YEAR BEING REPORTED: 2015

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License No. **3BM-COR1521** issued to the Hamlet of Coral Harbour.

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 station COR-1, as well as detailed chemical, physical and biological analysis required at COR-3, COR-4 and COR-6.

Month Reported	Quantity of Water Obtained from all sources (m³)	Quantity of Sewage Waste Discharged (Estimated, m³)
January	3,208.95420	3,208.95420
February	3,250.01700	3,250.01700
March	3,792.47000	3,792.47000
April	3,148.41100	3,148.41100
Мау	3,342.13800	3,342.13800
June	3,386.80650	3,386.80650
July	3,266.22410	3,266.22410
August	3,469.81600	3,469.81600
September	3,436.55200	3,436.55200
October	3,529.77600	3,529.77600
November	3,548.46900	3,548.46900
December	3,322.41700	3,322.41700
ANNUAL TOTAL	40,702.05080	40,702.05080

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;
 - Construction for the new Water Treatment Plant was delayed; construction scheduled to begin summer 2016 and be completed by the end of 2016.
 - No modifications and/or major work was carried out at the Solid Waste Site or the Sewage Treatment Facilities in 2015.
 - Improved segregation is taking place at the Solid Waste Site. Batteries have been collected and are stored in battery boxes.
- v. a list of unauthorized discharges and summary of follow-up action taken;
 - Spills:
 - 2014173, 2014-05-22, Public housing fuel tank unit #159, heating fuel, 30L
- vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;
 - No abandonment and restoration work took place in 2015.
 - The existing Water Truck Fill Station will be demolished in 2016. The site will not be abandoned and restored because the new Water Treatment Plant will be constructed in the same location.
- 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;
 - The Coral Harbour sewage wetlands was part of a study by Dalhousie University commissioned by GN-CGS. The *Summary of Site Specific Studies on Tundra Wetland Treatment Areas in Nunavut* report is submitted to the NWB with the Annual Report.
- viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
 - Signage for the Monitoring Program Stations will be ordered over the winter for installation summer 2016. Pictures of the signage at Monitoring Program Stations will be included in the 2016 Annual Report.
- ix. Updates or revisions to the approved Operation and Maintenance Plans.

- The *Operations and Maintenance Manual for Water, Sewage and Solid Waste Facilities at Coral Harbour, NU* was prepared by Nunami Stantec, 2010 and is currently being reviewed; an updated version of the O&M Manual will be submitted to the NWB in 2016.

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

- Licence 3BM-COR1521 was issued on April 24, 2015.
- The Hamlet is working with the Water Compliance Working Group to implement the Solid Waste Workplan goals.

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- The AANDC Inspection took place on August 11, 2015.
- The following Monitoring Program Station locations were confirmed with the AANDC Inspector:



Monitoring Program Station Identification	Description	GPS Coordinates
COR-3	Effluent from Sewage	N64°09.790'
	Containment Cell	W083°11.502'
COR-4	Station within the Wetland	N64°09.785'
		W083°11.326'
COR-5	Discharge from the Wetland	N64°09.718'
	(Compliance Point)	W083°11.243'
COR-6	Run-off from the Solid Waste	N64°09.722'
	Disposal Facility	W083°11.638
COR-7	Run-off below Waste Metals	N64°09.628'
	area.	W083°11.541'

List of Appendixes:

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

Appendix B: Weekly Inspections at Monitoring Stations – 1 page

Appendix C: Certificate of Analysis June 18, 2015 – 11 pages

Appendix D: Certificate of Analysis July 6, 2015 – 14 pages

Appendix E: Certificate of Analysis July 22, 2015 – 13 pages

Appendix F: Certificate of Analysis August 19, 2015 – 20 pages

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

3BM-COR1521 Coral Harbour Monitoring Program Results 2015

Part D, Item 2: COR-5 Effluent Quality Limits

Parameter	Maximum Average Concentration		COR-	5	
Parameter	Maximum Average Concentration	18-Jun-15	06-Jul-15	22-Jul-15	19-Aug-15
BOD ₅	30 mg/L	3.2 mg/L	12.2 mg/L	9.0 mg/L	107 mg/L
Total Suspended Solids	30 mg/L	85 mg/L	9.0 mg/L	9.0 mg/L	85 mg/L
Fecal Coliforms	1x10 ⁴ CFU/100 mL	<3 MPN/100 mL	92 MPN/100 mL	2400 MPN/100 mL	2400 MPN/100 mL
Oil and Grease	No visible sheen	<2.0 mg/L	<2.0 mg/L	<2.0 mg/L	<2.0 mg/L
pН	Between 6 and 9	7.57	8.21	7.84	8.07

unavut Water Board Licence No. 3BM-COR1521

art H: Weekly Inspections at Monitoring Program Stations, June to August oral Harbour, NU

Water Present (check) Yes No Frozen	Water Present (ch	
	Water Present (check) Yes No Frozen	Water Present (

onitoring Program Station Locations: COR-3: Effluent from Sewage Containment Cell

COR-4: Station within Wetland COR-5: Discharge from Wetland

COR-6: Run-off from the Solid Waste Disposal Facility



Hamlet of Coral Harbour ATTN: LEONIE PAMEOLIK

PO Box 30

Coral Harbour MB XOC OCO

Date Received: 19-JUN-15

Report Date: 16-JUL-15 10:47 (MT)

Version: FINAL

Client Phone: 867-925-8970

Certificate of Analysis

Lab Work Order #: L1630085
Project P.O. #: NOT SUBMITTED

Job Reference: CORAL HARBOUR MONIOTORING PROGRAM

C of C Numbers: Legal Site Desc:

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



L1630085 CONTD.... PAGE 2 of 7 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1630085-1 COR-3							
Sampled By: CLIENT on 18-JUN-15 @ 09:25							
Matrix:							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	145		1.2	mg/L		07-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		07-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		07-JUL-15	
Ammonia by colour Ammonia, Total (as N)	0.027		0.010	mg/L		22-JUN-15	R3213664
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	6.2		2.0	mg/L		20-JUN-15	R3222375
Carbonaceous BOD							
BOD Carbonaceous Chloride in Water by IC	3.4		2.0	mg/L		20-JUN-15	R3222375
Chloride (CI)	11.4		0.50	mg/L		22-JUN-15	R3215924
Conductivity							
Conductivity Fecal Coliform	251		1.0	umhos/cm		03-JUL-15	R3220935
Fecal Coliforms	9	RRR	3	MPN/100mL		19-JUN-15	R3213494
Note: ABL-Approximate Result.Reults might be biased low due to waterbath temperature being							
MBHT-The APHA 30 hour hold time was exceeded for microbiological testing. Samples processed within 48 hours from time of sampling may be valid in some cases (refer to Health Canada guidance). Hardness Calculated							
Hardness (as CaCO3)	114		0.30	mg/L		02-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	26-JUN-15	26-JUN-15	R3215797
Nitrate in Water by IC	0.000		0.000			00 11111 45	D0045004
Nitrate (as N) Nitrate+Nitrite	<0.020		0.020	mg/L		22-JUN-15	R3215924
Nitrate and Nitrite as N	<0.070		0.070	mg/L		27-JUN-15	
Nitrite in Water by IC Nitrite (as N)	<0.010		0.010	mg/L		22-JUN-15	R3215924
Oil and Grease, Total Oil and Grease, Total	2.4		2.0	mg/L	26-JUN-15	26-JUN-15	R3216311
Phenol (4AAP)	۲.۰۰		2.0	9, =	20 0011 10		
Phenols (4AAP)	<0.0010		0.0010	mg/L		02-JUL-15	R3219157
Phosphorus, Total Phosphorus (P)-Total	0.212		0.010	mg/L		26-JUN-15	R3215537
Sulfate in Water by IC Sulfate (SO4)	7.43		0.30	mg/L		22-JUN-15	R3215924
Total Alkalinity as CaCO3 Alkalinity, Total (as CaCO3)	119		1.0	mg/L		03-JUL-15	R3220935
Total Metals by ICP-MS							
Aluminum (AI)-Total	0.0370		0.0050	mg/L	25-JUN-15	30-JUN-15	R3217980
Arsenic (As)-Total Cadmium (Cd)-Total	0.00058		0.00020 0.000010	mg/L	25-JUN-15 25-JUN-15	30-JUN-15 30-JUN-15	R3217980
Calcium (Ca)-Total Calcium (Ca)-Total	<0.000010 40.1		0.000010	mg/L mg/L	25-JUN-15 25-JUN-15	30-JUN-15 30-JUN-15	R3217980 R3217980
Chromium (Cr)-Total	40.1 <0.0010		0.10	mg/L	25-JUN-15 25-JUN-15	30-JUN-15	R3217980 R3217980
Cobalt (Co)-Total	<0.0010		0.0010	mg/L	25-JUN-15	30-JUN-15	R3217980 R3217980

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

L1630085 CONTD.... PAGE 3 of 7 Version: FINAL

	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1630085-1 COR-3							
Sampled By: CLIENT on 18-JUN-15 @ 09:25							
Matrix:							
Total Metals by ICP-MS							
Copper (Cu)-Total	0.00083		0.00020	mg/L	25-JUN-15	30-JUN-15	R3217980
Iron (Fe)-Total	0.68		0.10	mg/L	25-JUN-15	30-JUN-15	R3217980
Lead (Pb)-Total	0.000210		0.000090	mg/L	25-JUN-15	30-JUN-15	R3217980
Magnesium (Mg)-Total Manganese (Mn)-Total	3.44 0.0867		0.010 0.00030	mg/L mg/L	25-JUN-15 25-JUN-15	30-JUN-15 30-JUN-15	R3217980 R3217980
Nickel (Ni)-Total	<0.0020		0.00030	mg/L	25-JUN-15	30-JUN-15	R3217980
Potassium (K)-Total	5.54		0.020	mg/L	25-JUN-15	30-JUN-15	R3217980
Sodium (Na)-Total	8.65		0.030	mg/L	25-JUN-15	30-JUN-15	R3217980
Zinc (Zn)-Total	0.0030		0.0020	mg/L	25-JUN-15	30-JUN-15	R3217980
Total Organic Carbon Total Organic Carbon	6.1		1.0	mg/L		15-JUL-15	R3226792
Total Suspended Solids Total Suspended Solids	5.0		5.0	mg/L		25-JUN-15	R3215627
Hq						00 11 11 15	Beens
рН	7.62		0.10	pH units		03-JUL-15	R3220935
L1630085-2 COR-4							
Sampled By: CLIENT on 18-JUN-15 @ 10:04 Matrix:							
Nunavut WW Group 1							
Alkalinity, Bicarbonate	70.4		4.0			07 1111 45	
Bicarbonate (HCO3)	79.1		1.2	mg/L		07-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		07-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		07-JUL-15	
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		22-JUN-15	R3213664
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	3.2		2.0	mg/L		20-JUN-15	R3222375
Carbonaceous BOD BOD Carbonaceous	3.3		2.0	mg/L		20-JUN-15	R3222375
Chloride in Water by IC Chloride (CI)	2.55		0.50	mg/L		22-JUN-15	R3215924
Conductivity Conductivity	164		1.0	umhos/cm		03-JUL-15	R3220935
Fecal Coliform Fecal Coliforms	<3	RRR	3	MPN/100mL		19-JUN-15	R3213494
Note: ABL-Approximate Result.Reults might be biased low due to waterbath temperature being above range by 0.1°							
MBHT-The APHA 30 hour hold time was exceeded for microbiological testing. Samples processed within 48 hours from time of sampling may be valid in some cases (refer to Health Canada guidance). Hardness Calculated							
Hardness (as CaCO3)	82.1		0.30	mg/L		03-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	26-JUN-15	26-JUN-15	R3215797
Nitrate in Water by IC Nitrate (as N)	0.073		0.020	mg/L		22-JUN-15	R3215924

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

L1630085 CONTD.... PAGE 4 of 7 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1630085-2 COR-4							
Sampled By: CLIENT on 18-JUN-15 @ 10:04							
Matrix:							
Nitrate+Nitrite Nitrate and Nitrite as N	0.073		0.070	mg/L		27-JUN-15	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		22-JUN-15	R3215924
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	26-JUN-15	26-JUN-15	R3216311
Phenol (4AAP)	\2.0		2.0	9/ =	20 0011 10	20 0011 10	10210011
Phenols (4AAP)	<0.0010		0.0010	mg/L		02-JUL-15	R3219157
Phosphorus, Total							
Phosphorus (P)-Total	0.104		0.010	mg/L		26-JUN-15	R3215537
Sulfate in Water by IC Sulfate (SO4)	19.3		0.30	mg/L		22-JUN-15	R3215924
Total Alkalinity as CaCO3	15.5		0.00	g, L		22 0011-10	1.0210024
Alkalinity, Total (as CaCO3)	64.8		1.0	mg/L		03-JUL-15	R3220935
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0407		0.0050	mg/L	29-JUN-15	02-JUL-15	R3218775
Arsenic (As)-Total	0.00034		0.00020	mg/L	29-JUN-15 29-JUN-15	02-JUL-15	R3218775
Cadmium (Cd)-Total Calcium (Ca)-Total	0.000053 30.5		0.000010 0.10	mg/L	29-JUN-15 29-JUN-15	02-JUL-15 02-JUL-15	R3218775 R3218775
Chromium (Cr)-Total	<0.0010		0.10	mg/L mg/L	29-JUN-15 29-JUN-15	02-JUL-15 02-JUL-15	R3218775 R3218775
Cobalt (Co)-Total	<0.0010		0.0010	mg/L	29-JUN-15	02-JUL-15	R3218775
Copper (Cu)-Total	0.00274		0.00020	mg/L	29-JUN-15	02-JUL-15	R3218775
Iron (Fe)-Total	0.49		0.10	mg/L	29-JUN-15	02-JUL-15	R3218775
Lead (Pb)-Total	0.000583		0.000090	mg/L	29-JUN-15	02-JUL-15	R3218775
Magnesium (Mg)-Total	1.46		0.010	mg/L	29-JUN-15	02-JUL-15	R3218775
Manganese (Mn)-Total	0.0407		0.00030	mg/L	29-JUN-15	02-JUL-15	R3218775
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	29-JUN-15	02-JUL-15	R3218775
Potassium (K)-Total	2.18		0.020	mg/L	29-JUN-15	02-JUL-15	R3218775
Sodium (Na)-Total	2.27		0.030	mg/L	29-JUN-15	02-JUL-15	R3218775
Zinc (Zn)-Total	0.0524		0.0020	mg/L	29-JUN-15	02-JUL-15	R3218775
Total Organic Carbon				,,		45 !!!! 45	
Total Organic Carbon	4.4		1.0	mg/L		15-JUL-15	R3226792
Total Suspended Solids Total Suspended Solids	<5.0		5.0	mg/L		25-JUN-15	R3215627
pH	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		5.0	g, L		20 0011-10	1.0210021
pH pH	7.57		0.10	pH units		03-JUL-15	R3220935
L1630085-3 COR-6 FROZEN PERMAFROST							
Sampled By: CLIENT on 18-JUN-15							
Matrix:							
Miscellaneous Parameters							
Sample Comment	Sample Not					19-JUN-15	
	Received						

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

L1630085 CONTD....

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Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RRR	Refer to Report Remarks for issues regarding this analysis

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.

CALCULATION ALK-HCO3HCO3-CALC-Water Alkalinity, Bicarbonate

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.

AI K-TITR-WP Water Total Alkalinity 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-5 day Incub.-O2 electrode

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

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

The sample is incubated for 5 days at 20 degrees Celcius. Comparison of dissolved oxygen content at the beginning and end of incubation provides a measure of biochemical oxygen demand. If carbonaceous BOD is requested, TCMP is added to the sample to chemically inhibit nitrogenous oxygen demand. If soluble BOD is requested, the sample is filtered prior to analysis. Surface waters have a DL of 1 mg/L. Effluents are diluted according to their history and will have a sample DL of 6 mg/L or greater, depending on the dilutions used.

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

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

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.

TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

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

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

EC-WP Conductivity **APHA 2510B** Water

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

FC-MPN-WP Fecal Coliform **APHA 9221E** Water

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.

L1630085 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.

OGG-TOT-WT Water Oil and Grease, Total APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

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.

SAMPNOTRECD-ONREP- Misc. Sample not received SAMPLE NOT RECEIVED WP

•••

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:

WT ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

L1630085 CONTD....

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Reference Information

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: 14 - 454487

L1630085-COFC

Canada Toll Free: 1 800 668 9878

Report To	<u> </u>	Report Format	<u>.</u>		1	/	oeiect S	ervice l	Level Be	low (Rus	h Turnan	ound Tim	i (TAT) e	s not ava	ilable for e	all tests)	
Company: HAMLET OF COCK! Hurbour	Select Report Fo	ormat: P	DF EXCEL	EOD (DIGITAL)	R		Regular (Standan	d TAT If	received I	by 3pm)						
Contact: Leonie Pemeolik Address: POBox 30 Coral Herborn Nn XOC-OCO	Quality Control (QC) Report with Rep	oort 🔲 Yes	No No	P		riority (2	2-4 busir	ness days	s If receiv	ed by 3p	ım)					
Address: POBOX 30 Coral Herborn Nn	Criteria on R	eport - provide details bei	ow if box checked		E												
X0C-0C0	Select Distribution		MAIL MAIL	FAX	€2	Same day or weekend emergency if received by 10am – contact ALS for surcharge.											
Phone: 867 925 8867 Fix (867) 925 8233	Email 1 or Fax	Munch 2	ginia Co	w	Specif	y Date	Date Required for E2,E or P:										
	Email 2								Analysis Request								
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Copy of Invoice with Report FYes T. No	Select Invoice D	istribution:	EMAIL MAIL	. 🔲 FAX													
Company: W10622	Email 1 or Fax																
Contact:	Email 2					1									i		į,
Project Information		il and Gas Require	d Fields (client us	ie) .			ŀ				١	,			ļ		ig.
ALS Quote #:	Approver ID: 3	3 0 160	Cost Center:	<u> </u>							7	,			1	ŀ	atre a
Job#: Coral Harbour Montering Program.	GL Account: 🚉	A CONTRACTOR OF THE CONTRACTOR	Routing Code:				İ				7		1 _	7	•		⁶
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LSD:	Location: 🚀 🚜		20.	X		4		7	/))	S				i		Number of Containers
ALS Lab Work Order# (lab use only)	ALS Contact: 5	Them tol	Sampler:	De la		4	1/2/2	20	420	1/2	+	#	X				
ALS Sample # Sample Identification and/or Coordinates		Date	Time (0	2	1	3	7	20		7	M	1,0			
(lab use only) (This description will appear on the report)		(dd-mmm-yy)	(hh:mm)	Sample Type	B	$\mathcal{L}_{\mathbf{z}}$	77	Ź	P	13	\mathcal{O}	, 1	ω	<u> </u>			
1 Cor-3		172N15	9:25		*	V	P	P	P	ρ	P_{\perp}	P					8
Cor - 4		10 NN15	10:04				ρ	$\boldsymbol{\rho}$	P	9	P	P					8
Cox - 6 Frozen Perny Frex	\mathcal{I}	, , , , , , , , , , , , , , , , , , , ,	 					*	_'_			*	\neg			-	0
10 mg// g	<i>y</i> -		<u> </u>					-			\dashv		-+		\dashv		
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	<u>.</u>	<u> </u>						6444			211.2.2	2505	0.000 (<u> </u>	
Drinking Water (DW) Samples¹ (client use) Special	Instructions / Spec	olfy Criteria to add on	report (client Use)		Froze	10 10 10 10 10 10 10 10 10 10 10 10 10 1		SAME	PLE CC			servati		lab use Yes		No	
Are samples taken from a Regulated DW System?				 -			Vec :							5.8%		No	H
TiYes tiNo					Coolin	g Initia	ted * »	П	K. (* 4	. L	Custoo	iy scai i	intact			·	
Are samples for human drinking water use?						ITIAL CO	2.10						NAL CO	OLER TE	MPERAT	URES °C	•
∏, Yes ∏ No			110/	^ ,	4, 4,		a a		3444.3				\top	7.76	2.2		
SHIPMENT RELEASE (client use)	INITIAL	SHIPMENT RECEP	riON (lab use oniv)				2	FI	NAL SI	HPMF	NT REC	CEPTIC	ON (lab	use on			
Released by: Date: Time: Receive	d by:	4.500	Date:	Time:	Rece	ived by	1					Date:	,,,,,,,,	Time			
Costano June 18/15-825 Am	V	\sim \sim	6119115	4:30			- * * * * * * * * * * * * * * * * * * *	i e	100	· · ·			<u> </u>				
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHI	TE - LABORATORY (COPY YELLOV	V - CLIE	NT CO	PΥ					NA-F	M-03286 VD8	Frum/03 Octob	sber 2013		

Fallure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.



Name of Sampler(s):	lorge
Date of Sampling:	and the second s
Time of Sampling: 10.04	,
Monitoring Station Number:	-4
GPS Coordinates: N 64 ° 9 , 4	9" w <u>83°11',13</u> "
Weather Conditions:	
Samples:	
 ✓ 500 mL BOD	1 L Amber PAH + Pres
1 L Routine	3 x 40 mL BTEX, F1 Vials + Pres
✓ 250 mL Metals + Pres	2 x 60 mL Amber F2-F4 Vials +
√ 40 mL Glass Mercury Vial + Pres	Pres
√ 250 mL Amber Nutrients + Pres	
250 mL Amber Phenols + Pres	Other:
√ 125 mL Sterile Bacteria Bottle	
2 x 500 mL Glass Oil & Grease +	
Pres	
Other Notes: (any unusual conditions, any d	eviation from standard procedures, etc.)
•	
· · · · · · · · · · · · · · · · · · ·	



Name of Sampler(s): Usey Corge
Date of Sampling: June 18/ 15
Time of Sampling: 930 An 9:25 An
Monitoring Station Number:
GPS Coordinates: N 64 ° 09 '720" W 83 ° 11 '624"
Weather Conditions: Partly Cloudy Same.
Samples:
500 mL BOD 1 L Amber PAH + Pres
1 L Routine 3 x 40 mL BTEX, F1 Vials + Pres
250 mL Metals + Pres 2 x 60 mL Amber F2-F4 Vials +
40 mL Glass Mercury Vial + Pres Pres
250 mL Amber Nutrients + Pres
250 mL Amber Phenols + Pres Other:
125 mL Sterile Bacteria Bottle
2 x 500 mL Glass Oil & Grease +
Pres
Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)
Some Sonow on the ground and sometime area
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- 1 year 1 ight over



Name of Sampler(s): wyen Great ye
Date of Sampling: 18/15
Time of Sampling: 10:45 Am
Monitoring Station Number: <u>Cor - 6</u>
GPS Coordinates: N <u>64° 9' 43"</u> W <u>83° 11',38"</u>
Weather Conditions: Somy Partly Cloudy
Samples:
500 mL BOD 1 L Amber PAH + Pres
1 L Routine 3 x 40 mL BTEX, F1 Vials + Pres
250 mL Metals + Pres 2 x 60 mL Amber F2-F4 Vials +
40 mL Glass Mercury Vial + Pres Pres
250 mL Amber Nutrients + Pres
250 mL Amber Phenols + Pres Other:
125 mL Sterile Bacteria Bottle
2 x 500 mL Glass Oil & Grease +
Pres
Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)
We Couldn't get any spriples due
to No leakage and Frozen Perma Frost
The Cuffert is Frozen.
No SANDling on et



Hamlet of Coral Harbour ATTN: LEONIE PAMEOLIK

PO Box 30

Coral Harbour MB XOC OCO

Date Received: 08-JUL-15

Report Date: 28-JUL-15 13:39 (MT)

Version: FINAL

Client Phone: 867-925-8970

Certificate of Analysis

Lab Work Order #: L1639230
Project P.O. #: NOT SUBMITTED

Job Reference: CORAL HARBOUR MONITORING PROGRAM

C of C Numbers: Legal Site Desc:

Hua Wo

Chemistry Laboratory Manager

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

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L1639230 CONTD.... PAGE 2 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1639230-1 COR-3							
Sampled By: CASEY P on 06-JUL-15 @ 09:00							
Matrix: WW							
Wattis.							
Nunavut WW Group 1							
Alkalinity, Bicarbonate	00.0		4.0			47 1111 45	
Bicarbonate (HCO3) Alkalinity, Carbonate	92.8		1.2	mg/L		17-JUL-15	
Carbonate (CO3)	<0.60		0.60	mg/L		17-JUL-15	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		17-JUL-15	
Ammonia by colour Ammonia, Total (as N)	0.010		0.010	mg/L		09-JUL-15	R3222633
Biochemical Oxygen Demand (BOD)	0.010		0.010	IIIg/L		09-30L-13	K3222033
Biochemical Oxygen Demand	3.9		2.0	mg/L		09-JUL-15	R3228448
Carbonaceous BOD			_				
BOD Carbonaceous	4.3		2.0	mg/L		09-JUL-15	R3228448
Chloride in Water by IC Chloride (CI)	4.66		0.50	mg/L		09-JUL-15	R3227080
Conductivity			0.00				
Conductivity	322		1.0	umhos/cm		16-JUL-15	R3227973
Fecal Coliform Fecal Coliforms	2	PEHR	•	MPN/100mL		00 1111 45	D2000024
Hardness Calculated	<3	PERK	3	IVIPIN/TOUTIL		08-JUL-15	R3226934
Hardness (as CaCO3)	151		0.30	mg/L		14-JUL-15	
Mercury Total							
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	15-JUL-15	15-JUL-15	R3226470
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		09-JUL-15	R3227080
Nitrate+Nitrite	\0.020		0.020	1119/12		00 002 10	13227 000
Nitrate and Nitrite as N	<0.070		0.070	mg/L		16-JUL-15	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		09-JUL-15	R3227080
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	10-JUL-15	10-JUL-15	R3224292
Phenol (4AAP)							
Phenols (4AAP)	0.0015		0.0010	mg/L		15-JUL-15	R3226870
Phosphorus, Total Phosphorus (P)-Total	0.470		0.040			15-JUL-15	Daggeroe
Sulfate in Water by IC	0.172		0.010	mg/L		10-JUL-15	R3226596
Sulfate (SO4)	79.2		0.30	mg/L		09-JUL-15	R3227080
Total Alkalinity as CaCO3							
Alkalinity, Total (as CaCO3)	76.1		1.0	mg/L		16-JUL-15	R3227973
Total Metals by ICP-MS Aluminum (Al)-Total	0.0324		0.0050	mg/L	13-JUL-15	13-JUL-15	R3225013
Arsenic (As)-Total	0.00055		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Cadmium (Cd)-Total	0.000016		0.000010	mg/L	13-JUL-15	13-JUL-15	R3225013
Calcium (Ca)-Total	54.1		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Chromium (Cr)-Total Cobalt (Co)-Total	<0.0010 0.00039		0.0010 0.00020	mg/L mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013 R3225013
Copper (Cu)-Total	0.00629		0.00020	mg/L	13-JUL-15	13-JUL-15 13-JUL-15	R3225013
Iron (Fe)-Total	0.72		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Lead (Pb)-Total	0.000408		0.000090	mg/L	13-JUL-15	13-JUL-15	R3225013
Magnesium (Mg)-Total	3.79		0.010	mg/L	13-JUL-15	13-JUL-15	R3225013
Manganese (Mn)-Total	0.0611		0.00030	mg/L	13-JUL-15	13-JUL-15	R3225013
Nickel (Ni)-Total	0.0023		0.0020	mg/L	13-JUL-15	13-JUL-15	R3225013

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

L1639230 CONTD.... PAGE 3 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1639230-1 COR-3							
Sampled By: CASEY P on 06-JUL-15 @ 09:00							
Matrix: WW							
Total Metals by ICP-MS	0.04		0.000		40 1111 45	40 1111 45	D0005040
Potassium (K)-Total Sodium (Na)-Total	3.81 5.65		0.020 0.030	mg/L mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013 R3225013
Zinc (Zn)-Total	0.0270		0.0020	mg/L	13-JUL-15	13-JUL-15	R3225013
Total Organic Carbon Total Organic Carbon	17.8		1.0	mg/L		27-JUL-15	R3233869
Total Suspended Solids Total Suspended Solids	8.0		5.0	mg/L		13-JUL-15	R3225563
pH	0.05		0.40	m I I mita		40 1111 45	D0007070
pH	8.05		0.10	pH units		16-JUL-15	R3227973
L1639230-2 COR-4 Sampled By: CASEY P on 06-JUL-15 @ 10:00							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	219		1.2	mg/L		17-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		17-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		17-JUL-15	
Ammonia by colour Ammonia, Total (as N)	<0.010		0.010	mg/L		10-JUL-15	R3225079
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	12.2		2.0	mg/L		09-JUL-15	R3228448
Carbonaceous BOD BOD Carbonaceous	7.6		2.0	mg/L		09-JUL-15	R3228448
Chloride in Water by IC Chloride (CI)	22.8		0.50	mg/L		09-JUL-15	R3227080
Conductivity Conductivity	422		1.0	umhos/cm		16-JUL-15	R3227973
Fecal Coliform Fecal Coliforms	92	PEHR	3	MPN/100mL		08-JUL-15	R3226934
Hardness Calculated Hardness (as CaCO3)	184		0.30	mg/L		14-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	15-JUL-15	15-JUL-15	R3226470
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		09-JUL-15	R3227080
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		16-JUL-15	
Nitrite in Water by IC Nitrite (as N)	<0.010		0.010	mg/L		09-JUL-15	R3227080
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	10-JUL-15	10-JUL-15	R3224292
Phenol (4AAP) Phenols (4AAP)	0.0034		0.0010	mg/L		15-JUL-15	R3226870
Phosphorus, Total Phosphorus (P)-Total	0.440		0.010	mg/L		15-JUL-15	R3226596
Sulfate in Water by IC Sulfate (SO4)	12.2		0.30	mg/L		09-JUL-15	R3227080
				1			1

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

L1639230 CONTD.... PAGE 4 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1639230-2 COR-4							
Sampled By: CASEY P on 06-JUL-15 @ 10:00							
Matrix: WW							
Total Metals by ICP-MS Aluminum (AI)-Total	0.123		0.0050	mg/L	13-JUL-15	13-JUL-15	R3225013
Arsenic (As)-Total	0.00081		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Cadmium (Cd)-Total	<0.00001		0.000010	mg/L	13-JUL-15	13-JUL-15	R3225013
Calcium (Ca)-Total	62.5		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	13-JUL-15	13-JUL-15	R3225013
Cobalt (Co)-Total	0.00021		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Copper (Cu)-Total	0.00257		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Iron (Fe)-Total	0.89		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Lead (Pb)-Total	0.000555	C	0.000090	mg/L	13-JUL-15	13-JUL-15	R3225013
Magnesium (Mg)-Total	6.73		0.010	mg/L	13-JUL-15	13-JUL-15	R3225013
Manganese (Mn)-Total	0.114		0.00030	mg/L	13-JUL-15	13-JUL-15	R3225013
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	13-JUL-15	13-JUL-15	R3225013
Potassium (K)-Total	5.83		0.020	mg/L	13-JUL-15	13-JUL-15	R3225013
Sodium (Na)-Total	18.6		0.030	mg/L	13-JUL-15	13-JUL-15	R3225013
Zinc (Zn)-Total	0.0109		0.0020	mg/L	13-JUL-15	13-JUL-15	R3225013
Total Organic Carbon Total Organic Carbon	07.0		4.0	a/I		07 1111 45	Daggagg
_	27.2		1.0	mg/L		27-JUL-15	R3233869
Total Suspended Solids Total Suspended Solids	9.0		5.0	mg/L		13-JUL-15	R3225563
pH	3.0		5.0	1119/ =		10 002 10	113223303
рН	8.21		0.10	pH units		16-JUL-15	R3227973
L1639230-3 COR-6				<u> </u>			
Sampled By: CASEY P on 06-JUL-15 @ 11:00							
Matrix: WW							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		11-JUL-15	R3225360
Toluene	0.0231		0.0010	mg/L		11-JUL-15	R3225360
Ethyl benzene	<0.00050		0.00050	mg/L		11-JUL-15	R3225360
o-Xylene	<0.00050		0.00050	mg/L		11-JUL-15	R3225360
m+p-Xylenes	<0.00050		0.00050	mg/L		11-JUL-15	R3225360
F1 (C6-C10)	<0.10		0.10	mg/L		11-JUL-15	R3225360
Surrogate: 4-Bromofluorobenzene (SS)	85.3		70-130	%		11-JUL-15	R3225360
CCME Total Hydrocarbons	0.45		0.40			40 !!!! 45	
F1-BTEX	<0.10		0.10	mg/L		16-JUL-15	
F2-Naphth F3-PAH	0.80 4.62		0.25	mg/L		16-JUL-15 16-JUL-15	
Total Hydrocarbons (C6-C50)	4.62 6.51		0.25 0.44	mg/L mg/L		16-JUL-15 16-JUL-15	
F2-F4 PHC method	0.51		0.44	mg/L		10-001-10	
F2 (C10-C16)	0.80		0.25	mg/L	09-JUL-15	10-JUL-15	R3224600
F3 (C16-C34)	4.62		0.25	mg/L	09-JUL-15	10-JUL-15	R3224600
F4 (C34-C50)	1.09		0.25	mg/L	09-JUL-15	10-JUL-15	R3224600
Surrogate: 2-Bromobenzotrifluoride	114.5		60-140	%	09-JUL-15	10-JUL-15	R3224600
Sum of Xylene Isomer Concentrations Xylenes (Total)	<0.0015		0.0015	mg/L		14-JUL-15	
Polygromatic Hydrocovkova (PAU-)							
Polyaromatic Hydrocarbons (PAHs) 1-Methyl Naphthalene	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
2-Methyl Naphthalene	<0.000020	1	0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Acenaphthene	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Acenaphthylene	<0.000020	1	0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
	10.000020			9, _	33 332 10	33 302 10	1.0221000

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

L1639230 CONTD.... PAGE 5 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1639230-3 COR-6							
Sampled By: CASEY P on 06-JUL-15 @ 11:00							
Matrix: WW							
Polyaromatic Hydrocarbons (PAHs)							
Anthracene	<0.000010		0.000010	mg/L	09-JUL-15	09-JUL-15	R3221586
Acridine	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Benzo(a)anthracene	<0.000010		0.000010	mg/L	09-JUL-15	09-JUL-15	R3221586
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	09-JUL-15	09-JUL-15	R3221586
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	09-JUL-15	09-JUL-15	R3221586
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Benzo(k)fluoranthene Chrysene	<0.000010 <0.000020		0.000010	mg/L mg/L	09-JUL-15 09-JUL-15	09-JUL-15 09-JUL-15	R3221586 R3221586
Dibenzo(a,h)anthracene	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Fluoranthene	<0.000020		0.0000030	mg/L	09-JUL-15	09-JUL-15	R3221586
Fluorene	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	09-JUL-15	09-JUL-15	R3221586
Naphthalene	<0.000050		0.000050	mg/L	09-JUL-15	09-JUL-15	R3221586
Phenanthrene	<0.000050		0.000050	mg/L	09-JUL-15	09-JUL-15	R3221586
Pyrene	<0.000010		0.000010	mg/L	09-JUL-15	09-JUL-15	R3221586
Quinoline B(a)P Total Potency Equivalent	<0.000020		0.000020	mg/L	09-JUL-15	09-JUL-15	R3221586
Surrogate: Acenaphthene d10	<0.000030 76.0		0.000030 40-130	mg/L %	09-JUL-15 09-JUL-15	09-JUL-15 09-JUL-15	R3221586 R3221586
Surrogate: Aceriaphinene d 10 Surrogate: Acridine d9	78.3		40-130	%	09-JUL-15	09-JUL-15	R3221586
Surrogate: Chrysene d12	73.3		40-130	%	09-JUL-15	09-JUL-15	R3221586
Surrogate: Naphthalene d8	109.3		40-130	%	09-JUL-15	09-JUL-15	R3221586
Surrogate: Phenanthrene d10	68.4		40-130	%	09-JUL-15	09-JUL-15	R3221586
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	398		1.2	mg/L		17-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		17-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		17-JUL-15	
Ammonia by colour Ammonia, Total (as N)	48.0	DLA	1.0	mg/L		09-JUL-15	R3222633
Biochemical Oxygen Demand (BOD)		5					
Biochemical Oxygen Demand	114	DLA	20	mg/L		09-JUL-15	R3228448
Carbonaceous BOD BOD Carbonaceous	100	DLA	20	mg/L		09-JUL-15	R3228448
Chloride in Water by IC Chloride (CI)	50.1		0.50	mg/L		09-JUL-15	R3227080
Conductivity Conductivity	832		1.0	umhos/cm		16-JUL-15	R3227973
Fecal Coliform Fecal Coliforms	>110000	PEHR	3	MPN/100mL		08-JUL-15	R3226934
Hardness Calculated Hardness (as CaCO3)	100		0.30	mg/L		14-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00080	DLM	0.00080	mg/L	15-JUL-15	15-JUL-15	R3226470
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		09-JUL-15	R3227080
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		16-JUL-15	
Nitrite in Water by IC Nitrite (as N)	<0.010		0.010	mg/L		09-JUL-15	R3227080
Oil and Grease, Total							

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

L1639230 CONTD.... PAGE 6 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1639230-3 COR-6							
Sampled By: CASEY P on 06-JUL-15 @ 11:00							
Matrix: WW							
Oil and Grease, Total							
Oil and Grease, Total	6.2		2.0	mg/L	11-JUL-15	11-JUL-15	R3224999
Phenol (4AAP)							
Phenols (4AAP)	0.0310		0.0010	mg/L		15-JUL-15	R3226870
Phosphorus, Total Phosphorus (P)-Total	0.00	DLA	0.00			15-JUL-15	Daggeroe
Sulfate in Water by IC	9.32	DLA	0.20	mg/L		15-JUL-15	R3226596
Sulfate (SO4)	5.33		0.30	mg/L		09-JUL-15	R3227080
Total Alkalinity as CaCO3							
Alkalinity, Total (as CaCO3)	326		1.0	mg/L		16-JUL-15	R3227973
Total Metals by ICP-MS	0.0763		0.0050	ma/l	13-JUL-15	13-JUL-15	D2225042
Aluminum (AI)-Total Arsenic (As)-Total	0.0763 0.00075		0.0050 0.00020	mg/L mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013 R3225013
Cadmium (Cd)-Total	0.00075		0.00020	mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013
Calcium (Ca)-Total	32.6		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	13-JUL-15	13-JUL-15	R3225013
Cobalt (Co)-Total	0.00064		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Copper (Cu)-Total	0.0322		0.00020	mg/L	13-JUL-15	13-JUL-15	R3225013
Iron (Fe)-Total	0.42		0.10	mg/L	13-JUL-15	13-JUL-15	R3225013
Lead (Pb)-Total	0.00100		0.000090	mg/L	13-JUL-15	13-JUL-15	R3225013
Magnesium (Mg)-Total Manganese (Mn)-Total	4.58 0.0731		0.010 0.00030	mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013 R3225013
Nickel (Ni)-Total	0.0731		0.00030	mg/L mg/L	13-JUL-15 13-JUL-15	13-JUL-15 13-JUL-15	R3225013 R3225013
Potassium (K)-Total	19.6		0.020	mg/L	13-JUL-15	13-JUL-15	R3225013
Sodium (Na)-Total	41.9		0.030	mg/L	13-JUL-15	13-JUL-15	R3225013
Zinc (Zn)-Total	0.0390		0.0020	mg/L	13-JUL-15	13-JUL-15	R3225013
Total Organic Carbon Total Organic Carbon	87.1		1.0	mg/L		27-JUL-15	R3233869
Total Suspended Solids	0 711						1.020000
Total Suspended Solids	46.0		5.0	mg/L		13-JUL-15	R3225563
рН							
pH	7.93		0.10	pH units		16-JUL-15	R3227973
		1					

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

L1639230 CONTD....

PAGE 7 of 9 Version: FINAL

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.

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

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

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.

TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

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.

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Version: FINAL

Reference Information

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

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.
- 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 F2-F4 PHC method CWS (CCME)

Petroleum Hydrocarbons (F2-F4) in Water Method is adapted from US EPA Method 3511: Organic Compounds in Water by Micro-extraction" (Nov 2002) with instrumental analysis as per the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method" (CCMS, Dec 2000) Water samples (in their entirety) are extracted using hexane prior to capillary column gas chromatography with flame ionization detection (GC/FID).

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.

OGG-TOT-WT Water Oil and Grease, Total APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

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

L1639230 CONTD....

Reference Information

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Version: FINAL

Test Method References:

ALS Test Code Matrix Test Description Method Reference**

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.

XYLENES-SUM-CALC-

Water

Sum of Xylene Isomer Concentrations

CALCULATED RESULT

WP

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

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
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA

Chain of Custody Numbers:

GLOSSARY OF REPORT TERMS

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

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

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

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

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

Test results reported relate only to the samples as received by the laboratory. UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

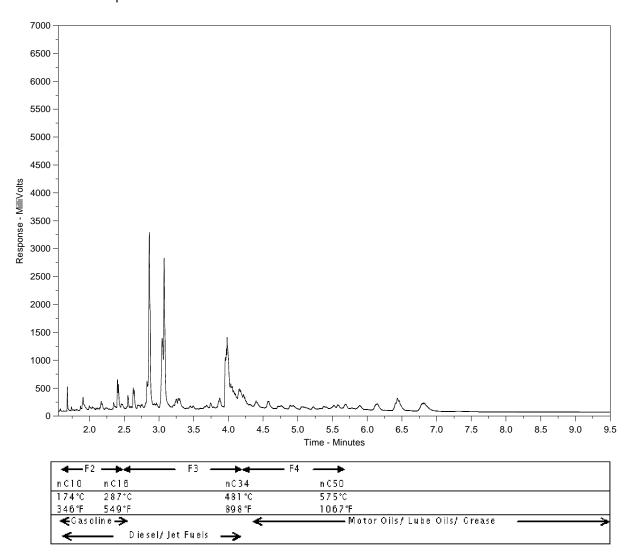
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

^{**} ALS test methods may incorporate modifications from specified reference methods to improve performance.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L1639230-3 Client Sample ID: COR-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.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.



Chain of Custody (COC) / Analytical Request Form

COC Number: 14 - 454539*

L1639230-COFC

Canada Toll Free; 1 800 668 9878

Report To	Report Format / Distrit	oution	26lect Service Level Below (Rush Turnaround Time (TAT) is not available for all lests)					
Company: HANGET OF Coral Howbord	Select Report Format: POF	EXCEL EDD (DIGITAL)	R Aeg	R Regular (Standard TAT If received by 3pm)				
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(860) 925 8867	Email 2			Analys	sis Request	\neg		
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re samples taken from a Regulated DW System?	<u> </u>		lce packs Y		ndy seal intact. Yes D No D			
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tre samples for human drinking water use?			TeliNiiTiAL COOL	LER TEMPERATURES °C ** 0 · ·	FINAL COOLER TEMPERATURES °C	_		
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Name of Sampler(s): When Y	any
Date of Sampling:	1/5
Time of Sampling: 900	
Monitoring Station Number:	<u>3</u>
GPS Coordinates: N <u>64 ° 09, 78</u>	7.6 W 083. 11.33.6
Weather Conditions: 5cm	
Samples:	>
500 mL BOD 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 125 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres	1 LAmber PAH + Pres 3-x 40 mL BTEX, F1 Vials + Pres 2 x 60 mL Amber F2-F4 Vials + Pres Other:
Other Notes: (any unusual conditions, any o	leviation from standard procedures, etc.)



Name of Sampler(s):
Date of Sampling: 4:00 feels 6/5
Time of Sampling:
Monitoring Station Number: 6
GPS Coordinates: N <u>64 ° 09'77.7"</u> W <u>083 ° // '49.2"</u>
Weather Conditions:
Samples: 500 mL BOD 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 250 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease +
Pres
Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)

<u>Fi</u>	eld Log
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Date of Sampling:	1/5
Time of Sampling:	
Monitoring Station Number:	01-4
GPS Coordinates: N 64 ° 69,	38.6" W 083 · 11 · 73.6
Weather Conditions: Samp	
Samples: 500 mL BOD 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 125 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres	1 LAmber PAH + Pres 3-x 40 mL BTEX, F1 Vials + Pres 2 x 60 mL Amber F2-F4 Vials + Pres Other:
Other Notes: (any unusual conditions, an	y deviation from standard procedures, etc.)

jos/



Hamlet of Coral Harbour ATTN: LEONIE PAMEOLIK

PO Box 30

Coral Harbour MB XOC OCO

Date Received: 24-JUL-15

Report Date: 06-AUG-15 13:35 (MT)

Version: FINAL

Client Phone: 867-925-8867

Certificate of Analysis

Lab Work Order #: L1647683
Project P.O. #: NOT SUBMITTED

Job Reference: CORAAL HARBOUR MONITORING PROGRAM

C of C Numbers: Legal Site Desc:

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

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L1647683 CONTD.... PAGE 2 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1647683-1 COR-3							
Sampled By: CASEY P on 22-JUL-15 @ 09:00							
Matrix: WATER							
Miscellaneous Parameters							
Total Organic Carbon	20.3		1.0	mg/L		29-JUL-15	R3235215
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	131		1.2	mg/L		31-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		31-JUL-15	
Alkalinity, Hydroxide	<0.60		0.60	IIIg/L		31-30L-13	
Hydroxide (OH) Ammonia by colour	<0.34		0.34	mg/L		31-JUL-15	
Ammonia, Total (as N)	0.036		0.010	mg/L		24-JUL-15	R323289
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	6.8		2.0	mg/L		24-JUL-15	R3235808
Carbonaceous BOD BOD Carbonaceous	2.0		2.0			24-JUL-15	Danasana
Chloride in Water by IC	2.8		2.0	mg/L		24-JUL-13	R3235808
Chloride (CI) Conductivity	7.27		0.50	mg/L		25-JUL-15	R3233612
Conductivity	620		1.0	umhos/cm		30-JUL-15	R323654
Fecal Coliform Fecal Coliforms	<3	PEHR	3	MPN/100mL		24-JUL-15	R323539
Hardness Calculated Hardness (as CaCO3)	330		0.30	mg/L		29-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	28-JUL-15	28-JUL-15	R3234932
Nitrate in Water by IC		22			20 002 10		
Nitrate (as N) Nitrate+Nitrite	0.025		0.020	mg/L		25-JUL-15	R3233612
Nitrate and Nitrite as N	<0.070		0.070	mg/L		28-JUL-15	
Nitrite in Water by IC Nitrite (as N)	<0.010		0.010	mg/L		25-JUL-15	R323361
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	28-JUL-15	28-JUL-15	R323435
Phenol (4AAP)					20 002 10		
Phenols (4AAP) Phosphorus, Total	<0.0010		0.0010	mg/L		05-AUG-15	R323926
Phosphorus (P)-Total	0.317		0.010	mg/L		29-JUL-15	R323475
Sulfate in Water by IC Sulfate (SO4)	193		0.30	mg/L		25-JUL-15	R323361
Total Alkalinity as CaCO3 Alkalinity, Total (as CaCO3)	107		1.0	mg/L		30-JUL-15	R323654
Total Metals by ICP-MS	107		1.0	illy/L		30-30L-13	1323034
Aluminum (Al)-Total	0.0178		0.0050	mg/L	28-JUL-15	28-JUL-15	R323437
Arsenic (As)-Total	0.00061		0.00020	mg/L	28-JUL-15	28-JUL-15	R323437
Cadmium (Cd)-Total	0.000016		0.000010	mg/L	28-JUL-15	28-JUL-15	R323437
Calcium (Ca)-Total	120		0.10	mg/L	28-JUL-15	28-JUL-15	R323437
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	28-JUL-15	28-JUL-15	R323437
Cobalt (Co)-Total	0.00036		0.00020	mg/L	28-JUL-15	28-JUL-15	R323437
Copper (Cu)-Total	0.00318		0.00020	mg/L	28-JUL-15	28-JUL-15	R323437
Iron (Fe)-Total	1.22		0.10	mg/L	28-JUL-15	28-JUL-15	R323437
Lead (Pb)-Total	0.000360		0.000090	mg/L	28-JUL-15	28-JUL-15	R323437
Magnesium (Mg)-Total	7.24		0.010	mg/L	28-JUL-15	28-JUL-15	R3234373
Manganese (Mn)-Total	0.0689	1	0.00030	mg/L	28-JUL-15	28-JUL-15	R3234373

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1647683-1 COR-3							
Sampled By: CASEY P on 22-JUL-15 @ 09:00							
Matrix: WATER							
Total Metals by ICP-MS							
Nickel (Ni)-Total	0.0027		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373
Potassium (K)-Total	5.82		0.020	mg/L	28-JUL-15	28-JUL-15	R3234373
Sodium (Na)-Total	10.5		0.030	mg/L	28-JUL-15	28-JUL-15	R3234373
Zinc (Zn)-Total Total Suspended Solids	0.0639		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373
Total Suspended Solids	10.0		5.0	mg/L		27-JUL-15	R3234080
pH pH	7.98		0.10	pH units		30-JUL-15	R3236541
L1647683-2 COR-4							
Sampled By: CASEY P on 22-JUL-15 @ 09:30							
Matrix: WATER Miscellaneous Parameters							
Total Organic Carbon	28.5		1.0	mg/L		29-JUL-15	R3235215
Nunavut WW Group 1	20.0		1.0	g/ L		20 002 10	1.0200210
Alkalinity, Bicarbonate Bicarbonate (HCO3)	222		1.2	mg/L		31-JUL-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		31-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		31-JUL-15	
Ammonia by colour Ammonia, Total (as N)	0.035		0.010	mg/L		24-JUL-15	R3232895
Biochemical Oxygen Demand (BOD)	0.033		0.010	ilig/L		24 00L 10	13232093
Biochemical Oxygen Demand	9.0		2.0	mg/L		25-JUL-15	R3238368
Carbonaceous BOD BOD Carbonaceous	4.6		2.0	mg/L		25-JUL-15	R3238368
Chloride in Water by IC Chloride (Cl)	49.0		0.50	mg/L		25-JUL-15	R3233612
Conductivity Conductivity	566		1.0	umhos/cm		30-JUL-15	R3236541
Fecal Coliform Fecal Coliforms	2400	PEHR	3	MPN/100mL		24-JUL-15	R3235397
Hardness Calculated Hardness (as CaCO3)	201		0.30	mg/L		29-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	28-JUL-15	28-JUL-15	R3234932
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		25-JUL-15	R3233612
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		28-JUL-15	13233012
Nitrite in Water by IC Nitrite (as N)	<0.010		0.010	mg/L		25-JUL-15	R3233612
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	28-JUL-15	28-JUL-15	R3234358
Phenol (4AAP)					20-JUL-13		
Phenols (4AAP) Phosphorus, Total	<0.0010		0.0010	mg/L		05-AUG-15	R3239267
Phosphorus (P)-Total Sulfate in Water by IC	0.203		0.010	mg/L		29-JUL-15	R3234756
Sulfate (SO4) Total Alkalinity as CaCO3	49.0		0.30	mg/L		25-JUL-15	R3233612
Alkalinity, Total (as CaCO3)	182		1.0	mg/L		30-JUL-15	R3236541

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

L1647683 CONTD.... PAGE 4 of 9 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1647683-2 COR-4							
Sampled By: CASEY P on 22-JUL-15 @ 09:30							
Matrix: WATER							
1							
Total Metals by ICP-MS Aluminum (Al)-Total	0.104		0.0050	mg/L	28-JUL-15	28-JUL-15	R3234373
Arsenic (As)-Total	0.00094		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	28-JUL-15	28-JUL-15	R3234373
Calcium (Ca)-Total	62.2		0.10	mg/L	28-JUL-15	28-JUL-15	R3234373
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	28-JUL-15	28-JUL-15	R3234373
Cobalt (Co)-Total	0.00020		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Copper (Cu)-Total	0.00172		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Iron (Fe)-Total	0.46		0.10	mg/L	28-JUL-15	28-JUL-15	R3234373
Lead (Pb)-Total	0.000268		0.000090	mg/L	28-JUL-15	28-JUL-15	R3234373
Magnesium (Mg)-Total	11.2		0.010	mg/L	28-JUL-15	28-JUL-15	R3234373
Manganese (Mn)-Total	0.0675		0.00030	mg/L	28-JUL-15	28-JUL-15	R3234373
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373
Potassium (K)-Total	10.2		0.020	mg/L	28-JUL-15	28-JUL-15	R3234373
Sodium (Na)-Total	39.5		0.030	mg/L	28-JUL-15	28-JUL-15	R3234373
Zinc (Zn)-Total	0.0024		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373
Total Suspended Solids			5.0	m= == //		07 1111 45	D0004000
Total Suspended Solids	9.0		5.0	mg/L		27-JUL-15	R3234080
pH pH	7.84		0.10	pH units		30-JUL-15	R3236541
	7.04		0.10	priunis		30-30L-13	K3230341
L1647683-3 COR-6 UPSTREAM							
Sampled By: CASEY P on 22-JUL-15 @ 10:00							
Matrix: WATER							
Miscellaneous Parameters							
Total Organic Carbon	62.5		1.0	mg/L		29-JUL-15	R3235215
Polyaromatic Hydrocarbons (PAHs)	0.000000		0.000000		30-JUL-15	24 1111 45	D2027704
1-Methyl Naphthalene 2-Methyl Naphthalene	<0.000020 <0.000020		0.000020 0.000020	mg/L mg/L	30-JUL-15 30-JUL-15	31-JUL-15 31-JUL-15	R3237781 R3237781
Acenaphthene	0.000020		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Acenaphthylene	<0.000043		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Anthracene	<0.000010		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Acridine	0.000133	EMPC	0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Benzo(a)anthracene	<0.000010		0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Benzo(a)pyrene	<0.000010	DLM	0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Chrysene	<0.000020		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Dibenzo(a,h)anthracene	<0.000010	DLM	0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Fluoranthene	<0.000020		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Fluorene	<0.000020		0.000020	mg/L	30-JUL-15	31-JUL-15	R3237781
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Naphthalene	<0.000050		0.000050	mg/L	30-JUL-15	31-JUL-15	R3237781
Phenanthrene	<0.000050		0.000050	mg/L	30-JUL-15	31-JUL-15	R3237781
Pyrene	<0.000010	D	0.000010	mg/L	30-JUL-15	31-JUL-15	R3237781
Quinoline P(a)R Total Reteney Equivalent	<0.00020	DLM	0.00020	mg/L	30-JUL-15	31-JUL-15	R3237781
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	30-JUL-15	31-JUL-15	R3237781
Surrogate: Acenaphthene d10 Surrogate: Acridine d9	74.0		40-130	% %	30-JUL-15 30-JUL-15	31-JUL-15 31-JUL-15	R3237781
Surrogate: Acridine d9 Surrogate: Chrysene d12	67.2 77.1		40-130 40-130	% %	30-JUL-15 30-JUL-15	31-JUL-15 31-JUL-15	R3237781
Surrogate: Naphthalene d8	77.6		40-130	%	30-JUL-15 30-JUL-15	31-JUL-15 31-JUL-15	R3237781 R3237781
Surrogate: Phenanthrene d10	73.5		40-130	% %	30-JUL-15	31-JUL-15	R3237781
Sarrogato. I nonantinono aro	13.3		40-130	/0	30-30L-13	01-30L-13	13231101

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1647683-3 COR-6 UPSTREAM							
Sampled By: CASEY P on 22-JUL-15 @ 10:00							
Matrix: WATER							
Nunavut WW Group 1							
Alkalinity, Bicarbonate	207		4.0			31-JUL-15	
Bicarbonate (HCO3) Alkalinity, Carbonate	397		1.2	mg/L		31-JUL-13	
Carbonate (CO3)	<0.60		0.60	mg/L		31-JUL-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		31-JUL-15	
Ammonia by colour Ammonia, Total (as N)	47.5	DLA	2.0	mg/L		29-JUL-15	R3235420
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	66	DLA	20	mg/L		25-JUL-15	R3238368
Carbonaceous BOD BOD Carbonaceous	58	DLA	20	mg/L		25-JUL-15	R3238368
Chloride in Water by IC							
Chloride (CI) Conductivity	58.7		0.50	mg/L		25-JUL-15	R3233612
Conductivity Conductivity Fecal Coliform	950		1.0	umhos/cm		30-JUL-15	R3236541
Fecal Coliforms	24000	PEHR	3	MPN/100mL		24-JUL-15	R3235397
Hardness Calculated Hardness (as CaCO3)	116		0.30	mg/L		29-JUL-15	
Mercury Total Mercury (Hg)-Total	<0.00040	DLM	0.00040	mg/L	28-JUL-15	28-JUL-15	R3234932
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		25-JUL-15	R3233612
Nitrate+Nitrite						00 1111 45	
Nitrate and Nitrite as N Nitrite in Water by IC	<0.070		0.070	mg/L		28-JUL-15	
Nitrite (as N)	<0.010		0.010	mg/L		25-JUL-15	R3233612
Oil and Grease, Total Oil and Grease, Total	3.8		2.0	mg/L	28-JUL-15	28-JUL-15	R3234358
Phenol (4AAP) Phenols (4AAP)	<0.040		0.040	mg/L		05-AUG-15	R3239267
Note: Result was checked. Data is ok. DLM	10.070		5.0⊣0	9, 2		337.00 10	. 10200201
(matrix interference). SD Phosphorus, Total							
Phosphorus (P)-Total	7.95	DLA	0.050	mg/L		29-JUL-15	R3234756
Sulfate in Water by IC Sulfate (SO4)	11.5		0.30	mg/L		25-JUL-15	R3233612
Total Alkalinity as CaCO3			0.00				
Alkalinity, Total (as CaCO3)	325		1.0	mg/L		30-JUL-15	R3236541
Total Metals by ICP-MS Aluminum (Al)-Total	0.0557		0.0050	mg/L	28-JUL-15	28-JUL-15	R3234373
Arsenic (As)-Total	0.0057		0.0050	mg/L	28-JUL-15	28-JUL-15 28-JUL-15	R3234373
Cadmium (Cd)-Total	0.000113		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Calcium (Ca)-Total	38.4		0.10	mg/L	28-JUL-15	28-JUL-15	R3234373
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	28-JUL-15	28-JUL-15	R3234373
Cobalt (Co)-Total	0.00063		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Copper (Cu)-Total	0.0184		0.00020	mg/L	28-JUL-15	28-JUL-15	R3234373
Iron (Fe)-Total	0.36		0.10	mg/L	28-JUL-15	28-JUL-15	R3234373
Lead (Pb)-Total	0.000378		0.000090	mg/L	28-JUL-15	28-JUL-15	R3234373
Magnesium (Mg)-Total	4.89		0.010	mg/L	28-JUL-15	28-JUL-15	R3234373
Manganese (Mn)-Total	0.0480		0.00030	mg/L	28-JUL-15	28-JUL-15	R3234373
Nickel (Ni)-Total	0.0031		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1647683-3 COR-6 UPSTREAM							
Sampled By: CASEY P on 22-JUL-15 @ 10:00							
Matrix: WATER							
Total Metals by ICP-MS Potassium (K)-Total	22.7		0.020	mg/L	28-JUL-15	28-JUL-15	R3234373
Sodium (Na)-Total	50.0		0.020	mg/L	28-JUL-15	28-JUL-15	R3234373
Zinc (Zn)-Total	0.0210		0.0020	mg/L	28-JUL-15	28-JUL-15	R3234373
Total Suspended Solids	0.02.0		0.0020				1.020.0.0
Total Suspended Solids	57.0		5.0	mg/L		27-JUL-15	R3234080
pH							
pH	7.77		0.10	pH units		30-JUL-15	R3236541
				<u> </u>	<u> </u>		

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

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Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
DLM	Detection Limit Adjusted due to sample matrix effects.
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.
PEHR	Parameter Exceeded Recommended Holding Time On Receipt: Proceed With Analysis As Requested.

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 Total Alkalinity 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.

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

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

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Reference Information

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Test Method References:

ALS Test Code Matrix Test Description

Method Reference**

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.

Thiroprusside and measured colournemeany

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.

OGG-TOT-WT Water Oil and Grease, Total APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

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)

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

TOC-WT Water Total Organic Carbon APHA 5310B

Sample is injected into a heated reaction chamber which is packed with an oxidative catalyst. The water is vaporized and the organic cabon is oxidized

to carbon dioxide. The carbon dioxide is transported in a carrier gas and is measured by a non-dispersive infrared detector.

** 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:

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Reference Information

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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

Canada Toil Free: 1 800 668 9878

L1647683-COFC

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Contact: Leon to Parcolice	Quality Control ((QC) Report with Rep	ont Yes	No 🗌 No	Р	Priority (2-4 business days if received by 3pm)											
Address: PoBox30 Corol Harbor Ne.	Criteria on F	Criteria on Report - provide details below if box checked					Emergen	y (1-2 bu	siness di	ays if reco	eived by ?	3pm)					
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EFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY																	

Name of Sampler(s): George Date of Sampling: ___ Time of Sampling: Monitoring Station Number: GPS Coordinates: N 64 ° 09 '621 " W83 ° 11 1536" Weather Conditions: Windy Sunny Samples: 500 mL BOD 1 Limber PAH + Pres 1 L Routine 3- 40 mL BTEX, F1 Vials + Pres 250 mL Metals + Pres 2 x 60 mL Amber F2-F4 Vials + 40 mL Glass Mercury Vial + Pres Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenois + Pres Other: 125 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)



Name of Sampler(s): <u>George</u> (1) Date of Sampling: <u>July 22</u> Time of Sampling: <u>9:30 A</u> Monitoring Station Number: <u>Cov</u> GPS Coordinates: N 64 ° 09 ' 72/	1" Woss "11 '62/" Same
Monitoring Station Number: Cov	1" Wolf o 11 ' 62/" Same
	4 1" Wolf of 11 '62/" 1 Same
GPS Coordinates: N 64 ° 09 ' 721	1" Woll "11 '62/" Same
	Same
Weather Conditions: Windy	
Samples:	
500 mL BOD	1 L Amber PAH + Pres
1 L Routine	3 4 40 mL BTEX, F1 Vials + Pres
250 mL Metals + Pres	2 x 60 mL Amber F2-F4 Vials +
40 mL Glass Mercury Vial + Pres	Pres
250 mL Amber Nutrients + Pres	
A DEC mal Amelia DI II -	Other:
125 mL Sterile Bacteria Bottle	
2 x 500 mL Glass Oil & Grease +	
Pres	
Other Notes: (any unusual conditions, any dev	viation from standard procedures, etc.)
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Name of Sampler(s): <u>Creorge</u> (Timmy / Casky
Date of Sampling:	
Time of Sampling:) An
Monitoring Station Number:	or-6 Upsteem bogow.
GPS Coordinates: N 64 . 09 . 79	13" W 083 ° 11 '501"
Weather Conditions: Windy	1 Samy.
Samples: 500 mL BOD 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres	1/LAmber PAH + Pres 3-x 40 mL BTEX, F1 Vials + Pres 2 x 60 mL Amber F2-F4 Vials + Pres
250 mL Amber Phenois + Pres 125 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres	Other:
Other Notes: (any unusual conditions, any	deviation from standard procedures, etc.)



Hamlet of Coral Harbour ATTN: LEONIE PAMEOLIK

PO Box 30

Coral Harbour MB XOC OCO

Date Received: 21-AUG-15

Report Date: 02-SEP-15 14:57 (MT)

Version: FINAL

Client Phone: 867-925-8970

Certificate of Analysis

Lab Work Order #: L1661499
Project P.O. #: NOT SUBMITTED

Job Reference: CORAL HARBOUR MONITORING PROGRAM

C of C Numbers: Legal Site Desc:

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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



L1661499 CONTD.... PAGE 2 of 12 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-1 COR-3							
Sampled By: CLIENT on 19-AUG-15 @ 08:30							
Matrix: Water							
Miscellaneous Parameters							
Total Organic Carbon	59	DLA	10	mg/L		26-AUG-15	R3254351
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	438		1.2	mg/L		01-SEP-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-15	
Ammonia by colour Ammonia, Total (as N)	29.0		1.0	mg/L		26-AUG-15	R3254918
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	180	DLA	50	mg/L		22-AUG-15	R3255815
Carbonaceous BOD			-				
BOD Carbonaceous Chloride in Water by IC	190	DLA	50	mg/L		22-AUG-15	R3255815
Chloride (CI)	66.0		0.50	mg/L		22-AUG-15	R3252971
Conductivity Conductivity	976		1.0	umhos/cm		31-AUG-15	R3257924
Fecal Coliform Fecal Coliforms	2400		3	MPN/100mL		21-AUG-15	R3255958
Hardness Calculated Hardness (as CaCO3)	151		0.30	mg/L		27-AUG-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	25-AUG-15	25-AUG-15	R3253685
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		22-AUG-15	R3252971
Nitrate+Nitrite Nitrate and Nitrite as N						25-AUG-15	
Nitrite in Water by IC	<0.070		0.070	mg/L			Doggood:
Nitrite (as N)	<0.010		0.010	mg/L		22-AUG-15	R3252971
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	25-AUG-15	25-AUG-15	R3253766
Phenol (4AAP)	0.0000		0.0040	m c://		24 4110 45	D2057500
Phenols (4AAP)	0.0089		0.0010	mg/L		31-AUG-15	R3257596
Phosphorus, Total Phosphorus (P)-Total	5.85		0.050	mg/L		31-AUG-15	R3256967
Sulfate in Water by IC Sulfate (SO4)	28.1		0.30	mg/L		22-AUG-15	R3252971
Total Alkalinity as CaCO3 Alkalinity, Total (as CaCO3)	359		1.0	mg/L		31-AUG-15	R3257924
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0880		0.0050	mg/L	25-AUG-15	26-AUG-15	R3254377
Arsenic (As)-Total	0.00088		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Cadmium (Cd)-Total	0.000015		0.000010	mg/L	25-AUG-15	26-AUG-15	R3254377
Calcium (Ca)-Total	50.3		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	25-AUG-15	26-AUG-15	R3254377
Cobalt (Co)-Total	0.00054		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Copper (Cu)-Total	0.00723		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Iron (Fe)-Total	0.49		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Lead (Pb)-Total	0.000261		0.000090	mg/L	25-AUG-15	26-AUG-15	R3254377
Magnesium (Mg)-Total	6.21		0.010	mg/L	25-AUG-15	26-AUG-15	R3254377
Manganese (Mn)-Total	0.0651		0.00030	mg/L	25-AUG-15	26-AUG-15	R3254377

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

L1661499 CONTD.... PAGE 3 of 12 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-1 COR-3							
Sampled By: CLIENT on 19-AUG-15 @ 08:30							
Matrix: Water							
Total Metals by ICP-MS							
Nickel (Ni)-Total	0.0037		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
Potassium (K)-Total	24.2		0.020	mg/L	25-AUG-15	26-AUG-15	R3254377
Sodium (Na)-Total Zinc (Zn)-Total	58.6 0.0069		0.030 0.0020	mg/L mg/L	25-AUG-15 25-AUG-15	26-AUG-15 26-AUG-15	R3254377 R3254377
Total Suspended Solids	0.0000		0.0020	9/ _	207.00 10	207.00 10	110204077
Total Suspended Solids	695		5.0	mg/L		25-AUG-15	R3254074
pH pH	7.24		0.10	pH units		31-AUG-15	R3257924
L1661499-2 COR-4							
Sampled By: CLIENT on 19-AUG-15 @ 09:30							
Matrix: Water							
Miscellaneous Parameters Total Organic Carbon	15.2		1.0	mg/L		26-AUG-15	R3254351
Nunavut WW Group 1	10.2		1.0	illy/L		20 700-10	13204331
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	382		1.2	mg/L		01-SEP-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-15	
Alkalinity, Hydroxide	10.00		0.00	9/ =		0.02.	
Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-15	
Ammonia by colour Ammonia, Total (as N)	0.065		0.010	mg/L		26-AUG-15	R3254918
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	3.5		2.0	mg/L		22-AUG-15	R3255815
Carbonaceous BOD BOD Carbonaceous	<2.0		2.0	mg/L		22-AUG-15	R3255815
Chloride in Water by IC	50.4		0.50	ma/l		22 ALIC 15	D2052074
Chloride (CI) Conductivity	58.1		0.50	mg/L		22-AUG-15	R3252971
Conductivity	712		1.0	umhos/cm		31-AUG-15	R3257924
Fecal Coliform Fecal Coliforms			0	MPN/100mL		21-AUG-15	Doorroso
Hardness Calculated	4		3	IMPIN/TOUTIL		21-AUG-15	R3255958
Hardness (as CaCO3)	277		0.30	mg/L		27-AUG-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	25-AUG-15	25-AUG-15	R3253685
Nitrate in Water by IC	<0.00020	DLIVI	0.00020	illy/L	20-AUG-10	20-400-10	NJ2JJU0J
Nitrate (as N)	0.057		0.020	mg/L		22-AUG-15	R3252971
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		25-AUG-15	
Nitrite in Water by IC							
Nitrite (as N) Oil and Grease, Total	<0.010		0.010	mg/L		22-AUG-15	R3252971
Oil and Grease, Total Oil and Grease, Total	<2.0		2.0	mg/L	25-AUG-15	25-AUG-15	R3253766
Phenol (4AAP) Phenols (4AAP)	0.0017		0.0010	mg/L		31-AUG-15	R3257596
Phosphorus, Total							
Phosphorus (P)-Total Sulfate in Water by IC	0.139		0.010	mg/L		31-AUG-15	R3256967
Sulfate (SO4)	3.14		0.30	mg/L		22-AUG-15	R3252971
Total Alkalinity as CaCO3 Alkalinity, Total (as CaCO3)	313		1.0	mg/L		31-AUG-15	R3257924
Amailing, I otal (as CaCCs)	313		1.0	illy/L		31-A0G-13	NJ201924

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

L1661499 CONTD.... PAGE 4 of 12 Version: FINAL

L1681499-2 COR-4 Sampled By: CLIENT on 19-AUG-15 @ 09:30 Matrix: Water Total Metals by ICP-MS Aluminum (Al)-Total	Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
Sampled By: CLIENT on 19-AUG-15 @ 09-30 Matrix: Water	L1661499-2 COR-4							
Total Metals by ICP-MS Aluminum (Al)-Total								
Aluminum (Al)-Total 0.123 0.0050 mg/L 25-AUG-15 62-AUG-15 82254377 Arsenic (Ag-)-Total 0.000019 0.00010 mg/L 25-AUG-15 62-AUG-15 82254377 Cadmium (Ca)-Total 0.000125 0.000010 mg/L 25-AUG-15 62-AUG-15 82254377 Cadmium (Ca)-Total 0.00161 0.00010 mg/L 25-AUG-15 26-AUG-15 82254377 Cadmium (Ca)-Total 0.00161 0.00020 mg/L 25-AUG-15 26-AUG-15 82254377 Cadmium (Ca)-Total 0.00161 0.00020 mg/L 25-AUG-15 26-AUG-15 82254377 Cadmium (Ca)-Total 0.00161 0.00020 mg/L 25-AUG-15 26-AUG-15 82254377 Cadmium (Ca)-Total 0.000523 0.000000 mg/L 25-AUG-15 26-AUG-15 82254377 Cadmium (Mg)-Total 0.000551 0.000000 mg/L 25-AUG-15 26-AUG-15 82254377 Magnesium (Mg)-Total 0.00161 0.00161 0.00000 mg/L 25-AUG-15 26-AUG-15 82254377 Magnesium (Mg)-Total 0.0054 0.00000 mg/L 25-AUG-15 26-AUG-15 82254377 Magnesium (Mg)-Total 0.0054 0.00000 mg/L 25-AUG-15 26-AUG-15 82254377 Magnesium (Mg)-Total 0.0054 0.00000 mg/L 25-AUG-15 26-AUG-16 82254377 Mg/L 0.00000 mg/L 25-AUG-15 82254377 Mg/L 0.000000 mg/L 25-AUG-15 82254377 Mg/L 0.0000000000000000000000000000000000								
Arsenic (As)-Total								
Cadichim (Cd)-Total					_			
Calcium (Ca)-Total					_			
Chromium (Cp)-Total					_			
Cobbat (Co)-Total					_			
Iron (Fe)-Total	\ '				_	25-AUG-15	26-AUG-15	
Lead (Pb)-Total	' ' ' '				mg/L			
Magnesium (Mg)-Total 0.0512 0.0010 mg/L 25-AUG-15 26-AUG-15 R3254377	ļ , , ,				_			
Manganese (Mn)-Total					_			
Nickel (Ni)-Total					_			
Potassium (K)-Total					_			
Sodium (Na)-Total Can Ca	` '				_			
Total Suspended Solids Total Suspended Solids Final Solids Final Suspended Solids Final Solids Final Suspended Solids Final Suspend	· ,	61.3		0.030	_	25-AUG-15	26-AUG-15	R3254377
Total Suspended Solids		0.0192		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
pH pH T.88 0.10 pH units 31-AUG-15 R3257924 L1661499-3 COR-5 COR-5 CATCHENT on 19-AUG-15 @ 09:45 Alkalinty Water Miscellaneous Parameters Total Organic Carbon 17.9 1.0 mg/L 26-AUG-15 R3254351 Nunavut WW Group 1 Alkalinity, Carbonate Bicarbonate (HCO3) 319 1.2 mg/L 01-SEP-15 01-SEP-15 01-SEP-15 Alkalinity, Hydroxide Hydroxide (OH) <0.34		67.0		F 0	mc/l		25 ALIC 45	D2054074
Ph	•	67.0		5.0	mg/L		25-AUG-15	R3254074
Sampled By: CLIENT on 19-AUG-15 @ 09:45 Matrix: Water Miscellaneous Parameters Total Organic Carbon 17.9 1.0 mg/L 26-AUG-15 R3254351		7.88		0.10	pH units		31-AUG-15	R3257924
Sampled By: CLIENT on 19-AUG-15 @ 09:45 Matrix: Water Miscellaneous Parameters Total Organic Carbon 17.9 1.0 mg/L 26-AUG-15 R3254351	L1661499-3 COR-5				,			
Matrix: Water Miscellaneous Parameters Total Organic Carbon 17.9 1.0 mg/L 26-AUG-15 R3254351 Nunavut WW Group 1 Alkalinity, Bicarbonate 319 1.2 mg/L 01-SEP-15 A18254351 Alkalinity, Carbonate (CO3) 319 1.2 mg/L 01-SEP-15 01-SEP-15 Alkalinity, Hydroxide (CH) <0.60 0.60 mg/L 01-SEP-15 01-SEP-15 Ammonia by colour <0.34 0.34 mg/L 01-SEP-15 01-SEP-15 Ammonia Dy colour <0.018 0.010 mg/L 26-AUG-15 R3254918 Biochemical Oxygen Demand (BOD) 0.018 0.010 mg/L 26-AUG-15 R3255815 Carbonaceous BOD 74 DLA 20 mg/L 22-AUG-15 R3255815 Chloride in Water by IC 53.2 0.50 mg/L 22-AUG-15 R3255958 Chorductivity 673 1.0 umhos/cm 31-AUG-15 R3255958 Hardness Calculated 4 3 MPN/100mL <								
Total Organic Carbon 17.9 1.0 mg/L 26-AUG-15 R3254351								
Nunavut WW Group 1	Miscellaneous Parameters							
Alkalinity, Bicarbonate 319 1.2 mg/L 01-SEP-15 Alkalinity, Carbonate (CO3) <0.60 0.60 mg/L 01-SEP-15 Carbonate (CO3) <0.60 0.60 mg/L 01-SEP-15 Alkalinity, Hydroxide (PJH) <0.34 0.34 mg/L 01-SEP-15 Ammonia by colour Ammonia, Total (as N) 0.018 0.010 mg/L 26-AUG-15 R3254918 Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand (BOD) DLA 20 mg/L 22-AUG-15 R3255815 Carbonaceous BOD BOD Carbonaceous 74 DLA 20 mg/L 22-AUG-15 R3255815 Chloride in Water by IC Chloride (CI) 53.2 0.50 mg/L 22-AUG-15 R3255951 Conductivity Conductivity 673 1.0 umhos/cm 31-AUG-15 R3257924 Fecal Coliform Feacl Coliform Feacl Coliforms 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 25-AUG-15 25-AUG-15 R3253685 <td></td> <td>17.9</td> <td></td> <td>1.0</td> <td>mg/L</td> <td></td> <td>26-AUG-15</td> <td>R3254351</td>		17.9		1.0	mg/L		26-AUG-15	R3254351
Bicarbonate (HCO3) 319 1.2 mg/L 01-SEP-15 Alkalinity, Carbonate (CO3) <0.60 0.60 mg/L 01-SEP-15 Alkalinity, Hydroxide (DH) <0.34 0.34 mg/L 01-SEP-15 Ammonia by colour Ammonia, Total (as N) 0.018 0.010 mg/L 26-AUG-15 R3254918 Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand 107 DLA 20 mg/L 22-AUG-15 R3255815 Carbonaceous BOD BOD Carbonaceous 74 DLA 20 mg/L 22-AUG-15 R3255815 Chloride in Water by IC Conductivity 673 1.0 umhos/cm 31-AUG-15 R3257924 Fecal Coliform Fecal Coliform 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 25-AUG-15 R3252971 Nitrate+Nitrite Nitrate+Nitrite 22-AUG-15 R3252971 R3253971 One of the control of	•							
Alkalinity, Carbonate <0.60		310		1 2	ma/l		01-SEP-15	
Carbonate (CO3)	` ′	319		1.2	mg/L		01-021-13	
Hydroxide (OH)		<0.60		0.60	mg/L		01-SEP-15	
Ammonia by colour Ammonia, Total (as N) 0.018 0.010 mg/L 26-AUG-15 R3254918 Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand 107 DLA 20 mg/L 22-AUG-15 R3255815 Carbonaceous BOD BOD Carbonaceous 74 DLA 20 mg/L 22-AUG-15 R3255815 Chloride in Water by IC Chloride (Cl) 53.2 0.50 mg/L 22-AUG-15 R3255815 Conductivity Conductivity 673 1.0 umhos/cm 31-AUG-15 R3257924 Fecal Coliform Fecal Coliforms 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15 R3255958 Mercury Total Mercury (Hg)-Total 0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 25-AUG-15 R3252971 Nitrate+Nitrite								
Ammonia, Total (as N) 0.018 0.010 mg/L 26-AUG-15 R3254918		<0.34		0.34	mg/L		01-SEP-15	
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand 107		0.018		0.010	ma/l		26-AHG-15	P325/018
Biochemical Oxygen Demand 107		0.010		0.010	g/ L		207.00-10	110204310
BOD Carbonaceous 74 DLA 20 mg/L 22-AUG-15 R3255815 Chloride in Water by IC Chloride (CI) 53.2 0.50 mg/L 22-AUG-15 R3252971 Conductivity Conductivity 673 1.0 umhos/cm Fecal Coliform Fecal Coliforms 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15 Mercury Total Mercury (Hg)-Total < <0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate+Nitrite 0 0.832 0.020 mg/L 22-AUG-15 R3252971		107	DLA	20	mg/L		22-AUG-15	R3255815
Chloride in Water by IC 53.2 0.50 mg/L 22-AUG-15 R3252971 Conductivity 673 1.0 umhos/cm 31-AUG-15 R3257924 Fecal Coliform 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated 4 3 MPN/100mL 27-AUG-15 R3255958 Mercury Total Mercury (Hg)-Total <0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite 83252971 R3252971 R3252971		_		_				
Chloride (CI) 53.2 0.50 mg/L 22-AUG-15 R3252971 Conductivity Conductivity Conductivity Fecal Coliform Fecal Coliforms 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15 Mercury Total Mercury (Hg)-Total < 0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite		74	DLA	20	mg/L		22-AUG-15	R3255815
Conductivity 673 1.0 umhos/cm 31-AUG-15 R3257924 Fecal Coliform 4 3 MPN/100mL 21-AUG-15 R3255958 Hardness Calculated Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15 Mercury Total Mercury (Hg)-Total <0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite	l	53.2		0.50	ma/l		22-AUG-15	R3252971
Conductivity 673	, ,	55.2		0.00	g/ L		LL / (00°10	1.0202011
Fecal Coliforms		673		1.0	umhos/cm		31-AUG-15	R3257924
Hardness Calculated 233 0.30 mg/L 27-AUG-15 Mercury Total 0.00020 DLM 0.00020 mg/L 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite 0.020 mg/L 22-AUG-15 R3252971	1							
Hardness (as CaCO3) 233 0.30 mg/L 27-AUG-15		4		3	MPN/100mL		21-AUG-15	R3255958
Mercury Total Mercury (Hg)-Total <0.00020 DLM 0.00020 mg/L 25-AUG-15 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite		233		0.30	ma/l		27-AUG-15	
Mercury (Hg)-Total <0.00020 DLM 0.00020 mg/L 25-AUG-15 25-AUG-15 R3253685 Nitrate in Water by IC Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite	, ,	200		5.55	g, L			
Nitrate (as N) 0.832 0.020 mg/L 22-AUG-15 R3252971 Nitrate+Nitrite		<0.00020	DLM	0.00020	mg/L	25-AUG-15	25-AUG-15	R3253685
Nitrate+Nitrite				_	_			
		0.832		0.020	mg/L		22-AUG-15	R3252971
, 1 0:00E 1 0:00 IIIU/E 1 20 A00 III		0.832		0.070	ma/l		25-AUG-15	
Nitrite in Water by IC		0.502		0.070	g/ L		_07.00 10	

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

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Sample Details/Parameters	Result	Qualifier* D.L	. Units	Extracted	Analyzed	Batch
L1661499-3 COR-5						
Sampled By: CLIENT on 19-AUG-15 @ 09:45						
Matrix: Water						
Nitrite in Water by IC						
Nitrite (as N)	<0.010	0.01	0 mg/L		22-AUG-15	R3252971
Oil and Grease, Total				05 4110 45	05 4110 45	
Oil and Grease, Total	<2.0	2.0) mg/L	25-AUG-15	25-AUG-15	R3253766
Phenol (4AAP) Phenols (4AAP)	0.0015	0.00	10 mg/L		31-AUG-15	R3257596
Phosphorus, Total Phosphorus (P)-Total	0.350	0.01	0 mg/L		31-AUG-15	R3256967
Sulfate in Water by IC						
Sulfate (SO4) Total Alkalinity as CaCO3	12.9	0.3	0 mg/L		22-AUG-15	R3252971
Alkalinity, Total (as CaCO3)	262	1.0) mg/L		31-AUG-15	R3257924
Total Metals by ICP-MS Aluminum (Al)-Total	0.0491	0.00	50 mg/L	25-AUG-15	26-AUG-15	R3254377
Arsenic (As)-Total	0.00062	0.000	J	25-AUG-15	26-AUG-15	R3254377
Cadmium (Cd)-Total	0.000123	0.000		25-AUG-15	26-AUG-15	R3254377
Calcium (Ca)-Total	82.8	0.1		25-AUG-15	26-AUG-15	R3254377
Chromium (Cr)-Total	<0.0010	0.00		25-AUG-15	26-AUG-15	R3254377
Cobalt (Co)-Total	0.00195	0.000)20 mg/L	25-AUG-15	26-AUG-15	R3254377
Copper (Cu)-Total	0.0119	0.000)20 mg/L	25-AUG-15	26-AUG-15	R3254377
Iron (Fe)-Total	<0.10	0.1	0 mg/L	25-AUG-15	26-AUG-15	R3254377
Lead (Pb)-Total	0.000131	0.000	090 mg/L	25-AUG-15	26-AUG-15	R3254377
Magnesium (Mg)-Total	6.28	0.01	0 mg/L	25-AUG-15	26-AUG-15	R3254377
Manganese (Mn)-Total	0.0109	0.000)30 mg/L	25-AUG-15	26-AUG-15	R3254377
Nickel (Ni)-Total	0.0060	0.00	20 mg/L	25-AUG-15	26-AUG-15	R3254377
Potassium (K)-Total	5.04	0.02		25-AUG-15	26-AUG-15	R3254377
Sodium (Na)-Total	52.3	0.03	30 mg/L	25-AUG-15	26-AUG-15	R3254377
Zinc (Zn)-Total	0.0049	0.00	20 mg/L	25-AUG-15	26-AUG-15	R3254377
Total Suspended Solids Total Suspended Solids	85.0	5.0) mg/L		25-AUG-15	R3254074
pH	00.0	3.0	, , , , , , , , , , , , , , , , , , ,		207100 10	113234074
pH	8.07	0.1	0 pH units		31-AUG-15	R3257924
L1661499-4 COR-6						
Sampled By: CLIENT on 19-AUG-15 @ 08:35						
Matrix: Water BTEX plus F1-F4						
BTX plus F1 by GCMS						
Benzene	<0.00050	0.000)50 mg/L		28-AUG-15	R3256939
Toluene	<0.0010	0.00	_		28-AUG-15	R3256939
Ethyl benzene	<0.00050	0.000			28-AUG-15	R3256939
o-Xylene	<0.00050	0.000			28-AUG-15	R3256939
m+p-Xylenes	<0.00050	0.000			28-AUG-15	R3256939
F1 (C6-C10)	<0.10	0.1	_		28-AUG-15	R3256939
Surrogate: 4-Bromofluorobenzene (SS)	100.9	70-1	_		28-AUG-15	R3256939
CCME Total Hydrocarbons						
F1-BTEX	<0.10	0.1	0 mg/L		01-SEP-15	
F2-Naphth	<0.25	0.2	5 mg/L		01-SEP-15	
F3-PAH	<0.25	0.2	5 mg/L		01-SEP-15	
Total Hydrocarbons (C6-C50)	<0.44	0.4	4 mg/L		01-SEP-15	
F2-F4 PHC method						
F2 (C10-C16)	<0.25	0.2	5 mg/L	26-AUG-15	27-AUG-15	R3254980
F3 (C16-C34)	<0.25	0.2	5 mg/L	26-AUG-15	27-AUG-15	R3254980

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-4 COR-6							
Matrix: Water							
F2-F4 PHC method F4 (C34-C50)	<0.25		0.25	mg/L	26-AUG-15	27-AUG-15	R3254980
Surrogate: 2-Bromobenzotrifluoride	104.8		60-140	111g/L %	26-AUG-15	27-AUG-15 27-AUG-15	R3254980
Sum of Xylene Isomer Concentrations	104.8		00-140	/0	20-700-13	21-A00-13	K3234900
Xylenes (Total)	<0.0015		0.0015	mg/L		31-AUG-15	
Miscellaneous Parameters	10.0010		0.00.0				
Total Organic Carbon	26.4		1.0	mg/L		26-AUG-15	R3254351
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Acenaphthene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Acenaphthylene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Anthracene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Acridine	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(a)anthracene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(b&j)fluoranthene Benzo(g,h,i)perylene	<0.000010		0.000010 0.000020	mg/L	27-AUG-15 27-AUG-15	29-AUG-15 29-AUG-15	R3255859 R3255859
Benzo(g,n,i)peryiene Benzo(k)fluoranthene	<0.000020		0.000020	mg/L	27-AUG-15 27-AUG-15	29-AUG-15 29-AUG-15	R3255859 R3255859
Chrysene	<0.000010 <0.000020		0.000010	mg/L mg/L	27-AUG-15 27-AUG-15	29-AUG-15 29-AUG-15	R3255859
Dibenzo(a,h)anthracene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15 29-AUG-15	R3255859
Fluoranthene	<0.000030		0.0000030	mg/L	27-AUG-15	29-AUG-15	R3255859
Fluorene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Naphthalene	<0.000050		0.000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Phenanthrene	<0.000050		0.000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Pyrene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Quinoline	<0.00010	DLM	0.00010	mg/L	27-AUG-15	29-AUG-15	R3255859
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	27-AUG-15	29-AUG-15	R3255859
Surrogate: Acenaphthene d10	90.6		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Acridine d9	101.1		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Chrysene d12	97.1		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Naphthalene d8	78.8		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Phenanthrene d10	91.2		40-130	%	27-AUG-15	29-AUG-15	R3255859
Nunavut WW Group 1							
Alkalinity, Bicarbonate Bicarbonate (HCO3)	280		1.2	mg/L		01-SEP-15	
Alkalinity, Carbonate	200		1.2	g, L		5. <u>5</u> L1 -10	
Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-15	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-15	
Ammonia by colour							
Ammonia, Total (as N)	0.343		0.010	mg/L		26-AUG-15	R3254918
Biochemical Oxygen Demand (BOD)							_
Biochemical Oxygen Demand	4.4		2.0	mg/L		22-AUG-15	R3255815
Carbonaceous BOD BOD Carbonaceous			2.0	m c/l		22 ALIC 45	Dageente
	5.5		2.0	mg/L		22-AUG-15	R3255815
Chloride in Water by IC Chloride (CI)	65.4		0.50	mg/L		22-AUG-15	R3252971
Conductivity			3.00	··			
Conductivity	885		1.0	umhos/cm		31-AUG-15	R3257924
Fecal Coliform							
Fecal Coliforms	210		3	MPN/100mL		21-AUG-15	R3255958

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-4 COR-6							
Sampled By: CLIENT on 19-AUG-15 @ 08:35							
Matrix: Water							
Hardness Calculated Hardness (as CaCO3)	352		0.30	mg/L		27-AUG-15	
Mercury Total							
Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	25-AUG-15	25-AUG-15	R3253685
Nitrate in Water by IC Nitrate (as N)	<0.020		0.020	mg/L		22-AUG-15	R3252971
Nitrate+Nitrite	0.070		0.070	/1		05 AUG 45	
Nitrate and Nitrite as N Nitrite in Water by IC	<0.070		0.070	mg/L		25-AUG-15	
Nitrite (as N)	<0.010		0.010	mg/L		22-AUG-15	R3252971
Oil and Grease, Total	-0.0		2.0	mc/!	25 ALIC 45	25 ALIC 45	D2050700
Oil and Grease, Total Phenol (4AAP)	<2.0		2.0	mg/L	25-AUG-15	25-AUG-15	R3253766
Phenols (4AAP)	0.0017		0.0010	mg/L		31-AUG-15	R3257596
Phosphorus, Total Phosphorus (P)-Total	0.125		0.010	mg/L		31-AUG-15	R3256967
Sulfate in Water by IC				3-			
Sulfate (SO4)	140		0.30	mg/L		22-AUG-15	R3252971
Total Alkalinity as CaCO3 Alkalinity, Total (as CaCO3)	230		1.0	mg/L		31-AUG-15	R3257924
Total Metals by ICP-MS				,,	05 4110 45	00 4110 45	
Aluminum (Al)-Total	0.0720		0.0050	mg/L	25-AUG-15	26-AUG-15	R3254377
Arsenic (As)-Total	0.00097		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	25-AUG-15	26-AUG-15	R3254377
Calcium (Ca)-Total	111		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	25-AUG-15	26-AUG-15	R3254377
Cobalt (Co)-Total	0.00023		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Copper (Cu)-Total	0.00136		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Iron (Fe)-Total	0.46		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Lead (Pb)-Total	0.000252		0.000090	mg/L	25-AUG-15	26-AUG-15	R3254377
Magnesium (Mg)-Total	18.0		0.010	mg/L	25-AUG-15	26-AUG-15	R3254377
Manganese (Mn)-Total	0.0635		0.00030	mg/L	25-AUG-15	26-AUG-15	R3254377
Nickel (Ni)-Total	<0.0020		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
Potassium (K)-Total	15.9		0.020	mg/L	25-AUG-15	26-AUG-15	R3254377
Sodium (Na)-Total	55.3		0.030	mg/L	25-AUG-15	26-AUG-15	R3254377
Zinc (Zn)-Total	0.0034		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
Total Suspended Solids Total Suspended Solids	8.0		E 0	ma/l		25-AUG-15	D2054074
pH	0.0		5.0	mg/L		20-AUG-10	R3254074
pH pH	8.21		0.10	pH units		31-AUG-15	R3257924
L1661499-5 COR-7							
Sampled By: CLIENT on 19-AUG-15 @ 08:45							
Matrix: Water							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		29-AUG-15	R3256939
Toluene	<0.0010		0.0010	mg/L		29-AUG-15	R3256939
Ethyl benzene	<0.00050		0.00050	mg/L		29-AUG-15	R3256939
o-Xylene	<0.00050		0.00050	mg/L		29-AUG-15	R3256939
m+p-Xylenes	<0.00050		0.00050	mg/L		29-AUG-15	R3256939
F1 (C6-C10)	<0.10		0.10	mg/L		29-AUG-15	R3256939
Surrogate: 4-Bromofluorobenzene (SS)	97.9		70-130	%		29-AUG-15	R3256939
CCME Total Hydrocarbons							

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

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Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-5 COR-7							
Sampled By: CLIENT on 19-AUG-15 @ 08:45							
Matrix: Water							
CCME Total Hydrocarbons F1-BTEX	<0.10		0.10	mg/L		01-SEP-15	
F2-Naphth	<0.25		0.25	mg/L		01-SEP-15	
F3-PAH	<0.25		0.25	mg/L		01-SEP-15	
Total Hydrocarbons (C6-C50)	<0.44		0.44	mg/L		01-SEP-15	
F2-F4 PHC method F2 (C10-C16)	-0.25		0.05	ma/l	26-AUG-15	27-AUG-15	D2054090
F3 (C16-C34)	<0.25 <0.25		0.25 0.25	mg/L mg/L	26-AUG-15 26-AUG-15	27-AUG-15 27-AUG-15	R3254980 R3254980
F4 (C34-C50)	<0.25		0.25	mg/L	26-AUG-15	27-AUG-15 27-AUG-15	R3254980
Surrogate: 2-Bromobenzotrifluoride	106.0		60-140	//////////////////////////////////////	26-AUG-15	27-AUG-15 27-AUG-15	R3254980
Sum of Xylene Isomer Concentrations	100.0		00-140	70	20 700 13	21 400 10	13234900
Xylenes (Total)	<0.0015		0.0015	mg/L		31-AUG-15	
Miscellaneous Parameters				J			
Total Organic Carbon	18.0		1.0	mg/L		26-AUG-15	R3254351
Polyaromatic Hydrocarbons (PAHs)				-			
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Acenaphthene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Acenaphthylene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Anthracene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Acridine	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(a)anthracene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(a)pyrene	<0.000050		0.0000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	27-AUG-15 27-AUG-15	29-AUG-15	R3255859
Benzo(g,h,i)perylene Benzo(k)fluoranthene	<0.000020 <0.000010		0.000020 0.000010	mg/L mg/L	27-AUG-15 27-AUG-15	29-AUG-15 29-AUG-15	R3255859 R3255859
Chrysene	<0.000010		0.000010	mg/L	27-AUG-15 27-AUG-15	29-AUG-15 29-AUG-15	R3255859
Dibenzo(a,h)anthracene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Fluoranthene	<0.000020		0.000000	mg/L	27-AUG-15	29-AUG-15	R3255859
Fluorene	<0.000020		0.000020	mg/L	27-AUG-15	29-AUG-15	R3255859
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Naphthalene	<0.000050		0.000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Phenanthrene	<0.000050		0.000050	mg/L	27-AUG-15	29-AUG-15	R3255859
Pyrene	<0.000010		0.000010	mg/L	27-AUG-15	29-AUG-15	R3255859
Quinoline	<0.00015	DLM	0.00015	mg/L	27-AUG-15	29-AUG-15	R3255859
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	27-AUG-15	29-AUG-15	R3255859
Surrogate: Acenaphthene d10	89.9		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Acridine d9	100.7		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Chrysene d12	94.4		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Rhoparthropa d10	82.2		40-130	%	27-AUG-15	29-AUG-15	R3255859
Surrogate: Phenanthrene d10 Nunavut WW Group 1	90.3		40-130	%	27-AUG-15	29-AUG-15	R3255859
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	189		1.2	mg/L		01-SEP-15	
Alkalinity, Carbonate Carbonate (CO3)	<0.60		0.60	mg/L		01-SEP-15	
Alkalinity, Hydroxide Hydroxide (OH)	<0.34		0.34	mg/L		01-SEP-15	
	<0.54		0.34	my/L		01-357-13	
Ammonia by colour Ammonia, Total (as N)	0.205		0.010	mg/L		26-AUG-15	R3254918
Biochemical Oxygen Demand (BOD) Biochemical Oxygen Demand	<2.0		2.0	mg/L		22-AUG-15	R3255815
Carbonaceous BOD							

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

L1661499 CONTD.... PAGE 9 of 12 Version: FINAL

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1661499-5 COR-7							
Sampled By:							
Matrix: Water							
Carbonaceous BOD							
BOD Carbonaceous	<2.0		2.0	mg/L		22-AUG-15	R3255815
Chloride in Water by IC							
Chloride (CI)	10.3		0.50	mg/L		22-AUG-15	R3252971
Conductivity Conductivity	1030		1.0	umhos/cm		31-AUG-15	R3257924
Fecal Coliform	1030		1.0	ummos/cm		31-700-10	13237 924
Fecal Coliforms	<3		3	MPN/100mL		21-AUG-15	R3255958
Hardness Calculated							
Hardness (as CaCO3)	494		0.30	mg/L		27-AUG-15	
Mercury Total Mercury (Hg)-Total	<0.00020	DLM	0.00020	mg/L	25-AUG-15	25-AUG-15	R3253685
Nitrate in Water by IC							
Nitrate (as N)	0.049		0.020	mg/L		22-AUG-15	R3252971
Nitrate+Nitrite Nitrate and Nitrite as N	<0.070		0.070	mg/L		25-AUG-15	
Nitrite in Water by IC	30.070		5.070	9, _		_5.100 10	
Nitrite (as N)	<0.010		0.010	mg/L		22-AUG-15	R3252971
Oil and Grease, Total Oil and Grease, Total	-0.0		0.0	m c //	25-AUG-15	25-AUG-15	D2052700
Phenol (4AAP)	<2.0		2.0	mg/L	25-AUG-15	25-AUG-15	R3253766
Phenols (4AAP)	0.0025		0.0010	mg/L		31-AUG-15	R3257596
Phosphorus, Total							
Phosphorus (P)-Total	0.129		0.010	mg/L		31-AUG-15	R3256967
Sulfate in Water by IC Sulfate (SO4)	401		0.30	mg/L		22-AUG-15	R3252971
Total Alkalinity as CaCO3			0.00				
Alkalinity, Total (as CaCO3)	155		1.0	mg/L		31-AUG-15	R3257924
Total Metals by ICP-MS Aluminum (Al)-Total	0.0465		0.0050	ma/l	25-AUG-15	26-AUG-15	D2054277
Arsenic (As)-Total	0.0165 0.00050		0.0050 0.00020	mg/L mg/L	25-AUG-15 25-AUG-15	26-AUG-15 26-AUG-15	R3254377 R3254377
Cadmium (Cd)-Total	0.00030		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Calcium (Ca)-Total	178		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	25-AUG-15	26-AUG-15	R3254377
Cobalt (Co)-Total	0.00026		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Copper (Cu)-Total	0.00428		0.00020	mg/L	25-AUG-15	26-AUG-15	R3254377
Iron (Fe)-Total	0.89		0.10	mg/L	25-AUG-15	26-AUG-15	R3254377
Lead (Pb)-Total	0.000159		0.000090	mg/L	25-AUG-15	26-AUG-15	R3254377
Magnesium (Mg)-Total	12.0		0.010	mg/L	25-AUG-15	26-AUG-15	R3254377
Manganese (Mn)-Total	0.0742		0.00030	mg/L	25-AUG-15	26-AUG-15	R3254377
Nickel (Ni)-Total	0.0024		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
Potassium (K)-Total	7.42		0.020	mg/L	25-AUG-15	26-AUG-15	R3254377
Sodium (Na)-Total	14.2		0.030	mg/L	25-AUG-15	26-AUG-15	R3254377
Zinc (Zn)-Total	0.0612		0.0020	mg/L	25-AUG-15	26-AUG-15	R3254377
Total Suspended Solids				-			
Total Suspended Solids	<5.0		5.0	mg/L		25-AUG-15	R3254074
рН рН	7.81		0.10	pH units		31-AUG-15	R3257924
	7.01		0.10	pri unito		31-400-13	13231924

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

L1661499 CONTD....

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Version: FINAL

Reference Information

Sample Parameter Qualifier Key:

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

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

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 Total Alkalinity 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.

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.
- 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.

Reference Information

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Test Method References:

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

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 F2-F4 PHC method CWS (CCME)

Petroleum Hydrocarbons (F2-F4) in Water Method is adapted from US EPA Method 3511: Organic Compounds in Water by Micro-extraction" (Nov 2002) with instrumental analysis as per the "Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil - Tier 1 Method" (CCMS, Dec 2000) Water samples (in their entirety) are extracted using hexane prior to capillary column gas chromatography with flame ionization detection (GC/FID).

FC-MPN-WP **APHA 9221E** Water Fecal Coliform

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 APHA 4500 NH3 F Water Ammonia by colour

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 Nitrate in Water by IC EPA 300.1 (mod) Water

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

OGG-TOT-WT Water Oil and Grease, Total APHA 5520 B

Sample is extracted with hexane, extract is then evaporated and the residue is weighed to determine total oil and grease.

P-T-COL-WP 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 **APHA 4500H** Water pΗ

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 FPA 9066 Water Phenol (4AAP)

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.

Sulfate in Water by IC SO4-IC-N-WP Water 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.

TOC-WT Water **Total Organic Carbon APHA 5310B**

L1661499 CONTD

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Reference Information

Test Method References:

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

Sample is injected into a heated reaction chamber which is packed with an oxidative catalyst. The water is vaporized and the organic cabon is oxidized to carbon dioxide. The carbon dioxide is transported in a carrier gas and is measured by a non-dispersive infrared detector.

XYLENES-SUM-CALC-

Water

Sum of Xylene Isomer Concentrations

CALCULATED RESULT

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.

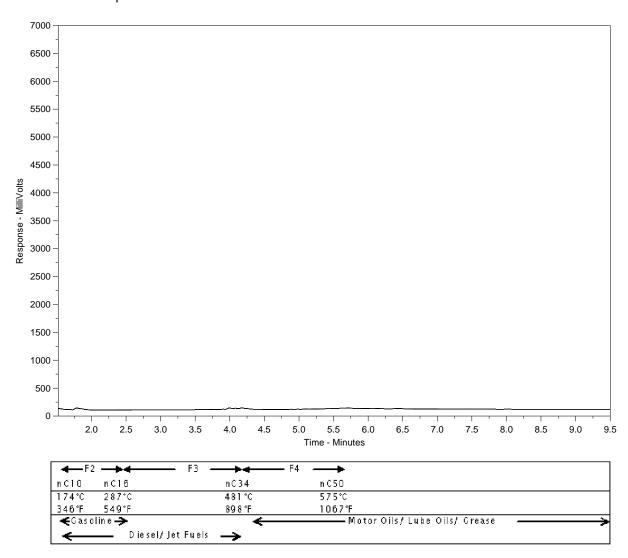
Test results reported relate only to the samples as received by the laboratory. UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

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

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L1661499-4 Client Sample ID: COR-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.

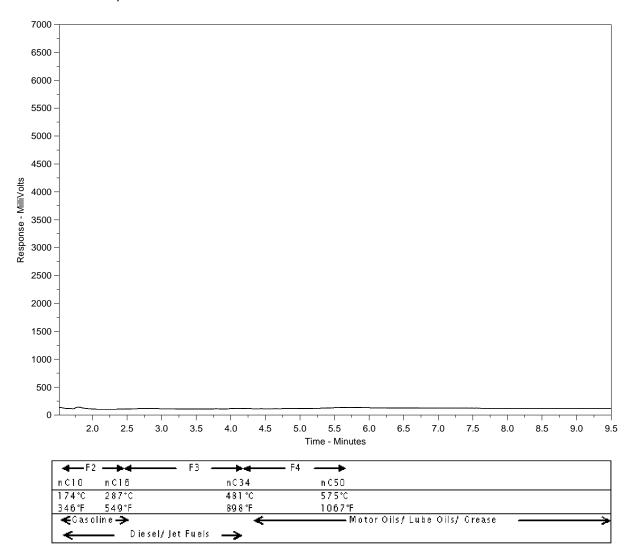
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L1661499-5 Client Sample ID: COR-7



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.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR library can be found at www.alsglobal.com.



Chain of Custody (COC) / Analytical Request Form

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Canada Toll Free: 1 800 668 9878

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L1661499-COFC

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Date of Sampling: Apry 19/15
Time of Sampling: 945
Monitoring Station Number: 6-5
GPS Coordinates: N 64 ° 09 ' \$50" W 93 ° 11 ' 16.2"
Weather Conditions:
Samples:
500 mL BOD 1 LAmber PAH + Pres
1 L Routine 3-x 40 mL BTEX, F1 Vials + Pres
250 mL Metals + Pres 2 x 60 mL Amber F2-F4 Vials +
40 mL Glass Mercury Vial + Pres Pres
250 mL Amber Nutrients + Pres
250 mL Amber Phenols + Pres Other:
125 mL Sterile Bacteria Bottle
500 mL Glass Oil & Grease +
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Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)
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Name of Sampler(s): Creorge Jimon Cases
Date of Sampling: Aug 19/15
Time of Sampling:
Monitoring Station Number:
GPS Coordinates: N 64 ° 09 ' 471 " W 43 ° 11 ' 20.1"
Weather Conditions: Scrup!
Samples:
1 LAmber PAH + Pres 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Nutrients + Pres
250 mL Amber Phenols + Pres 125 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres Other:
Other Notes: (any unusual conditions, any deviation from standard procedures, etc.) Strem from the (agoon



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Field Log

TOTAL LOB
Name of Sampler(s): <u>George Jimmy</u> Cade
Date of Sampling: Aug 19/15
Time of Sampling:

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GPS Coordinates: N <u>ん</u> り。_	09.62.5"	w 083 · 11	1538"

Monitoring Station Number:

Weather Conditions:	
Samples: 500 mL BOD 1 L Routine 250 mL Metals + Pres	1 L Amber PAH + Pres 3 x 40 mL BTEX, F1 Vials + Pres 2 x 60 mL Amber F2-F4 Vials +
40 mL Glass Mercury Vial + Pres	Pres
250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 250 mL Sterile Bacteria Bottle	Other:
2 x 500 mL Glass Oil & Grease +	

Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)

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Field Log

L1661499-COF

Name of Sampler(s): George Jimmy Cosley
Date of Sampling: Aug/9/15
Time of Sampling:
Monitoring Station Number:
GPS Coordinates: N <u>40 ° 09 1996"</u> W 0.83 ° 11 1987 "
Weather Conditions: Samp
Samples: 500 mL BOD 1 L Routine 250 mL Metals + Pres 40 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 250 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres Other Other Notes: (any unusual conditions, any deviation from standard procedures, etc.)
19gan



Name of Sampler(s): Ceorge Story Ceorge Date of Sampling: Aya 9/15
Date of Sampling: Aug 19/15
Time of Sampling:
Monitoring Station Number:
GPS Coordinates: N 64 ° 09 '41.9" W 083 ° 11 '36.5"
Weather Conditions:
Samples: 1 500 mL BOD 1 L Routine 250 mL Metals + Pres 250 mL Glass Mercury Vial + Pres 250 mL Amber Nutrients + Pres 250 mL Amber Phenols + Pres 250 mL Sterile Bacteria Bottle 2 x 500 mL Glass Oil & Grease + Pres
Other Notes: (any unusual conditions, any deviation from standard procedures, etc.) For before lagoon and Domp the



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): 2015

Spill No.	Date	Ter	Region	Location	Site Description	Commodity	Quantity	Source	Agency
2015007	2015-01-09	NU	KEE	Coral Harbour	Sakku School	Diesel	170 L	ST<	GN
2015228	2015-05-29	NU	KEE	Coral Harbour	Public Housing Unit 174-M	Heat fuel	30 L	ST<	GN

Total Spills on this Report: 2

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

BAF - Baffin	DRUM - Drum or Barrel MV - Marine Vessel NS - Natural Seepage	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 NEB - National Energy Board
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