Total Suspended Solids	144		20	mg/L		15-JUL-16	R3505696
pH							
pH	6.45		0.10	pH units		18-JUL-16	R3507037

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

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Reference Information

Sample Parameter Qualifier Key:

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ific

Test Method References:

ALS Test Code Matrix		Test Description	Method Reference**	
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION	

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.

ALK-HCO3HCO3-CALC- Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L

ALK-OHOH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO3) APHA 2320B

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

BOD-CBOD-WP Water Carbonaceous BOD APHA 5210 B

Samples are diluted and seeded, have TCMP added to inhibit nitrogenous demands, and then are incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BOD-WP Water Biochemical Oxygen Demand (BOD) APHA 5210 B

Samples are diluted and seeded and then incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BTEXS+F1-HSMS-WP Water BTX plus F1 by GCMS EPA 8260C / EPA 5021A

The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transfered into a gas chromatograph.

Target compound concentrations are measured using mass spectrometry detection.

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.

CL-IC-N-WP Water Chloride in Water by IC EPA 300.1 (mod)

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

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-TOT-WP Water Hardness Calculated HARDNESS CALCULATED

F1-F4-CALC-WP Water CCME Total Hydrocarbons CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH

PAGE 12 of 13 Version: FINAL

Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
- 3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
- 3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
- 4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F2-F4-FID-WP Water CCME PHC F2-F4 in Water EPA 3511

Petroleum hydrocarbons in water are determined by liquid-liquid micro-scale solvent extraction using a reciprocal shaker extraction apparatus prior to capillary column gas chromatography with flame ionization detection (GC-FID) analysis.

FC-MPN-WP Water Fecal Coliform APHA 9221E

The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. Aliquots from three or more decimal dilutions of a sample are inoculated into tubes containing enrichment media and incubated at 35C for 48 – 3 hours. Sample aliquots exhibiting the characteristic positive response are transferred to various selective media for the coliform group(s) of interest and incubated at specific temperatures and times. The Most Probable Number for each target group is statistically derived from a standard MPN table based on the combinations of positive outcomes at each dilution.

The fecal (thermotolerant) coliform group may include organisms not originating in the intestines of warm-blooded animals.

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-T-L-MS-WP Water Total Metals by ICP-MS APHA 3030E/EPA 6020A-TL

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

NH3-COL-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-N-WP Water Nitrite in Water by IC EPA 300.1 (mod)

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

NO3-IC-N-WP Water Nitrate in Water by IC EPA 300.1 (mod)

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

OG-GRAV-WP Water Oil & Grease - Gravimetric EPA 1664 (modified)

Water samples are acidified and extracted with hexane; the hexane extract is collected in a pre-weighed vial. The solvent is evaporated and Total Oil & Grease is determined from the weight of the residue in the vial.

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 Phosphorus is determined colourimetrically after persulphate digestion of the sample.

PAH,PANH-WP Water Polyaromatic Hydrocarbons (PAHs) EPA SW 846/8270-GC/MS

Water is spiked with a surrogate spike mix and extracted using solvent extraction techniques. Analysis is performed by GC/MS in the selected ion monitoring (SIM) mode.

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.

PHENOLS-4AAP-WT Water Phenol (4AAP) EPA 9066

An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a

L1798407 CONTD....

PAGE 13 of 13 Version: FINAL

Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

red complex which is measured colorimetrically.

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

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

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

Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.

XYLENES-SUM-CALC- Water Sum of Xylene Isomer Concentrations CALCULATED RESULT

WP

Total xylenes represents the sum of o-xylene and m&p-xylene.

** 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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, 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.

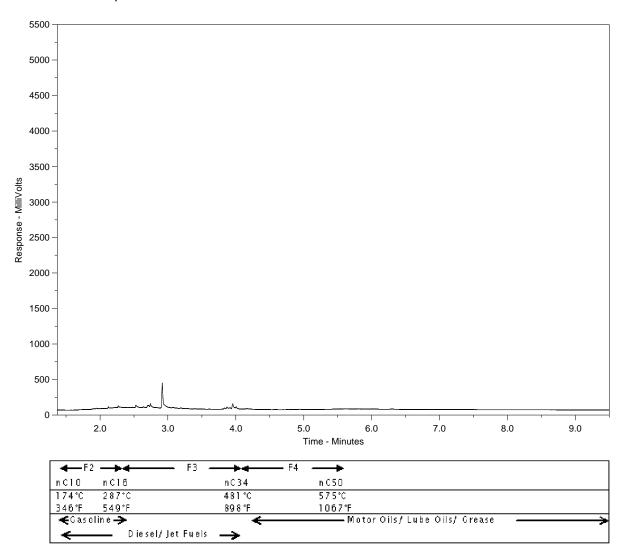
Test results reported relate only to the samples as received by the laboratory.

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.



ALS Sample ID: L1798407-1 Client Sample ID: ARV-2



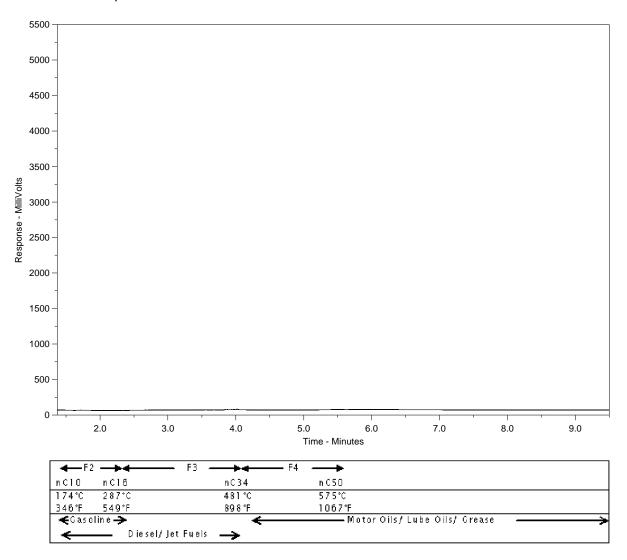
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1798407-3 Client Sample ID: ARV-5



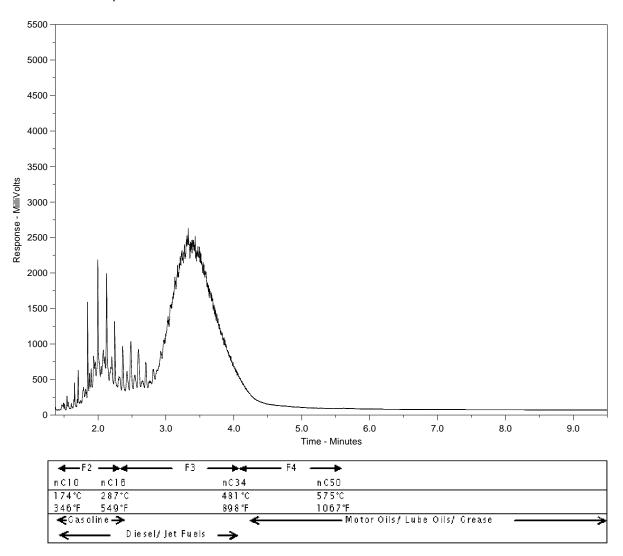
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1798407-4 Client Sample ID: ARV-6



The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



Chain of Custody (COC) / Analytical Request Form

COC Number: 15 - 571746

L1798407-COFC

Canada Toll Free: 1 800 668 9878

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REFER TO BACK	PAGE FOR ALS LOCATIONS AND SAMPLING	NEORMATION	· ·	- 🕶 WHI1	E LABORATORY	COPY YELLOV	v - CLIE	NI CO	PY										OCTOBER 2015 FRONT

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAME ING INFORMATION

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Hamlet of Arviat

ATTN: STEVE ENGLAND

PO Box 150

Arviat NU XOC 0E0

Date Received: 27-AUG-16

Report Date: 09-SEP-16 08:46 (MT)

Version: FINAL

Client Phone: 867-857-2841

Certificate of Analysis

Lab Work Order #: L1820134
Project P.O. #: NOT SUBMITTED

Job Reference: C of C Numbers: Legal Site Desc:

Mohl

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

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



Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-1 ARV-2							
Sampled By: CLIENT on 25-AUG-16 @ 10:49							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
Toluene	<0.0010		0.0010	mg/L		29-AUG-16	R3537764
Ethyl benzene	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
o-Xylene	< 0.00050		0.00050	mg/L		29-AUG-16	R3537764
m+p-Xylenes	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
F1 (C6-C10)	<0.10		0.10	mg/L		29-AUG-16	R3537764
Surrogate: 4-Bromofluorobenzene (SS)	98.3		70-130	%		29-AUG-16	R3537764
CCME PHC F2-F4 in Water	0.40				00 4110 40	00 4110 40	D0500700
F2 (C10-C16) F3 (C16-C34)	0.13 0.47		0.10	mg/L	29-AUG-16 29-AUG-16	29-AUG-16	R3536726
F4 (C34-C50)	0.47 <0.25		0.25 0.25	mg/L	29-AUG-16 29-AUG-16	29-AUG-16 29-AUG-16	R3536726 R3536726
Surrogate: 2-Bromobenzotrifluoride	<0.25 92.7		60-140	mg/L %	29-AUG-16 29-AUG-16	29-AUG-16 29-AUG-16	R3536726
CCME Total Hydrocarbons	₹.1		00-140	70	20 700-10	20 700-10	110000120
F1-BTEX	<0.10		0.10	mg/L		08-SEP-16	
F2-Naphth	0.13		0.10	mg/L		08-SEP-16	
F3-PAH	0.47		0.25	mg/L		08-SEP-16	
Total Hydrocarbons (C6-C50)	0.60		0.38	mg/L		08-SEP-16	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.0015		0.0015	mg/L		31-AUG-16	
Polyaromatic Hydrocarbons (PAHs) 1-Methyl Naphthalene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Acenaphthene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Acenaphthylene	0.000022		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Anthracene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Acridine	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)anthracene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Chrysene	<0.000020		0.000020	mg/L mg/L	01-SEP-16 01-SEP-16	06-SEP-16 06-SEP-16	R3543410
Dibenzo(a,h)anthracene Fluoranthene	<0.0000050 <0.000020		0.0000050 0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410 R3543410
Fluorene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Indeno(1,2,3-cd)pyrene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Naphthalene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Phenanthrene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Pyrene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Quinoline	0.000035		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acenaphthene d10	81.3		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acridine d9	114.0		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Chrysene d12	88.8		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Naphthalene d8 Surrogate: Phenanthrene d10	81.7 84.2		40-130 40-130	% %	01-SEP-16 01-SEP-16	06-SEP-16 06-SEP-16	R3543410 R3543410
Nunavut WW Group 1	04.∠		40-130	/0	01-357-10	00-3E7-10	13543410
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	537		1.2	mg/L		01-SEP-16	
Alkalinity, Carbonate							
• ·							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-1 ARV-2							
Sampled By: CLIENT on 25-AUG-16 @ 10:49							
Matrix: EFF							
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-16	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	440		1.0	mg/L		30-AUG-16	R3538902
Ammonia by colour Ammonia, Total (as N)	5.0		1.0	mg/L		02-SEP-16	R3540476
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	28.1		6.0	mg/L		27-AUG-16	R3539943
Carbonaceous BOD BOD Carbonaceous						27-AUG-16	
Chloride in Water by IC	25.9		6.0	mg/L			R3539943
Chloride (CI) Conductivity	399		10	mg/L		29-AUG-16	R3537862
Conductivity Fecal Coliform	2790		1.0	umhos/cm		30-AUG-16	R3538902
Fecal Coliforms Hardness Calculated	<3		3	MPN/100mL		27-AUG-16	R3538480
Hardness (as CaCO3) Mercury Total	994		0.30	mg/L		06-SEP-16	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	31-AUG-16	31-AUG-16	R3538895
Nitrate in Water by IC Nitrate (as N)	<0.40	DLM	0.40	mg/L		29-AUG-16	R3537862
Nitrate+Nitrite Nitrate and Nitrite as N	<0.45		0.45	mg/L		31-AUG-16	
Nitrite in Water by IC Nitrite (as N)	<0.20	DLM	0.20	mg/L		29-AUG-16	R3537862
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		02-SEP-16	R3542635
Phenol (4AAP) Phenols (4AAP)	0.0074		0.0010	mg/L		01-SEP-16	R3539221
Phosphorus, Total Phosphorus (P)-Total	0.746		0.010	mg/L		01-SEP-16	R3538987
Sulfate in Water by IC Sulfate (SO4)	501		6.0	mg/L		29-AUG-16	R3537862
Total Metals by ICP-MS				<i>y</i> –			
Aluminum (Al)-Total	0.0216		0.0050	mg/L	02-SEP-16	02-SEP-16	R3541393
Arsenic (As)-Total	0.00596		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Cadmium (Cd)-Total	0.000061		0.000010	mg/L	02-SEP-16	02-SEP-16	R3541393
Calcium (Ca)-Total	297		0.10	mg/L	02-SEP-16	02-SEP-16	R3541393
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	02-SEP-16	02-SEP-16	R3541393
Copper (Cu) Total	0.00096		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Copper (Cu)-Total	0.00779		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Iron (Fe)-Total	0.995		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Lead (Pb)-Total	0.000813		0.000090	mg/L	02-SEP-16	02-SEP-16	R3541393
Magnesium (Mg)-Total	61.5		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Manganese (Mn)-Total	0.550		0.00030	mg/L	02-SEP-16	02-SEP-16	R3541393
Nickel (Ni)-Total	0.0074		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Potassium (K)-Total	55.8		0.020	mg/L	02-SEP-16	02-SEP-16	R3541393
Sodium (Na)-Total	281		0.030	mg/L	02-SEP-16	02-SEP-16	R3541393
Zinc (Zn)-Total	0.0219		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Total Organic Carbon by Combustion							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-1 ARV-2							
Sampled By: CLIENT on 25-AUG-16 @ 10:49							
Matrix: EFF							
Total Organic Carbon by Combustion							
Total Organic Carbon	46.3		0.50	mg/L		01-SEP-16	R3539363
Total Suspended Solids	10.0		0.00	9/ =		0.02.	110000000
Total Suspended Solids	143		13	mg/L		31-AUG-16	R3539338
рН							
pH	7.89		0.10	pH units		30-AUG-16	R3538902
L1820134-2 ARV-4							
Sampled By: CLIENT on 25-AUG-16 @ 10:26							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS Benzene	<0.00050		0.00050	mg/L		29-AUG-16	D2527764
Toluene	<0.0010		0.00050	mg/L		29-AUG-16 29-AUG-16	R3537764 R3537764
Ethyl benzene	<0.0010		0.0010	mg/L		29-AUG-16 29-AUG-16	R3537764
o-Xylene	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
m+p-Xylenes	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
F1 (C6-C10)	<0.10		0.10	mg/L		29-AUG-16	R3537764
Surrogate: 4-Bromofluorobenzene (SS)	99.2		70-130	%		29-AUG-16	R3537764
CCME PHC F2-F4 in Water							
F2 (C10-C16)	<0.10		0.10	mg/L	29-AUG-16	29-AUG-16	R3536726
F3 (C16-C34)	<0.25		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726
F4 (C34-C50)	<0.25		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726
Surrogate: 2-Bromobenzotrifluoride	94.0		60-140	%	29-AUG-16	29-AUG-16	R3536726
CCME Total Hydrocarbons F1-BTEX	<0.10		0.10	mg/L		31-AUG-16	
Total Hydrocarbons (C6-C50)	<0.38		0.38	mg/L		31-AUG-16	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.0015		0.0015	mg/L		31-AUG-16	
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	206		1.2	mg/L		01-SEP-16	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-16	
Alkalinity, Hydroxide				,,		04.055.40	
Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	169		1.0	mg/L		30-AUG-16	R3538902
Ammonia by colour	105		1.0	mg/L		007.0010	10000002
Ammonia, Total (as N)	17.0		0.50	mg/L		02-SEP-16	R3540476
Biochemical Oxygen Demand (BOD)				_			
Biochemical Oxygen Demand	<6.0		6.0	mg/L		27-AUG-16	R3539943
Carbonaceous BOD				,,		07 4110 15	
BOD Carbonaceous	2.4		2.0	mg/L		27-AUG-16	R3539943
Chloride in Water by IC Chloride (Cl)	381		2.5	mg/L		29-AUG-16	R3537862
Conductivity	301		2.0	g/ L		_57.55 10	110001002
Conductivity	1640		1.0	umhos/cm		30-AUG-16	R3538902
Fecal Coliform							
Fecal Coliforms	93		3	MPN/100mL		27-AUG-16	R3538480
Hardness Calculated			_				
Hardness (as CaCO3)	204		0.30	mg/L		06-SEP-16	
Mercury Total							

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
1 1920124 2 APV 4							
L1820134-2 ARV-4 Sampled By: CLIENT on 25-AUG-16 @ 10:26							
, ,							
Matrix: EFF							
Mercury Total Mercury (Hg)-Total	<0.000020		0.000020	mg/L	31-AUG-16	31-AUG-16	R3538895
Nitrate in Water by IC				, u			
Nitrate (as N)	0.41	DLM	0.10	mg/L		29-AUG-16	R3537862
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.47		0.11	mg/L		31-AUG-16	
Nitrite in Water by IC Nitrite (as N)	0.061	DLM	0.050	mg/L		29-AUG-16	R3537862
Oil & Grease - Gravimetric	0.001		0.000	9/ =		207.00 10	110007002
Oil and Grease	<5.0		5.0	mg/L		02-SEP-16	R3542635
Phenol (4AAP)							
Phenols (4AAP)	0.0052		0.0010	mg/L		01-SEP-16	R3539221
Phosphorus, Total Phosphorus (P)-Total	4.12		0.010	mg/L		01-SEP-16	R3538987
Sulfate in Water by IC	7.12		0.010	g, L		5. <u>5</u> L1 -10	
Sulfate (SO4)	21.6		1.5	mg/L		29-AUG-16	R3537862
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0436		0.0050	mg/L	02-SEP-16	02-SEP-16	R3541393
Arsenic (As)-Total Cadmium (Cd)-Total	0.00443		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Cadrium (Cd)-Total Calcium (Ca)-Total	0.000010 36.0		0.000010 0.10	mg/L mg/L	02-SEP-16 02-SEP-16	02-SEP-16 02-SEP-16	R3541393 R3541393
Chromium (Cr)-Total	<0.0010		0.10	mg/L	02-SEP-16	02-SEP-16	R3541393
Cobalt (Co)-Total	0.00255		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Copper (Cu)-Total	0.00309		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Iron (Fe)-Total	2.21		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Lead (Pb)-Total	0.000151		0.000090	mg/L	02-SEP-16	02-SEP-16	R3541393
Magnesium (Mg)-Total	27.7		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Manganese (Mn)-Total	0.817		0.00030	mg/L	02-SEP-16	02-SEP-16	R3541393
Nickel (Ni)-Total Potassium (K)-Total	0.0071 25.3		0.0020 0.020	mg/L mg/L	02-SEP-16 02-SEP-16	02-SEP-16 02-SEP-16	R3541393 R3541393
Sodium (Na)-Total	23.3		0.020	mg/L	02-SEP-16 02-SEP-16	02-SEP-16 02-SEP-16	R3541393
Zinc (Zn)-Total	0.0023		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Total Organic Carbon by Combustion	0.000			3			
Total Organic Carbon	20.0		0.50	mg/L		08-SEP-16	R3544249
Total Suspended Solids				- "		04 4110 15	Donossa
Total Suspended Solids	20		10	mg/L		31-AUG-16	R3539338
pH pH	7.32		0.10	pH units		30-AUG-16	R3538902
L1820134-3 ARV-5	1.02		5.10	P 311110		307.30 10	
Sampled By: CLIENT on 25-AUG-16 @ 11:06							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		30-AUG-16	R3537764
Toluene	<0.0010		0.0010	mg/L		30-AUG-16	R3537764
Ethyl benzene	<0.00050		0.00050	mg/L		30-AUG-16	R3537764
o-Xylene m+p-Xylenes	<0.00050 <0.00050		0.00050 0.00050	mg/L mg/L		30-AUG-16 30-AUG-16	R3537764 R3537764
F1 (C6-C10)	<0.10		0.00030	mg/L		30-AUG-16	R3537764
Surrogate: 4-Bromofluorobenzene (SS)	118.5		70-130	//g/L %		30-AUG-16	R3537764
CCME PHC F2-F4 in Water							
F2 (C10-C16)	<0.10		0.10	mg/L	29-AUG-16	29-AUG-16	R3536726
F3 (C16-C34)	<0.25		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-3 ARV-5							
Sampled By: CLIENT on 25-AUG-16 @ 11:06							
Matrix: EFF							
CCME PHC F2-F4 in Water							
F4 (C34-C50)	<0.25		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726
Surrogate: 2-Bromobenzotrifluoride	93.9		60-140	%	29-AUG-16	29-AUG-16	R3536726
CCME Total Hydrocarbons							
F1-BTEX	<0.10		0.10	mg/L		08-SEP-16	
F2-Naphth	<0.10		0.10	mg/L		08-SEP-16	
F3-PAH	<0.25		0.25	mg/L		08-SEP-16	
Total Hydrocarbons (C6-C50)	<0.38		0.38	mg/L		08-SEP-16	
Sum of Xylene Isomer Concentrations	0.0045		0.0045	a/I		24 ALIC 46	
Xylenes (Total)	<0.0015		0.0015	mg/L		31-AUG-16	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Acenaphthene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Acenaphthylene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Anthracene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Acridine	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)anthracene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Chrysene Dibenzo(a,h)anthracene	<0.000020 <0.0000050		0.000020 0.0000050	mg/L mg/L	01-SEP-16 01-SEP-16	06-SEP-16 06-SEP-16	R3543410 R3543410
Fluoranthene	<0.000030		0.0000030	mg/L	01-SEP-16	06-SEP-16	R3543410
Fluorene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Naphthalene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Phenanthrene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Pyrene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Quinoline	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acenaphthene d10	84.6		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acridine d9	105.5		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Chrysene d12	89.7		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Naphthalene d8	81.1		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Phenanthrene d10 Nunavut WW Group 1	89.7		40-130	%	01-SEP-16	06-SEP-16	R3543410
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	107		1.2	mg/L		01-SEP-16	
Alkalinity, Carbonate Carbonate (CO3)				-		01-SEP-16	
Alkalinity, Hydroxide	<0.60		0.60	mg/L		01-0EF-10	
Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	87.7		1.0	mg/L		30-AUG-16	R3538902
Ammonia by colour Ammonia, Total (as N)	0.013		0.010	mg/L		30-AUG-16	R3537825
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	<2.0		2.0	mg/L		27-AUG-16	R3539943
Carbonaceous BOD BOD Carbonaceous	<2.0		2.0	-		27-AUG-16	R3539943
DOD Calbullaceous	<2.0		2.0	mg/L		21-AUG-16	13339943

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14000424.2 ADV.5							
L1820134-3 ARV-5							
Sampled By: CLIENT on 25-AUG-16 @ 11:06							
Matrix: EFF							
Chloride in Water by IC Chloride (CI)	290		1.0	mg/L		29-AUG-16	R3537862
Conductivity Conductivity	1130		1.0	umhos/cm		30-AUG-16	R3538902
Fecal Coliform	1130		1.0	ummos/cm		30-A0G-10	K3536902
Fecal Coliforms	15		3	MPN/100mL		27-AUG-16	R3538480
Hardness Calculated Hardness (as CaCO3)	185		0.30	mg/L		06-SEP-16	
Mercury Total Mercury (Hg)-Total	<0.000020		0.000020	mg/L	31-AUG-16	31-AUG-16	R3538895
Nitrate in Water by IC Nitrate (as N)	<0.040	DLM	0.040	mg/L		29-AUG-16	R3537862
Nitrate+Nitrite							1.0007.002
Nitrate and Nitrite as N Nitrite in Water by IC	<0.070		0.070	mg/L		31-AUG-16	
Nitrite (as N)	<0.020	DLM	0.020	mg/L		29-AUG-16	R3537862
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		02-SEP-16	R3542635
Phenol (4AAP) Phenols (4AAP)	0.0033		0.0010	mg/L		01-SEP-16	R3539221
Phosphorus, Total							
Phosphorus (P)-Total Sulfate in Water by IC	0.045		0.010	mg/L		01-SEP-16	R3538987
Sulfate (SO4)	4.90		0.60	mg/L		29-AUG-16	R3537862
Total Metals by ICP-MS Aluminum (Al)-Total	0.326		0.0050	mg/L	02-SEP-16	02-SEP-16	R3541393
Arsenic (As)-Total	0.326		0.0050	mg/L	02-SEP-16 02-SEP-16	02-SEP-16 02-SEP-16	R3541393 R3541393
Cadmium (Cd)-Total	<0.00002		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Calcium (Ca)-Total	35.0		0.10	mg/L	02-SEP-16	02-SEP-16	R3541393
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	02-SEP-16	02-SEP-16	R3541393
Cobalt (Co)-Total	0.00035		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Copper (Cu)-Total	0.00097		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Iron (Fe)-Total	1.45		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Lead (Pb)-Total	0.000358		0.000090	mg/L	02-SEP-16	02-SEP-16	R3541393
Magnesium (Mg)-Total	23.7		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Manganese (Mn)-Total	0.0629		0.00030	mg/L	02-SEP-16	02-SEP-16	R3541393
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Potassium (K)-Total	7.13		0.020	mg/L	02-SEP-16	02-SEP-16	R3541393
Sodium (Na)-Total	149		0.030	mg/L	02-SEP-16	02-SEP-16	R3541393
Zinc (Zn)-Total	0.0056		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Total Organic Carbon by Combustion Total Organic Carbon	10.8		0.50	mg/L		01-SEP-16	R3539363
Total Suspended Solids							
Total Suspended Solids	69.0		5.0	mg/L		31-AUG-16	R3539338
pH pH	7.65		0.10	pH units		30-AUG-16	R3538902
L1820134-4 ARV-6							
Sampled By: CLIENT on 25-AUG-16 @ 11:22							
Matrix: EFF							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		29-AUG-16	R3537764
Toluene	<0.0010		0.0010	mg/L		29-AUG-16	R3537764

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14920424 4 ADV C							
L1820134-4 ARV-6							
Sampled By: CLIENT on 25-AUG-16 @ 11:22							
Matrix: EFF							
BTX plus F1 by GCMS Ethyl benzene	-0.000E0		0.00050	ma/l		20 110 16	D2527764
o-Xylene	<0.00050 0.00098		0.00050 0.00050	mg/L mg/L		29-AUG-16 29-AUG-16	R3537764 R3537764
m+p-Xylenes	0.00098		0.00050	mg/L		29-AUG-16 29-AUG-16	R3537764
F1 (C6-C10)	<0.10		0.00030	mg/L		29-AUG-10 29-AUG-16	R3537764
Surrogate: 4-Bromofluorobenzene (SS)	101.4		70-130	//g/L %		29-AUG-16	R3537764
CCME PHC F2-F4 in Water	101.4		70 100	70		207.00 10	110007704
F2 (C10-C16)	<0.10		0.10	mg/L	29-AUG-16	29-AUG-16	R3536726
F3 (C16-C34)	0.32		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726
F4 (C34-C50)	<0.25		0.25	mg/L	29-AUG-16	29-AUG-16	R3536726
Surrogate: 2-Bromobenzotrifluoride	95.4		60-140	%	29-AUG-16	29-AUG-16	R3536726
CCME Total Hydrocarbons							
F1-BTEX	<0.10		0.10	mg/L		08-SEP-16	
F2-Naphth	<0.10		0.10	mg/L		08-SEP-16	
F3-PAH	0.32		0.25	mg/L		08-SEP-16	
Total Hydrocarbons (C6-C50)	<0.38		0.38	mg/L		08-SEP-16	
Sum of Xylene Isomer Concentrations						04 41:0 :-	
Xylenes (Total)	0.0018		0.0015	mg/L		31-AUG-16	
Polyaromatic Hydrocarbons (PAHs)	0.000040		0.000000	a/I	04 CED 46	06-SEP-16	D0540440
1-Methyl Naphthalene 2-Methyl Naphthalene	0.000040 0.000032		0.000020 0.000020	mg/L	01-SEP-16 01-SEP-16	06-SEP-16 06-SEP-16	R3543410
Acenaphthene	<0.000032		0.000020	mg/L mg/L	01-SEP-16	06-SEP-16	R3543410 R3543410
Acenaphthylene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Anthracene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Acridine	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)anthracene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(a)pyrene	<0.000010		0.0000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Chrysene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Dibenzo(a,h)anthracene	<0.000050		0.0000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Fluoranthene	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Fluorene	0.000021		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Naphthalene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Phenanthrene	<0.000050		0.000050	mg/L	01-SEP-16	06-SEP-16	R3543410
Pyrene	<0.000010		0.000010	mg/L	01-SEP-16	06-SEP-16	R3543410
Quinoline	<0.000020		0.000020	mg/L	01-SEP-16	06-SEP-16	R3543410
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acenaphthene d10	85.1		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Acridine d9	107.3		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Chrysene d12	93.1		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Naphthalene d8	80.8		40-130	%	01-SEP-16	06-SEP-16	R3543410
Surrogate: Phenanthrene d10 Nunavut WW Group 1	88.5		40-130	%	01-SEP-16	06-SEP-16	R3543410
-							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	118		1.2	mg/L		01-SEP-16	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-16	
Alkalinity, Hydroxide	201		0.24	m a/l		01 000 40	
Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-16	

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-4 ARV-6							
L1820134-4 ARV-6 Sampled By: CLIENT on 25-AUG-16 @ 11:22							
Matrix: EFF							
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	97.0		1.0	mg/L		30-AUG-16	R3538902
Ammonia by colour Ammonia, Total (as N)	0.138		0.010	mg/L		30-AUG-16	R3537825
Biochemical Oxygen Demand (BOD)	0.136		0.010	IIIg/L		30-A0G-10	K3537625
Biochemical Oxygen Demand	5.1		2.0	mg/L		27-AUG-16	R3539943
Carbonaceous BOD BOD Carbonaceous	<2.0		2.0	mg/L		27-AUG-16	R3539943
Chloride in Water by IC							
Chloride (CI)	267		1.0	mg/L		29-AUG-16	R3537862
Conductivity Conductivity	1070		1.0	umhos/cm		30-AUG-16	R3538902
Fecal Coliform Fecal Coliforms	<3		3	MPN/100mL		27-AUG-16	D3530400
Hardness Calculated	< 3		٥	IVIE IN/ IUUIIIL		21-AUG-10	R3538480
Hardness (as CaCO3)	253		0.30	mg/L		08-SEP-16	
Mercury Total Mercury (Hg)-Total	<0.000020		0.000020	mg/L	31-AUG-16	31-AUG-16	R3538895
Nitrate in Water by IC					017100 10		
Nitrate (as N) Nitrate+Nitrite	0.159		0.040	mg/L		29-AUG-16	R3537862
Nitrate and Nitrite as N	0.159		0.070	mg/L		31-AUG-16	
Nitrite in Water by IC Nitrite (as N)	<0.020	DLM	0.020	mg/L		29-AUG-16	R3537862
Oil & Grease - Gravimetric	<0.020	DEIVI	0.020	IIIg/L		29-A00-10	K3337602
Oil and Grease	<5.0		5.0	mg/L		02-SEP-16	R3542635
Phenol (4AAP) Phenols (4AAP)	0.0037		0.0010	mg/L		01-SEP-16	R3539221
Phosphorus, Total	0.0037		0.0010	mg/L		0102110	100000221
Phosphorus (P)-Total	0.305		0.010	mg/L		01-SEP-16	R3538987
Sulfate in Water by IC Sulfate (SO4)	3.22		0.60	mg/L		29-AUG-16	R3537862
Total Metals by ICP-MS							
Aluminum (Al)-Total	1.69		0.0050	mg/L	02-SEP-16	02-SEP-16	R3541393
Arsenic (As)-Total	0.00127		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Cadmium (Cd)-Total	0.000091		0.000010	mg/L	02-SEP-16	02-SEP-16	R3541393
Calcium (Ca)-Total	74.2		0.10	mg/L	02-SEP-16	02-SEP-16	R3541393
Chromium (Cr)-Total	0.0036		0.0010	mg/L	02-SEP-16	02-SEP-16	R3541393
Cobalt (Co)-Total	0.00361		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Copper (Cu)-Total	0.00403		0.00020	mg/L	02-SEP-16	02-SEP-16	R3541393
Iron (Fe)-Total	17.7		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Lead (Pb)-Total	0.00198		0.000090	mg/L	02-SEP-16	02-SEP-16	R3541393
Magnesium (Mg)-Total	16.4		0.010	mg/L	02-SEP-16	02-SEP-16	R3541393
Manganese (Mn)-Total	2.48		0.030	mg/L	02-SEP-16	07-SEP-16	R3543240
Nickel (Ni)-Total	0.0039		0.0020	mg/L	02-SEP-16	02-SEP-16	R3541393
Potassium (K)-Total Sodium (Na)-Total	8.30		0.020	mg/L	02-SEP-16	02-SEP-16	R3541393
Zinc (Zn)-Total	71.1 0.0433		0.030	mg/L	02-SEP-16 02-SEP-16	02-SEP-16 02-SEP-16	R3541393
	0.0433		0.0020	mg/L	02-3EF-10	02-3EF-10	R3541393
Total Organic Carbon by Combustion Total Organic Carbon	11.0		0.50	mg/L		01-SEP-16	R3539363
Total Suspended Solids	000		40	c: //		24 4110 42	Dococco
Total Suspended Solids pH	228		13	mg/L		31-AUG-16	R3539338
F							

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

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Sample Details	s/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1820134-4 Sampled By: Matrix: pH pH	ARV-6 CLIENT on 25-AUG-16 @ 11:22 EFF	6.87		0.10	pH units		30-AUG-16	R3538902

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

L1820134 CONTD....

Reference Information

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Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
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**	
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION	

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.

ALK-HCO3HCO3-CALC- Water Alkalinity, Bicarbonate CALCULATION WP

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L

ALK-OHOH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO3) APHA 2320B

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

BOD-CBOD-WP Water Carbonaceous BOD APHA 5210 B

Samples are diluted and seeded, have TCMP added to inhibit nitrogenous demands, and then are incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BOD-WP Water Biochemical Oxygen Demand (BOD) APHA 5210 B

Samples are diluted and seeded and then incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BTEXS+F1-HSMS-WP Water BTX plus F1 by GCMS EPA 8260C / EPA 5021A

The water sample, with added reagents, is heated in a sealed vial to equilibrium. The headspace from the vial is transfered into a gas chromatograph. Target compound concentrations are measured using mass spectrometry detection.

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.

CL-IC-N-WP Water Chloride in Water by IC EPA 300.1 (mod)

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

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-TOT-WP Water Hardness Calculated HARDNESS CALCULATED

F1-F4-CALC-WP Water CCME Total Hydrocarbons CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.

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Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

- 2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
- 3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

- 1. All extraction and analysis holding times were met.
- 2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
- 3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
- 4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F2-F4-FID-WP Water CCME PHC F2-F4 in Water EPA 3511

Petroleum hydrocarbons in water are determined by liquid-liquid micro-scale solvent extraction using a reciprocal shaker extraction apparatus prior to capillary column gas chromatography with flame ionization detection (GC-FID) analysis.

FC-MPN-WP Water Fecal Coliform APHA 9221E

The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. Aliquots from three or more decimal dilutions of a sample are inoculated into tubes containing enrichment media and incubated at 35C for 48 – 3 hours. Sample aliquots exhibiting the characteristic positive response are transferred to various selective media for the coliform group(s) of interest and incubated at specific temperatures and times. The Most Probable Number for each target group is statistically derived from a standard MPN table based on the combinations of positive outcomes at each dilution.

The fecal (thermotolerant) coliform group may include organisms not originating in the intestines of warm-blooded animals.

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-T-L-MS-WP Water Total Metals by ICP-MS APHA 3030E/EPA 6020A-TL

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

NH3-COL-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-N-WP Water Nitrite in Water by IC EPA 300.1 (mod)

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

NO3-IC-N-WP Water Nitrate in Water by IC EPA 300.1 (mod)

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

OG-GRAV-WP Water Oil & Grease - Gravimetric EPA 1664 (modified)

Water samples are acidified and extracted with hexane; the hexane extract is collected in a pre-weighed vial. The solvent is evaporated and Total Oil & Grease is determined from the weight of the residue in the vial.

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 Phosphorus is determined colourimetrically after persulphate digestion of the sample.

PAH,PANH-WP Water Polyaromatic Hydrocarbons (PAHs) EPA SW 846/8270-GC/MS

Water is spiked with a surrogate spike mix and extracted using solvent extraction techniques. Analysis is performed by GC/MS in the selected ion monitoring (SIM) mode.

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.

PHENOLS-4AAP-WT Water Phenol (4AAP) EPA 9066

An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.

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

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

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

L1820134 CONTD....

PAGE 13 of 13 Version: FINAL

Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.

XYLENES-SUM-CALC-

Water

Sum of Xylene Isomer Concentrations

CALCULATED RESULT

WP

Total xylenes represents the sum of o-xylene and m&p-xylene.

** 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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, 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.

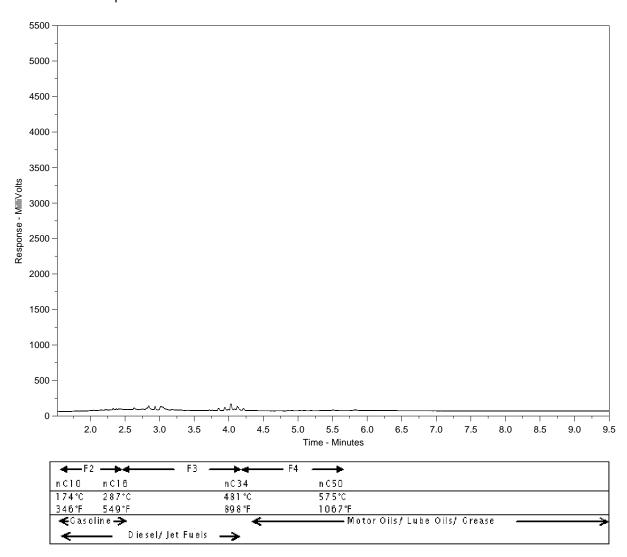
Test results reported relate only to the samples as received by the laboratory.

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.



ALS Sample ID: L1820134-1 Client Sample ID: ARV-2



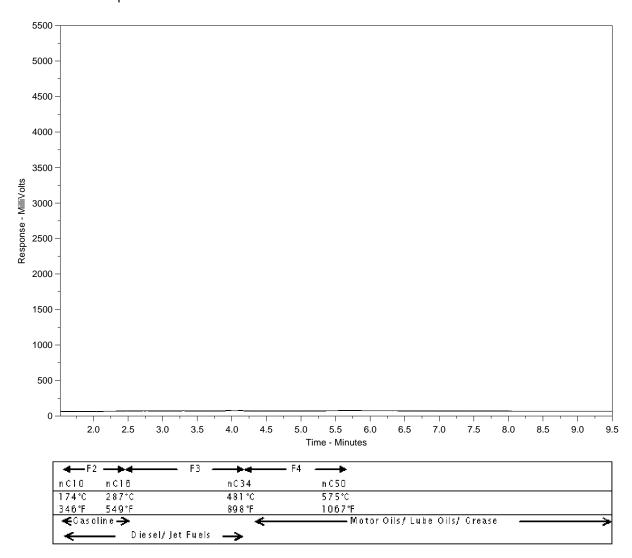
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1820134-2 Client Sample ID: ARV-4



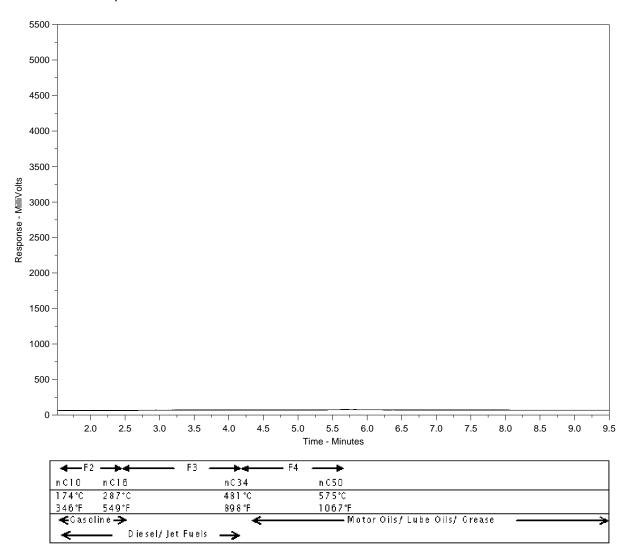
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1820134-3 Client Sample ID: ARV-5



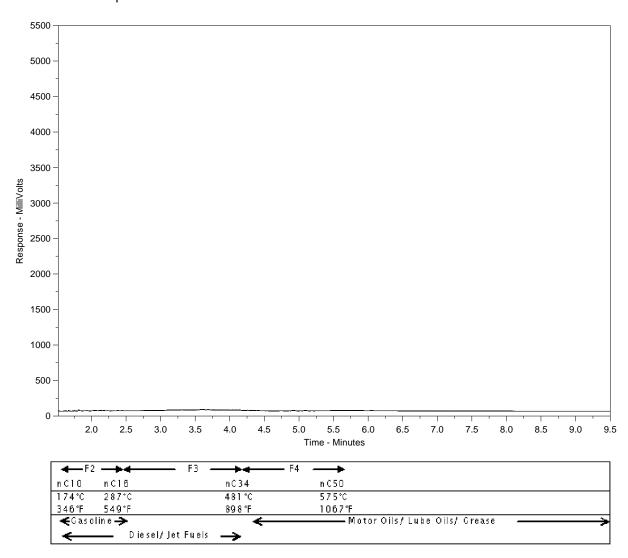
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



ALS Sample ID: L1820134-4 Client Sample ID: ARV-6



The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



_1820134-COFC

-	coc Number: 15 - 571747	
	Page 1 of 1 L1870134	

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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 book page of the white - report copy.

^{1.} If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Hamlet of Arviat

ATTN: STEVEN ENGLAND

PO Box 150

Arviat NU XOC 0E0

Date Received: 19-SEP-16

Report Date: 28-SEP-16 11:51 (MT)

Version: FINAL

Client Phone: 867-857-2841

Certificate of Analysis

Lab Work Order #: L1830578
Project P.O. #: NOT SUBMITTED

Job Reference: C of C Numbers: Legal Site Desc:

Mohl

Hua Wo

Chemistry Laboratory Manager

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

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

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



Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1830578-1 ARV-2							
Sampled By: CLIENT on 16-SEP-16 @ 08:48							
Matrix:							
Numerat WIN Crown 4							
Nunavut WW Group 1 Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	704		1.2	mg/L		21-SEP-16	
Alkalinity, Carbonate							
Carbonate (CO3) Alkalinity, Hydroxide	<0.60		0.60	mg/L		21-SEP-16	
Hydroxide (OH)	<0.34		0.34	mg/L		21-SEP-16	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	577		1.0	mg/L		20-SEP-16	R3553460
Ammonia by colour Ammonia, Total (as N)	15.2		2.0	mg/L		22-SEP-16	R3555604
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	18.1		6.0	mg/L		19-SEP-16	R3557751
Carbonaceous BOD BOD Carbonaceous	15.7		6.0	mg/L		19-SEP-16	R3557751
Chloride in Water by IC			0.0				
Chloride (CI)	371		10	mg/L		19-SEP-16	R3555562
Conductivity Conductivity	2760		1.0	umhos/cm		20-SEP-16	R3553460
Fecal Coliform	2700		1.0	diiii103/0111		20 021 10	110000-000
Fecal Coliforms	9		3	MPN/100mL		19-SEP-16	R3557050
Hardness Calculated Hardness (as CaCO3)	1040	HTC	0.25	mg/L		27-SEP-16	
Mercury Total	1040	1110	0.23	IIIg/L		21-321-10	
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	22-SEP-16	22-SEP-16	R3555079
Nitrate in Water by IC	0.40	DLM	0.40			19-SEP-16	Dattero
Nitrate (as N) Nitrate+Nitrite	<0.40	DEIVI	0.40	mg/L		19-357-10	R3555562
Nitrate and Nitrite as N	<0.45		0.45	mg/L		26-SEP-16	
Nitrite in Water by IC	0.00	DLM	0.00			40.0ED 40	Doctor
Nitrite (as N) Oil & Grease - Gravimetric	<0.20	DLIVI	0.20	mg/L		19-SEP-16	R3555562
Oil and Grease	<5.0		5.0	mg/L		22-SEP-16	R3555637
Phenol (4AAP)	0.0000		0.0040	/1		07.050.40	D0550570
Phenols (4AAP) Phosphorus, Total	0.0063		0.0010	mg/L		27-SEP-16	R3558578
Phosphorus (P)-Total	1.06		0.010	mg/L		22-SEP-16	R3554466
Sulfate in Water by IC	F45		0.0	m c://		40 CED 40	Doctor
Sulfate (SO4) Total Metals by ICP-MS	515		6.0	mg/L		19-SEP-16	R3555562
Aluminum (Al)-Total	0.0264		0.0050	mg/L	26-SEP-16	26-SEP-16	R3557535
Arsenic (As)-Total	0.00584		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Cadmium (Cd)-Total	0.000077		0.000010	mg/L	26-SEP-16	26-SEP-16	R3557535
Calcium (Ca)-Total Chromium (Cr)-Total	325		0.10	mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535 R3557535
Cobalt (Co)-Total	<0.0010 0.00087		0.0010 0.00020	mg/L mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535 R3557535
Copper (Cu)-Total	0.00894		0.00020	mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535
Iron (Fe)-Total	1.15		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Lead (Pb)-Total	0.000973		0.00090	mg/L	26-SEP-16	26-SEP-16	R3557535
Magnesium (Mg)-Total	56.1		0.00090	mg/L	26-SEP-16	26-SEP-16	R3557535
Manganese (Mn)-Total	0.917		0.00030	mg/L	26-SEP-16	26-SEP-16	R3557535
Nickel (Ni)-Total	0.0063		0.00030	mg/L	26-SEP-16	26-SEP-16	R3557535
	3.0000		0.0020	9, -			. 10007 000

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1830578-1 ARV-2							
Sampled By: CLIENT on 16-SEP-16 @ 08:48							
Matrix:							
Total Metals by ICP-MS Potassium (K)-Total	48.8		0.020	mg/L	26-SEP-16	26-SEP-16	R3557535
Sodium (Na)-Total	246		0.030	mg/L	26-SEP-16	26-SEP-16	R3557535
Zinc (Zn)-Total	0.0218		0.0020	mg/L	26-SEP-16	26-SEP-16	R3557535
Total Organic Carbon by Combustion Total Organic Carbon	32.9		0.50	mg/L		20-SEP-16	R3553194
Total Suspended Solids Total Suspended Solids	26		10	mg/L		23-SEP-16	R3558065
pH			-				
pH	8.00		0.10	pH units		20-SEP-16	R3553460
L1830578-2 ARV-4 Sampled By: CLIENT on 16-SEP-16 @ 08:26							
Matrix:							
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	192		1.2	mg/L		21-SEP-16	
Alkalinity, Carbonate							
Carbonate (CO3) Alkalinity, Hydroxide	<0.60		0.60	mg/L		21-SEP-16	
Hydroxide (OH)	<0.34		0.34	mg/L		21-SEP-16	
Alkalinity, Total (as CaCO3) Alkalinity, Total (as CaCO3)	157		1.0	mg/L		20-SEP-16	R3553460
Ammonia by colour Ammonia, Total (as N)	16.7		0.50	mg/L		22-SEP-16	R3555604
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	6.3		2.0	mg/L		19-SEP-16	R3557751
Carbonaceous BOD BOD Carbonaceous	3.5		2.0	mg/L		19-SEP-16	R3557751
Chloride in Water by IC Chloride (CI)						19-SEP-16	R3555562
Conductivity	318		2.5	mg/L		19-357-10	K3333302
Conductivity	1360		1.0	umhos/cm		20-SEP-16	R3553460
Fecal Coliform Fecal Coliforms	240		3	MPN/100mL		19-SEP-16	R3557050
Hardness Calculated Hardness (as CaCO3)	142	нтс	0.25	mg/L		27-SEP-16	
Mercury Total Mercury (Hg)-Total	<0.000020		0.000020	mg/L	22-SEP-16	22-SEP-16	R3555079
Nitrate in Water by IC		DLM			J 10		
Nitrate (as N) Nitrate+Nitrite	0.48	DLIVI	0.10	mg/L		19-SEP-16	R3555562
Nitrate and Nitrite as N Nitrite in Water by IC	0.48		0.11	mg/L		26-SEP-16	
Nitrite (as N)	<0.050	DLM	0.050	mg/L		19-SEP-16	R3555562
Oil & Grease - Gravimetric Oil and Grease	<5.0		5.0	mg/L		22-SEP-16	R3555637
Phenol (4AAP) Phenols (4AAP)	0.0045		0.0010	mg/L		27-SEP-16	R3558578
Phosphorus, Total Phosphorus (P)-Total	2.18		0.010	mg/L		22-SEP-16	R3554466
Sulfate in Water by IC							
Sulfate (SO4)	26.7		1.5	mg/L		19-SEP-16	R3555562

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1830578-2 ARV-4							
Sampled By: CLIENT on 16-SEP-16 @ 08:26							
Matrix:							
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0375		0.0050	mg/L	26-SEP-16	26-SEP-16	R3557535
Arsenic (As)-Total	0.00364		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Cadmium (Cd)-Total	0.000014		0.000010	mg/L	26-SEP-16	26-SEP-16	R3557535
Calcium (Ca)-Total	23.9		0.10	mg/L	26-SEP-16	26-SEP-16	R3557535
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-16	26-SEP-16	R3557535
Cobalt (Co)-Total	0.00118		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Copper (Cu)-Total	0.00403		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Iron (Fe)-Total	1.59		0.010	mg/L	26-SEP-16	26-SEP-16	R3557535
Lead (Pb)-Total Magnesium (Mg)-Total	0.000188 20.1		0.000090 0.010	mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535 R3557535
Manganese (Mn)-Total	0.451		0.010	mg/L mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535
Nickel (Ni)-Total	0.451		0.00030	mg/L	26-SEP-16	26-SEP-16	R3557535
Potassium (K)-Total	19.4		0.020	mg/L	26-SEP-16	26-SEP-16	R3557535
Sodium (Na)-Total	181		0.030	mg/L	26-SEP-16	26-SEP-16	R3557535
Zinc (Zn)-Total	0.0027		0.0020	mg/L	26-SEP-16	26-SEP-16	R3557535
Total Organic Carbon by Combustion Total Organic Carbon	18.0		0.50	mg/L		20-SEP-16	R3553194
Total Suspended Solids							
Total Suspended Solids pH	<10		10	mg/L		23-SEP-16	R3558065
pH	7.41		0.10	pH units		20-SEP-16	R3553460
L1830578-3 ARV-5							
Sampled By: CLIENT on 16-SEP-16 @ 09:02							
Matrix:							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	78.2		1.2	mg/L		21-SEP-16	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		21-SEP-16	
Alkalinity, Hydroxide			2.00	3-			
Hydroxide (OH)	<0.34		0.34	mg/L		21-SEP-16	
Alkalinity, Total (as CaCO3)							_
Alkalinity, Total (as CaCO3)	64.1		1.0	mg/L		20-SEP-16	R3553460
Ammonia by colour Ammonia, Total (as N)	0.054		0.010	mg/L		22-SEP-16	R3555604
Biochemical Oxygen Demand (BOD)						10.055 15	Doct
Biochemical Oxygen Demand	<2.0		2.0	mg/L		19-SEP-16	R3557751
Carbonaceous BOD BOD Carbonaceous	<2.0		2.0	mg/L		19-SEP-16	R3557751
Chloride in Water by IC Chloride (CI)	185		0.50	mg/L		19-SEP-16	R3555562
Conductivity Conductivity	735		1.0	umhos/cm		20-SEP-16	R3553460
Fecal Coliform	. 55			30, 3.11			
Fecal Coliforms Hardness Calculated	43		3	MPN/100mL		19-SEP-16	R3557050
Hardness (as CaCO3)	120	нтс	0.25	mg/L		27-SEP-16	
Mercury Total Mercury (Hg)-Total	<0.000020		0.000020	mg/L	22-SEP-16	22-SEP-16	R3555079
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		19-SEP-16	R3555562

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

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
14000F70 2 ADV 5							
L1830578-3 ARV-5							
Sampled By: CLIENT on 16-SEP-16 @ 09:02							
Matrix:							
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		26-SEP-16	
Nitrite in Water by IC	<0.070		0.070	IIIg/L		20-3LF-10	
Nitrite (as N)	<0.010		0.010	mg/L		19-SEP-16	R3555562
Oil & Grease - Gravimetric	10.0.0		0.0.0				
Oil and Grease	<5.0		5.0	mg/L		22-SEP-16	R3555637
Phenol (4AAP)							
Phenols (4AAP)	0.0014		0.0010	mg/L		27-SEP-16	R3558578
Phosphorus, Total				,,		00.055.40	
Phosphorus (P)-Total	0.137		0.010	mg/L		22-SEP-16	R3554466
Sulfate in Water by IC Sulfate (SO4)	11.8		0.30	mg/L		19-SEP-16	R3555562
Total Metals by ICP-MS	11.0		0.00	g, L		10 021 -10	.10000002
Aluminum (Al)-Total	0.0237		0.0050	mg/L	26-SEP-16	26-SEP-16	R3557535
Arsenic (As)-Total	0.00036		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	26-SEP-16	26-SEP-16	R3557535
Calcium (Ca)-Total	22.5		0.10	mg/L	26-SEP-16	26-SEP-16	R3557535
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	26-SEP-16	26-SEP-16	R3557535
Cobalt (Co)-Total	<0.00020		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Copper (Cu)-Total	0.00040		0.00020	mg/L	26-SEP-16	26-SEP-16	R3557535
Iron (Fe)-Total	0.882		0.010	mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535
Lead (Pb)-Total Magnesium (Mg)-Total	<0.000090 15.6		0.000090 0.010	mg/L mg/L	26-SEP-16 26-SEP-16	26-SEP-16 26-SEP-16	R3557535 R3557535
Manganese (Mn)-Total	0.0253		0.00030	mg/L	26-SEP-16	26-SEP-16	R3557535
Nickel (Ni)-Total	<0.0020		0.0000	mg/L	26-SEP-16	26-SEP-16	R3557535
Potassium (K)-Total	6.27		0.020	mg/L	26-SEP-16	26-SEP-16	R3557535
Sodium (Na)-Total	95.2		0.030	mg/L	26-SEP-16	26-SEP-16	R3557535
Zinc (Zn)-Total	0.0032		0.0020	mg/L	26-SEP-16	26-SEP-16	R3557535
Total Organic Carbon by Combustion							
Total Organic Carbon	8.46		0.50	mg/L		20-SEP-16	R3553194
Total Suspended Solids							
Total Suspended Solids	7.0		5.0	mg/L		23-SEP-16	R3558065
pH pH	7.63		0.10	pH units		20-SEP-16	R3553460
L1830578-4 ARV-6	7.00		0.10	pri driito		20 021 10	110000400
Sampled By: CLIENT on 16-SEP-16 @ 09:15							
Matrix:							
Walls.							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	97.7		1.2	mg/L		21-SEP-16	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		21-SEP-16	
Alkalinity, Hydroxide	<0.00		0.00	ilig/L		Z1-0EF-10	
Hydroxide (OH)	<0.34		0.34	mg/L		21-SEP-16	
Alkalinity, Total (as CaCO3)				J			
Alkalinity, Total (as CaCO3)	80.1		1.0	mg/L		20-SEP-16	R3553460
Ammonia by colour	_		_				
Ammonia, Total (as N)	0.83		0.10	mg/L		22-SEP-16	R3555604
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	5.1		2.0	mg/L		19-SEP-16	R3557751
Carbonaceous BOD	3.1		2.0	ilig/L		19-055-10	13337731
BOD Carbonaceous	2.2		2.0	mg/L		19-SEP-16	R3557751
<u> </u>				<u> </u>	I.	5	

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

Conductivity S34	
Sampled By: CLIENT on 16-SEP-16 @ 09:15 Matrix: Chloride in Water by IC Chloride (Cl) 215 1.0 mg/L 19-SEP-16 R3 Conductivity 834 1.0 umhos/cm 20-SEP-16 R3 R5 R5 R5 R5 R5 R5 R5	
Matrix: Chloride in Water by IC 215 1.0 mg/L 19-SEP-16 R3 Conductivity 834 1.0 umhos/cm 20-SEP-16 R3 Fecal Coliform 43 3 MPN/100mL 19-SEP-16 R3 Hardness Calculated Hardness (as CaCO3) 221 HTC 0.25 mg/L 28-SEP-16 R3 Mercury Total Mercury Total <0.000020	
Chloride in Water by IC Chloride (CI) 215 1.0 mg/L 19-SEP-16 R3 R3 R5-R0 R5-R0 R3 R5-	
Chloride (Cl)	
Conductivity R34	3555562
Fecal Coliform Fecal Coliforms Secal Colif	
Fecal Coliforms	3553460
Hardness Calculated Hardness (as CaCO3)	3557050
Hardness (as CaCO3)	.5557 050
Mercury (Hg)-Total	
Nitrate in Water by IC Nitrate (as N) <0.040	
Nitrate (as N)	3555079
Nitrate+Nitrite Nitrate and Nitrite as N <0.070	3555562
Nitrite in Water by IC Nitrite (as N) <0.020	
Nitrite (as N)	
Oil & Grease - Gravimetric <5.0	255550
Oil and Grease <5.0 5.0 mg/L 22-SEP-16 R3 Phenol (4AAP) 0.0030 0.0010 mg/L 28-SEP-16 R3 Phosphorus, Total 0.043 0.010 mg/L 22-SEP-16 R3 Sulfate in Water by IC Sulfate (SO4) <0.60 DLM 0.60 mg/L 19-SEP-16 R3 Total Metals by ICP-MS <0.60 DLM 0.60 mg/L 19-SEP-16 R3	3555562
Phenols (4AAP) 0.0030 0.0010 mg/L 28-SEP-16 R3 Phosphorus, Total 0.043 0.010 mg/L 22-SEP-16 R3 Sulfate in Water by IC Sulfate (SO4) <0.60 DLM 0.60 mg/L 19-SEP-16 R3 Total Metals by ICP-MS <0.60 DLM 0.60 mg/L 19-SEP-16 R3	3555637
Phosphorus, Total 0.043 0.010 mg/L 22-SEP-16 R3 Sulfate in Water by IC Sulfate (SO4) <0.60	
Phosphorus (P)-Total	3558854
Sulfate in Water by IC Sulfate (SO4) <0.60 DLM 0.60 mg/L 19-SEP-16 R3 Total Metals by ICP-MS	3554466
Total Metals by ICP-MS	.000 1 100
	3555562
Aluminum (Al)-Total	0557505
	3557535 3557535
	3557535
	3557535
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	3557535
	3557535
	3557535
	3557535
Magnesium (Mg)-Total 14.5 0.010 mg/L 26-SEP-16 26-SEP-16 R3	3557535
Manganese (Mn)-Total 2.02 0.030 mg/L 26-SEP-16 27-SEP-16 R3	3558558
	3557535
	3557535
	3557535
	3557535
Total Organic Carbon by Combustion Total Organic Carbon 8.61 0.50 mg/L 20-SEP-16 R3	3553194
Total Suspended Solids	
	3558065
pH 0.10 pH units 20-SEP-16 R3	3553460
0.01 U.10 PH UIIIS 20-SEP-10 R3	.5555460

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

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Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
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**
ALK-CO3CO3-CALC-WP	Water	Alkalinity, Carbonate	CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by carbonate is calculated and reported as mg CO3 2-/L.

ALK-HCO3HCO3-CALC- Water Alkalinity, Bicarbonate CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by bicarbonate is calculated and reported as mg HCO3-/L

ALK-OHOH-CALC-WP Water Alkalinity, Hydroxide CALCULATION

The Alkalinity of water is a measure of its acid neutralizing capacity. Alkalinity is imparted by bicarbonate, carbonate and hydroxide components of water. The fraction of alkalinity contributed by hydroxide is calculated and reported as mg OH-/L.

ALK-TITR-WP Water Alkalinity, Total (as CaCO3) APHA 2320B

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

BOD-CBOD-WP Water Carbonaceous BOD APHA 5210 B

Samples are diluted and seeded, have TCMP added to inhibit nitrogenous demands, and then are incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

BOD-WP Water Biochemical Oxygen Demand (BOD) APHA 5210 B

Samples are diluted and seeded and then incubated in airtight bottles at 20°C for 5 days. Dissolved oxygen is measured initially and after incubation, and results are computed from the difference between initial and final DO.

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.

CL-IC-N-WP Water Chloride in Water by IC EPA 300.1 (mod)

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

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.

FC-MPN-WP Water Fecal Coliform APHA 9221E

The Most Probable Number (MPN) method is based on the Multiple Tube Fermentation technique. Aliquots from three or more decimal dilutions of a sample are inoculated into tubes containing enrichment media and incubated at 35C for 48 – 3 hours. Sample aliquots exhibiting the characteristic positive response are transferred to various selective media for the coliform group(s) of interest and incubated at specific temperatures and times. The Most Probable Number for each target group is statistically derived from a standard MPN table based on the combinations of positive outcomes at each dilution.

The fecal (thermotolerant) coliform group may include organisms not originating in the intestines of warm-blooded animals.

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.

HARDNESS-CALC-WP Water Hardness Calculated HARDNESS CALCULATED

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.

L1830578 CONTD....

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Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

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-T-L-MS-WP Water Total Metals by ICP-MS APHA 3030E/EPA 6020A-TL

This analysis involves preliminary sample treatment by hotblock acid digestion (APHA 3030E). Instrumental analysis is by inductively coupled plasma -

mass spectrometry (EPA Method 6020A).

NH3-COL-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-N-WP Water Nitrite in Water by IC EPA 300.1 (mod)

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

NO3-IC-N-WP Water Nitrate in Water by IC EPA 300.1 (mod)

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

OG-GRAV-WP Water Oil & Grease - Gravimetric EPA 1664 (modified)

Water samples are acidified and extracted with hexane; the hexane extract is collected in a pre-weighed vial. The solvent is evaporated and Total Oil &

Grease is determined from the weight of the residue in the vial.

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 Phosphorus 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.

PHENOLS-4AAP-WT Water Phenol (4AAP) EPA 9066

An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a

red complex which is measured colorimetrically.

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

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

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

Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.

** 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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

L1830578 CONTD....

Reference Information

PAGE 9 of 9 Version: FINAL

Test Method References:

ALS Test Code Matrix Method Reference** **Test Description**

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.



Chain of Custody (COC) / Analytical Request Form

COC Number: 15 - 571748

L1830578-COFC

Page / of

Canada Toll Free: 1 800 668 9878

Report To	Contact and company name below will appear on the final report	Report Format / L			Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply										
Company;	thought of Arrivat	Select Report Format: POF EXCEL EDD (DIGITAL)			Regular [R] Standard TAT if received by 3 pm - business days - no surcharges apply										
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Drinking Water (DW) Samples' (client use)		(electronic COC only)			Frozen SIF Observations Yes No										
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REFER TO BACK	REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY														



Hazardous Materials Spill Database

Environment Division of ENR

Scotia 6, 5102-50th Avenue; Yellowknife, NT X1A 3S8 Phone: (867) 873-7654 Fax: (867) 873-0221

Sorted By: SpillNo for the year

s):

Spill No.	Date	Ter	Region	Location	Site Description	Commodity	Quantity	Source	Agency
2016127	2016-04-19	NU	KEE	Arviat	Arviat, 802 10th Avenue, unit 271	No.2 Home heating fuel	0 L	ST<	GN
2016173	2016-05-16	NU	KEE	Arviat	Southwest of the Northern Store	Diesel	100 L	ST<	GN
2016193	2016-05-26	NU	KEE	Arviat	Arviat, 801 8th Street	Heating Oil	100 L	ST<	GN
2016194	2016-05-26	NU	KEE	Arviat	801- 8th Street	Heating Fuel	100 L	ST<	GN
2016225	2016-06-17	NU	KEE	Arviat	Arviat, 404 A 5th Street	Heating Fuel	200 L	DRUM	GN

Total Spills on this Report: 5

This report contains information regarding spills that were reported to the NWT 24-Hour Spill Line. The absence of information on any particular location in no way guarantees that contamination has not occurred at that location.

LEGEND

Region: BAF - Baffin DEH - Deh Cho INU - Inuvik KEE - Keewatin KIT - Kitikmeot NSL - North Slave	Source: AIR - Aircraft DRUM - Drum or Barrel MV - Marine Vessel NS - Natural Seepage OTH - Other Transportation	PL - Pipe or Line RT - Rail Train SL - Sewage Lagoon ST< - Storage Tank <4000 litres ST> - Storage Tank >4000 litres	Agency: CCG - Canadian Coast Guard EP - Environment Canada GN - Government of Nunavut GNWT - Government of Northwest Territories ILA - Inuvialiut Land Administration INAC - Indian and Northern Affairs Canada
NSL - North Slave SAH - Sahtu SSL - South Slave	·	,	INAC - Indian and Northern Affairs Canada NEB - National Energy Board