Hamlet of Coral Harbour
ATTN: LEONIE PAMEOLIK
PO Box 30
Coral Harbour MB X0C 0C0

Date Received: 27-AUG-14
Report Date: 09-SEP-14 13:49 (MT)
Version: FINAL

Client Phone: 867-925-8970

Certificate of Analysis

Lab Work Order #: L1508944

Project P.O. #: NOT SUBMITTED
Job Reference: CORAL HARBOUR MONITORING PROGRAM
C of C Numbers:
Legal Site Desc:

Craig Riddell
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1508944-1 COR-3							
Sampled By: Casey P on 26-AUG-14 @ 11:10							
Matrix: Wastewater							
Nunavut WW Group 1							
Alkalinity							
Alkalinity, Total (as CaCO3)	349		20	mg/L		30-AUG-14	R2936349
Bicarbonate (HCO3)	426		24	mg/L		30-AUG-14	R2936349
Carbonate (CO3)	<12		12	mg/L		30-AUG-14	R2936349
Hydroxide (OH)	<6.8		6.8	mg/L		30-AUG-14	R2936349
Ammonia by colour							
Ammonia, Total (as N)	35.1	DLA	1.0	mg/L		29-AUG-14	R2934811
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	37.6		6.0	mg/L		28-AUG-14	R2935188
Carbonaceous BOD							
BOD Carbonaceous	23.3		6.0	mg/L		28-AUG-14	R2935188
Chloride by Ion Chromatography							
Chloride	62.3		0.50	mg/L		28-AUG-14	R2934807
Conductivity							
Conductivity	949		20	umhos/cm		30-AUG-14	R2936349
Fecal Coliform							
Fecal Coliforms	9300		3	MPN/100mL		31-AUG-14	R2941142
Hardness Calculated							
Hardness (as CaCO3)	179		0.30	mg/L		02-SEP-14	
Mercury Total							
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	29-AUG-14	29-AUG-14	R2933322
Nitrate as N by Ion Chromatography							
Nitrate-N	0.051		0.050	mg/L		28-AUG-14	R2934807
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.071		0.071	mg/L		02-SEP-14	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.050		0.050	mg/L		28-AUG-14	R2934807
Oil and Grease, Total							
Oil and Grease, Total	2.8		2.0	mg/L	03-SEP-14	03-SEP-14	R2938657
Phenol (4AAP)							
Phenols (4AAP)	0.0188		0.0010	mg/L	05-SEP-14	05-SEP-14	R2940489
Phosphorus, Total							
Phosphorus (P)-Total	7.00	DLA	0.050	mg/L		29-AUG-14	R2934547
Sulfate by Ion Chromatography							
Sulfate	17.9		0.50	mg/L		28-AUG-14	R2934807
Total Metals by ICP-MS							
Aluminum (Al)-Total	<0.0050		0.0050	mg/L	29-AUG-14	29-AUG-14	R2934389
Arsenic (As)-Total	0.00047		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Cadmium (Cd)-Total	0.000033		0.000010	mg/L	29-AUG-14	29-AUG-14	R2934389
Calcium (Ca)-Total	62.0		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	29-AUG-14	29-AUG-14	R2934389
Cobalt (Co)-Total	0.00073		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Copper (Cu)-Total	0.00428		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Iron (Fe)-Total	<0.10		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Lead (Pb)-Total	<0.000090		0.000090	mg/L	29-AUG-14	29-AUG-14	R2934389
Magnesium (Mg)-Total	5.94		0.010	mg/L	29-AUG-14	29-AUG-14	R2934389
Manganese (Mn)-Total	0.00714		0.00030	mg/L	29-AUG-14	29-AUG-14	R2934389
Nickel (Ni)-Total	0.0034		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389
Potassium (K)-Total	7.61		0.020	mg/L	29-AUG-14	29-AUG-14	R2934389
Sodium (Na)-Total	40.0		0.030	mg/L	29-AUG-14	29-AUG-14	R2934389
Zinc (Zn)-Total	0.0022		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1508944-1 COR-3							
Sampled By: Casey P on 26-AUG-14 @ 11:10							
Matrix: Wastewater							
Total Organic Carbon							
Total Organic Carbon	69.5		1.0	mg/L		30-AUG-14	R2933649
Total Suspended Solids							
Total Suspended Solids	49.0		5.0	mg/L		28-AUG-14	R2933078
pH							
pH	7.50		0.10	pH units		30-AUG-14	R2936349
L1508944-2 COR-4							
Sampled By: Casey P on 26-AUG-14 @ 11:35							
Matrix: Wastewater							
Nunavut WW Group 1							
Alkalinity							
Alkalinity, Total (as CaCO3)	231		20	mg/L		30-AUG-14	R2936349
Bicarbonate (HCO3)	282		24	mg/L		30-AUG-14	R2936349
Carbonate (CO3)	<12		12	mg/L		30-AUG-14	R2936349
Hydroxide (OH)	<6.8		6.8	mg/L		30-AUG-14	R2936349
Ammonia by colour							
Ammonia, Total (as N)	0.022		0.010	mg/L		28-AUG-14	R2932652
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	<6.0		6.0	mg/L		28-AUG-14	R2935188
Carbonaceous BOD							
BOD Carbonaceous	<6.0		6.0	mg/L		28-AUG-14	R2935188
Chloride by Ion Chromatography							
Chloride	42.4		0.50	mg/L		28-AUG-14	R2934807
Conductivity							
Conductivity	608		20	umhos/cm		30-AUG-14	R2936349
Fecal Coliform							
Fecal Coliforms	43		3	MPN/100mL		31-AUG-14	R2941142
Hardness Calculated							
Hardness (as CaCO3)	141		0.30	mg/L		02-SEP-14	
Mercury Total							
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	29-AUG-14	29-AUG-14	R2933322
Nitrate as N by Ion Chromatography							
Nitrate-N	0.531		0.050	mg/L		28-AUG-14	R2934807
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.531		0.071	mg/L		02-SEP-14	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.050		0.050	mg/L		28-AUG-14	R2934807
Oil and Grease, Total							
Oil and Grease, Total	<2.0		2.0	mg/L	03-SEP-14	03-SEP-14	R2938657
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L	05-SEP-14	05-SEP-14	R2940489
Phosphorus, Total							
Phosphorus (P)-Total	0.091		0.010	mg/L		29-AUG-14	R2934547
Sulfate by Ion Chromatography							
Sulfate	22.6		0.50	mg/L		28-AUG-14	R2934807
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0803		0.0050	mg/L	29-AUG-14	29-AUG-14	R2934389
Arsenic (As)-Total	0.00101		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Cadmium (Cd)-Total	0.000018		0.000010	mg/L	29-AUG-14	29-AUG-14	R2934389
Calcium (Ca)-Total	47.2		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	29-AUG-14	29-AUG-14	R2934389
Cobalt (Co)-Total	0.00061		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1508944-2 COR-4							
Sampled By: Casey P on 26-AUG-14 @ 11:35							
Matrix: Wastewater							
Total Metals by ICP-MS							
Copper (Cu)-Total	0.00700		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Iron (Fe)-Total	0.37		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Lead (Pb)-Total	0.000285		0.000090	mg/L	29-AUG-14	29-AUG-14	R2934389
Magnesium (Mg)-Total	5.77		0.010	mg/L	29-AUG-14	29-AUG-14	R2934389
Manganese (Mn)-Total	0.0598		0.00030	mg/L	29-AUG-14	29-AUG-14	R2934389
Nickel (Ni)-Total	0.0035		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389
Potassium (K)-Total	27.0		0.020	mg/L	29-AUG-14	29-AUG-14	R2934389
Sodium (Na)-Total	69.1		0.030	mg/L	29-AUG-14	29-AUG-14	R2934389
Zinc (Zn)-Total	0.0073		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389
Total Organic Carbon							
Total Organic Carbon	19.7		1.0	mg/L		30-AUG-14	R2936029
Total Suspended Solids							
Total Suspended Solids	5.0		5.0	mg/L		28-AUG-14	R2933078
pH							
pH	8.29		0.10	pH units		30-AUG-14	R2936349
L1508944-3 COR-6							
Sampled By: Casey P on 26-AUG-14 @ 10:30							
Matrix: Wastewater							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		29-AUG-14	R2933240
Toluene	<0.0010		0.0010	mg/L		29-AUG-14	R2933240
Ethyl benzene	<0.00050		0.00050	mg/L		29-AUG-14	R2933240
o-Xylene	<0.00050		0.00050	mg/L		29-AUG-14	R2933240
m+p-Xylenes	<0.00050		0.00050	mg/L		29-AUG-14	R2933240
F1 (C6-C10)	<0.10		0.10	mg/L		29-AUG-14	R2933240
Surrogate: 4-Bromofluorobenzene (SS)	107.6		70-130	%		29-AUG-14	R2933240
CCME Total Hydrocarbons							
F1-BTEX	<0.10		0.10	mg/L		09-SEP-14	
F2-Naphth	<0.25		0.25	mg/L		09-SEP-14	
F3-PAH	<0.25		0.25	mg/L		09-SEP-14	
Total Hydrocarbons (C6-C50)	<0.44		0.44	mg/L		09-SEP-14	
F2-F4 PHC method							
F2 (C10-C16)	<0.25		0.25	mg/L	29-AUG-14	29-AUG-14	R2933670
F3 (C16-C34)	<0.25		0.25	mg/L	29-AUG-14	29-AUG-14	R2933670
F4 (C34-C50)	<0.25		0.25	mg/L	29-AUG-14	29-AUG-14	R2933670
Surrogate: 2-Bromobenzotrifluoride	94.2		60-140	%	29-AUG-14	29-AUG-14	R2933670
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.0015		0.0015	mg/L		03-SEP-14	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Acenaphthene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Acenaphthylene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Anthracene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Acridine	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Benzo(a)anthracene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	04-SEP-14	08-SEP-14	R2941969
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1508944-3 COR-6							
Sampled By: Casey P on 26-AUG-14 @ 10:30							
Matrix: Wastewater							
Polyaromatic Hydrocarbons (PAHs)							
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Chrysene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	04-SEP-14	08-SEP-14	R2941969
Fluoranthene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Fluorene	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Naphthalene	<0.000050		0.000050	mg/L	04-SEP-14	08-SEP-14	R2941969
Phenanthrene	<0.000050		0.000050	mg/L	04-SEP-14	08-SEP-14	R2941969
Pyrene	<0.000010		0.000010	mg/L	04-SEP-14	08-SEP-14	R2941969
Quinoline	<0.000020		0.000020	mg/L	04-SEP-14	08-SEP-14	R2941969
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	04-SEP-14	08-SEP-14	R2941969
Surrogate: Acenaphthene d10	79.6		40-130	%	04-SEP-14	08-SEP-14	R2941969
Surrogate: Acridine d9	89.7		40-130	%	04-SEP-14	08-SEP-14	R2941969
Surrogate: Chrysene d12	76.5		40-130	%	04-SEP-14	08-SEP-14	R2941969
Surrogate: Naphthalene d8	68.5		40-130	%	04-SEP-14	08-SEP-14	R2941969
Surrogate: Phenanthrene d10	84.1		40-130	%	04-SEP-14	08-SEP-14	R2941969
Nunavut WW Group 1							
Alkalinity							
Alkalinity, Total (as CaCO3)	252		20	mg/L		30-AUG-14	R2936349
Bicarbonate (HCO3)	308		24	mg/L		30-AUG-14	R2936349
Carbonate (CO3)	<12		12	mg/L		30-AUG-14	R2936349
Hydroxide (OH)	<6.8		6.8	mg/L		30-AUG-14	R2936349
Ammonia by colour							
Ammonia, Total (as N)	0.020		0.010	mg/L		28-AUG-14	R2932652
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	<6.0		6.0	mg/L		28-AUG-14	R2935188
Carbonaceous BOD							
BOD Carbonaceous	<6.0		6.0	mg/L		28-AUG-14	R2935188
Chloride by Ion Chromatography							
Chloride	65.1		0.50	mg/L		28-AUG-14	R2934807
Conductivity							
Conductivity	912		20	umhos/cm		30-AUG-14	R2936349
Fecal Coliform							
Fecal Coliforms	38		3	MPN/100mL		31-AUG-14	R2941142
Hardness Calculated							
Hardness (as CaCO3)	335		0.30	mg/L		02-SEP-14	
Mercury Total							
Mercury (Hg)-Total	<0.000020		0.000020	mg/L	29-AUG-14	29-AUG-14	R2933322
Nitrate as N by Ion Chromatography							
Nitrate-N	<0.050		0.050	mg/L		28-AUG-14	R2934807
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.071		0.071	mg/L		02-SEP-14	
Nitrite as N by Ion Chromatography							
Nitrite-N	<0.050		0.050	mg/L		28-AUG-14	R2934807
Oil and Grease, Total							
Oil and Grease, Total	<2.0		2.0	mg/L	03-SEP-14	03-SEP-14	R2938657
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L	05-SEP-14	05-SEP-14	R2940489
Phosphorus, Total							
Phosphorus (P)-Total	0.186		0.010	mg/L		29-AUG-14	R2934547
Sulfate by Ion Chromatography							
Sulfate	128		0.50	mg/L		28-AUG-14	R2934807

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

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1508944-3 COR-6							
Sampled By: Casey P on 26-AUG-14 @ 10:30							
Matrix: Wastewater							
Total Metals by ICP-MS							
Aluminum (Al)-Total	0.0734		0.0050	mg/L	29-AUG-14	29-AUG-14	R2934389
Arsenic (As)-Total	0.00098		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Cadmium (Cd)-Total	<0.000010		0.000010	mg/L	29-AUG-14	29-AUG-14	R2934389
Calcium (Ca)-Total	107		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Chromium (Cr)-Total	<0.0010		0.0010	mg/L	29-AUG-14	29-AUG-14	R2934389
Cobalt (Co)-Total	0.00028		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Copper (Cu)-Total	0.00200		0.00020	mg/L	29-AUG-14	29-AUG-14	R2934389
Iron (Fe)-Total	0.56		0.10	mg/L	29-AUG-14	29-AUG-14	R2934389
Lead (Pb)-Total	0.000302		0.000090	mg/L	29-AUG-14	29-AUG-14	R2934389
Magnesium (Mg)-Total	16.7		0.010	mg/L	29-AUG-14	29-AUG-14	R2934389
Manganese (Mn)-Total	0.0858		0.00030	mg/L	29-AUG-14	29-AUG-14	R2934389
Nickel (Ni)-Total	0.0020		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389
Potassium (K)-Total	15.8		0.020	mg/L	29-AUG-14	29-AUG-14	R2934389
Sodium (Na)-Total	56.8		0.030	mg/L	29-AUG-14	29-AUG-14	R2934389
Zinc (Zn)-Total	0.0037		0.0020	mg/L	29-AUG-14	29-AUG-14	R2934389
Total Organic Carbon							
Total Organic Carbon	27.5		1.0	mg/L		30-AUG-14	R2936029
Total Suspended Solids							
Total Suspended Solids	15.0		5.0	mg/L		28-AUG-14	R2933078
pH							
pH	8.11		0.10	pH units		30-AUG-14	R2936349

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

Reference Information

Sample Parameter Qualifier Key:

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

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
ALK-TOT-WP	Water	Alkalinity	APHA 2320B

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

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	Water	Biochemical Oxygen Demand (BOD)	APHA 5210 B

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.

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-WP	Water	Chloride by Ion Chromatography	EPA 300.1 (Modified)

Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.

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 DEC-2000 - PUB# 1310-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.

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.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
		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-WP	Water	Nitrite as N by Ion Chromatography	EPA 300.1 (Modified)
		Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.	
NO3-IC-WP	Water	Nitrate as N by Ion Chromatography	EPA 300.1 (Modified)
		Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.	
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-WP	Water	Sulfate by Ion Chromatography	EPA 300.1 (Modified)
		Anions in aqueous matrices are analyzed using ion chromatography with conductivity and/or UV absorbance detectors.	
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-WP	Water	Sum of Xylene Isomer Concentrations	CALCULATED RESULT
		Total xylenes represents the sum of o-xylene and m&p-xylene.	

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

** 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:

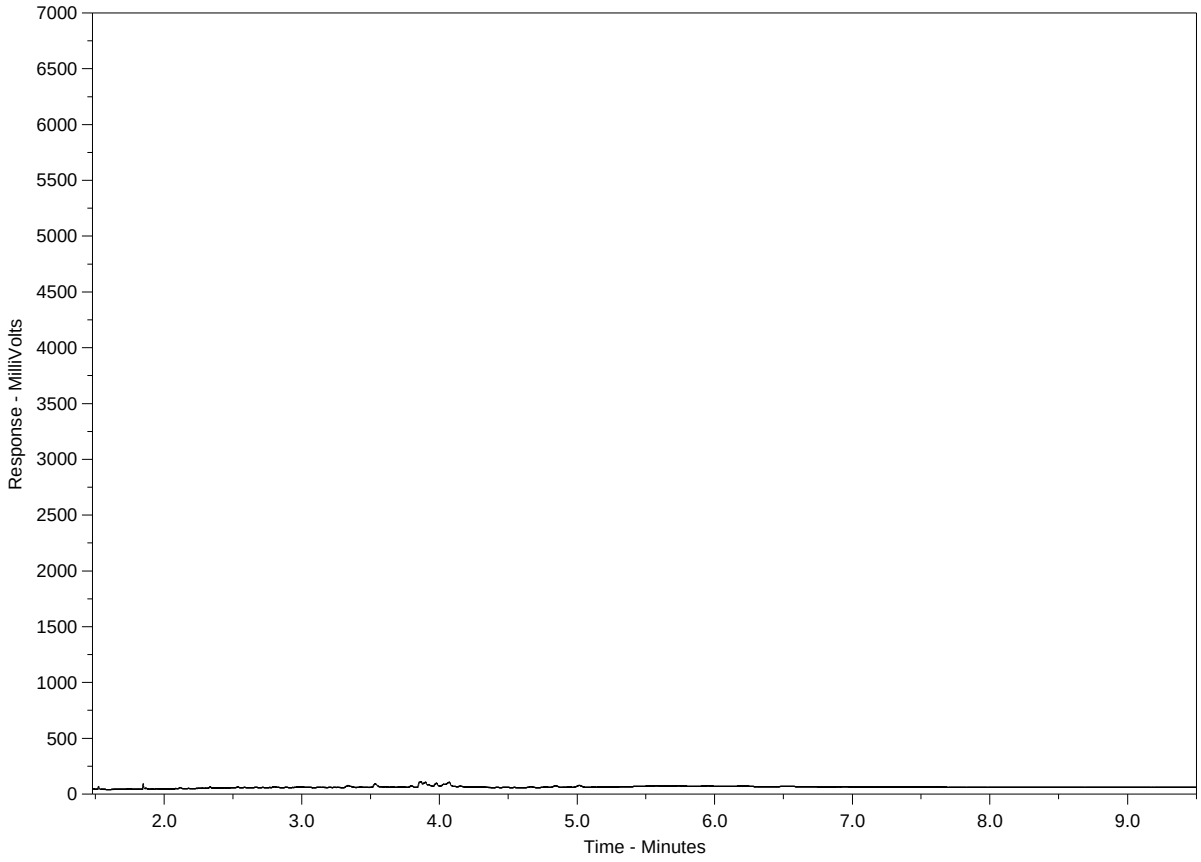
GLOSSARY OF REPORT TERMS

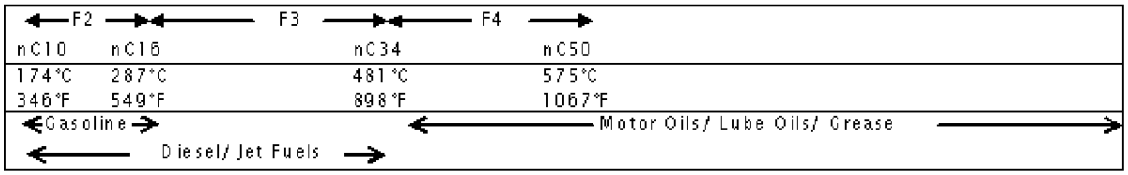
Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates 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: L1508944-3
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.

10-312599

ALS Environmental

L1508944-COFC

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Page 1 of 1

Report To	Report Format / Distribution	Service Request: (Rush subject to availability - Contact ALS to confirm TAT)
Company: Hamlet of Coral Harbour	Standard: ✓ Other (specify):	✓ Regular (Standard Turnaround Times - Business Days)
Contact: Leonie Pameolik	Select: PDF ✓ Excel Digital Fax ✓	Priority (2-4 Business Days)-50% surcharge - Contact ALS to confirm TAT
Address: PO Box 30, Coral Harbour, NU X0C 0C0	Email 1: munchq@qiniq.com	Emergency (1-2 Business Days)-100% Surcharge - Contact ALS to confirm TAT
	Email 2: mlusty@gov.nu.ca	Same Day or Weekend Emergency - Contact ALS to confirm TAT
Phone: (867) 925-8867 Fax: (867) 925-8233		
Invoice To Same as Report ? (circle) Yes or No (if No, provide details)	**Client / Project Information**	**Analysis Request**
Copy of Invoice with Report? (circle) Yes or No	Job #: Coral Harbour Monitoring Program	(Indicate Filtered or Preserved, F/P)
Company: W10622	PO / AFE:	
Contact:	LSD:	
Address:		
Phone: Fax:	Quote #:	
Lab Work Order # (lab use only)	ALS Contact: Paul Nicolas Sampler: Casey Pyne	

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD	Routine	Metals	Nutrients	Phenols	Bacteria	O:I + Grease	PAH	BTEX, F1	F2-F4			Number of Containers
	COR-3	26-08-14	11:10AM	Wastewater	✓	✓	P	P	P	P	P						8
	COR-4	26-08-14	11:35 AM	Wastewater	✓	✓	P	P	P	P	P						8
	COR-6	26-08-14	10:30AM	Wastewater	✓	✓	P	P	P	P	P	P	P	P			14

Special Instructions / Regulation with water or land use (CCME- Freshwater Aquatic Life/BC CSR-Commercial/AB Tier 1-Natural/ETC) / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.

By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by: Casey Pyne	Date: Aug 26/14	Time: 1:16	Received by: JC	Date: 08/27/14	Time: 1:40	Temperature: 12 °C	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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