ANNUAL REPORT
FOR THE HAMLET OF CORAL HARBOUR

YEAR BEING REPORTED: 2019

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 (m^3)	Quantity of Sewage Waste Discharged (Estimated, m^3)
January	3,346.586	Same
February	868.647	Same
March	946.402	Same
April	3,219.282	Same
May	946.075	Same
June	3,004.056	Same
July	3,227.574	Same
August	3,223.009	Same
September	3,499.340	Same
October	3,333.856	Same
November	3,157.282	Same
December	3,302.565	Same
ANNUAL TOTAL	**32,074.67**	

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;

- The new Water Treatment Plant was substantially completed December 2016 and warranty work is still being completed (Regional CGS Project Management Office).
- Repairs to the chlorine system were completed during 2018; more work is to come in this regard in 2019.

v. a list of unauthorized discharges and summary of follow-up action taken;

- Spills:

Spill No.	Date	Site Description	Commodity	Quantity
		NO SPILLS REPORTED		

vi. a summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year;

- None
-

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;

- None

viii. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and

- None

ix. Updates or revisions to the approved Operation and Maintenance Plans.

- None

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

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

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- The 3BM-COR1521 CIRNAC Inspection took place on July 31st, 2019. A copy of the inspection report is included in Appendix F.

Appendix A: COR-5 Effluent Quality Limits – 1 page
Appendix B: Weekly Inspections at Monitoring Stations – 1 page
Appendix C: Certificate of Analysis July 31, 2019 – 15 pages
Appendix D: Hazardous Materials Spill Database, Coral Harbour 2019 – 1 page
Appendix E: Coral Harbour 2019 Sampling Summary - 5 pages
Appendix F: CIRNAC Inspection Report - 2 pages

Appendix A

3BM-COR1521 Coral Harbour Monitoring Program Results 2019
Part D, Item 2: COR-5 Effluent Quality Limits

Parameter	Maximum Average Concentration	COR-5
		19-Jul-19
BOD_5	30 mg/L	2
Total Suspended Solids	30 mg/L	2
Fecal Coliforms	$1x10^4$ CFU/100 mL	N/A
Oil and Grease	No visible sheen	5
pH	Between 6 and 9	8.22

Appendix B

No Weekly Inspections at Monitoring Stations Document was received by CGS

Appendix C

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

Date Received: 07-AUG-19
Report Date: 20-AUG-19 12:02 (MT)
Version: FINAL

Client Phone: 867-925-8867

Certificate of Analysis

Lab Work Order #: L2324046

Project P.O. #: NOT SUBMITTED
Job Reference: CORAL 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.]

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2324046-1 COR-3							
Sampled By: CLIENT on 31-JUL-19 @ 11:22							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	330		1.2	mg/L		09-AUG-19	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		09-AUG-19	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		09-AUG-19	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	270		1.0	mg/L		08-AUG-19	R4744874
Ammonia by colour							
Ammonia, Total (as N)	27.5		1.0	mg/L		08-AUG-19	R4744419
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	29.6		6.0	mg/L		08-AUG-19	R4753016
Carbonaceous BOD							
BOD Carbonaceous	11.9		6.0	mg/L		08-AUG-19	R4753016
Chloride in Water by IC							
Chloride (Cl)	51.8		0.50	mg/L		08-AUG-19	R4746733
Conductivity							
Conductivity	712		1.0	umhos/cm		08-AUG-19	R4744874
Hardness Calculated							
Hardness (as CaCO3)	129	HTC	0.20	mg/L		16-AUG-19	
Mercury Total							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L	08-AUG-19	09-AUG-19	R4746685
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		08-AUG-19	R4746733
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		13-AUG-19	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		08-AUG-19	R4746733
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		12-AUG-19	R4747276
Phenol (4AAP)							
Phenols (4AAP)	0.0054		0.0010	mg/L		09-AUG-19	R4746535
Phosphorus, Total							
Phosphorus (P)-Total	6.48		0.030	mg/L		09-AUG-19	R4745230
Sulfate in Water by IC							
Sulfate (SO4)	13.9		0.30	mg/L		08-AUG-19	R4746733
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0990		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Arsenic (As)-Total	0.00098		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cadmium (Cd)-Total	0.0000162		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Calcium (Ca)-Total	43.1		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Chromium (Cr)-Total	0.00041		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cobalt (Co)-Total	0.00050		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Copper (Cu)-Total	0.0106		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Iron (Fe)-Total	0.525		0.010	mg/L	15-AUG-19	15-AUG-19	R4757095
Lead (Pb)-Total	0.000388		0.000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Magnesium (Mg)-Total	5.20		0.0050	mg/L	15-AUG-19	15-AUG-19	R4757095
Manganese (Mn)-Total	0.0587		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Nickel (Ni)-Total	0.00273		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Potassium (K)-Total	18.0		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Sodium (Na)-Total	46.6		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095

* 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
L2324046-1 COR-3							
Sampled By: CLIENT on 31-JUL-19 @ 11:22							
Matrix: WW							
Total Metals in Water by CRC ICPMS							
Zinc (Zn)-Total	0.0148		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Total Organic Carbon by Combustion							
Total Organic Carbon	46.7		0.50	mg/L		15-AUG-19	R4757724
Total Suspended Solids							
Total Suspended Solids	35.2		2.0	mg/L		13-AUG-19	R4752484
pH							
pH	7.48		0.10	pH units		08-AUG-19	R4744874
L2324046-2 COR-4							
Sampled By: CLIENT on 31-JUL-19 @ 11:40							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	292		1.2	mg/L		09-AUG-19	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		09-AUG-19	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		09-AUG-19	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	240		1.0	mg/L		08-AUG-19	R4744874
Ammonia by colour							
Ammonia, Total (as N)	1.95		0.10	mg/L		08-AUG-19	R4744419
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	11.5		2.0	mg/L		08-AUG-19	R4753016
Carbonaceous BOD							
BOD Carbonaceous	<2.0		2.0	mg/L		08-AUG-19	R4753016
Chloride in Water by IC							
Chloride (Cl)	45.4		0.50	mg/L		08-AUG-19	R4746733
Conductivity							
Conductivity	625		1.0	umhos/cm		08-AUG-19	R4744874
Hardness Calculated							
Hardness (as CaCO3)	210	HTC	0.20	mg/L		16-AUG-19	
Mercury Total							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L	08-AUG-19	09-AUG-19	R4746685
Nitrate in Water by IC							
Nitrate (as N)	5.20		0.020	mg/L		08-AUG-19	R4746733
Nitrate+Nitrite							
Nitrate and Nitrite as N	5.37		0.070	mg/L		13-AUG-19	
Nitrite in Water by IC							
Nitrite (as N)	0.167		0.010	mg/L		08-AUG-19	R4746733
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		12-AUG-19	R4747276
Phenol (4AAP)							
Phenols (4AAP)	0.0011		0.0010	mg/L		09-AUG-19	R4746535
Phosphorus, Total							
Phosphorus (P)-Total	0.356		0.0030	mg/L		09-AUG-19	R4745230
Sulfate in Water by IC							
Sulfate (SO4)	11.4		0.30	mg/L		08-AUG-19	R4746733
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0239		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Arsenic (As)-Total	0.00160		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cadmium (Cd)-Total	0.0000449		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4757095

* 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
L2324046-2 COR-4							
Sampled By: CLIENT on 31-JUL-19 @ 11:40							
Matrix: WW							
Total Metals in Water by CRC ICPMS							
Calcium (Ca)-Total	72.9		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Chromium (Cr)-Total	0.00048		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cobalt (Co)-Total	0.00144		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Copper (Cu)-Total	0.00356		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Iron (Fe)-Total	0.466		0.010	mg/L	15-AUG-19	15-AUG-19	R4757095
Lead (Pb)-Total	0.000092		0.000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Magnesium (Mg)-Total	6.75		0.0050	mg/L	15-AUG-19	15-AUG-19	R4757095
Manganese (Mn)-Total	0.0651		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Nickel (Ni)-Total	0.00457		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Potassium (K)-Total	8.45		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Sodium (Na)-Total	29.7		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Zinc (Zn)-Total	0.0200		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Total Organic Carbon by Combustion							
Total Organic Carbon	12.8		0.50	mg/L		15-AUG-19	R4757724
Total Suspended Solids							
Total Suspended Solids	33.5		2.0	mg/L		13-AUG-19	R4752484
pH							
pH	7.77		0.10	pH units		08-AUG-19	R4744874
L2324046-3 COR-6							
Sampled By: CLIENT on 31-JUL-19 @ 11:11							
Matrix: WW							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
Toluene	<0.0010		0.0010	mg/L		09-AUG-19	R4756835
Ethyl benzene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
o-Xylene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
m+p-Xylenes	<0.00040		0.00040	mg/L		09-AUG-19	R4756835
F1 (C6-C10)	<0.10		0.10	mg/L		09-AUG-19	R4756835
Surrogate: 4-Bromofluorobenzene (SS)	90.0		70-130	%		09-AUG-19	R4756835
CCME PHC F2-F4 in Water							
F2 (C10-C16)	<0.10		0.10	mg/L	14-AUG-19	14-AUG-19	R4757751
F3 (C16-C34)	<0.25		0.25	mg/L	14-AUG-19	14-AUG-19	R4757751
F4 (C34-C50)	<0.25		0.25	mg/L	14-AUG-19	14-AUG-19	R4757751
Surrogate: 2-Bromobenzotrifluoride	91.8		60-140	%	14-AUG-19	14-AUG-19	R4757751
CCME Total Hydrocarbons							
F1-BTEX	<0.10		0.10	mg/L		20-AUG-19	
F2-Naphth	<0.10		0.10	mg/L		20-AUG-19	
F3-PAH	<0.25		0.25	mg/L		20-AUG-19	
Total Hydrocarbons (C6-C50)	<0.38		0.38	mg/L		20-AUG-19	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.00064		0.00064	mg/L		15-AUG-19	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Acenaphthene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Acenaphthylene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Anthracene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Acridine	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(a)anthracene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673

* 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
L2324046-3 COR-6							
Sampled By: CLIENT on 31-JUL-19 @ 11:11							
Matrix: WW							
Polyaromatic Hydrocarbons (PAHs)							
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Chrysene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Fluoranthene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Fluorene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Naphthalene	<0.000050		0.000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Phenanthrene	<0.000050		0.000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Pyrene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Quinoline	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	08-AUG-19	16-AUG-19	R4757673
Surrogate: Acenaphthene d10	78.5		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Acridine d9	67.3		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Chrysene d12	76.0		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Naphthalene d8	76.5		50-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Phenanthrene d10	76.1		60-130	%	08-AUG-19	16-AUG-19	R4757673
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	297		1.2	mg/L		09-AUG-19	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		09-AUG-19	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		09-AUG-19	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	243		1.0	mg/L		08-AUG-19	R4744874
Ammonia by colour							
Ammonia, Total (as N)	0.043		0.010	mg/L		07-AUG-19	R4744419
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	5.6		2.0	mg/L		08-AUG-19	R4753016
Carbonaceous BOD							
BOD Carbonaceous	2.6		2.0	mg/L		08-AUG-19	R4753016
Chloride in Water by IC							
Chloride (Cl)	28.6		0.50	mg/L		08-AUG-19	R4746733
Conductivity							
Conductivity	636		1.0	umhos/cm		08-AUG-19	R4744874
Hardness Calculated							
Hardness (as CaCO3)	255	HTC	0.20	mg/L		16-AUG-19	
Mercury Total							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L	08-AUG-19	09-AUG-19	R4746685
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		08-AUG-19	R4746733
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		13-AUG-19	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		08-AUG-19	R4746733
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		12-AUG-19	R4747276
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L		09-AUG-19	R4746535

* 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
L2324046-3 COR-6							
Sampled By: CLIENT on 31-JUL-19 @ 11:11							
Matrix: WW							
Phosphorus, Total							
Phosphorus (P)-Total	0.220		0.0030	mg/L		09-AUG-19	R4745230
Sulfate in Water by IC							
Sulfate (SO4)	74.7		0.30	mg/L		08-AUG-19	R4746733
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0794		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Arsenic (As)-Total	0.00121		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cadmium (Cd)-Total	0.0000076		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Calcium (Ca)-Total	77.0		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Chromium (Cr)-Total	0.00051		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cobalt (Co)-Total	0.00020		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Copper (Cu)-Total	0.00172		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Iron (Fe)-Total	0.537		0.010	mg/L	15-AUG-19	15-AUG-19	R4757095
Lead (Pb)-Total	0.000386		0.000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Magnesium (Mg)-Total	15.4		0.0050	mg/L	15-AUG-19	15-AUG-19	R4757095
Manganese (Mn)-Total	0.0639		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Nickel (Ni)-Total	0.00162		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Potassium (K)-Total	11.7		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Sodium (Na)-Total	30.1		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Zinc (Zn)-Total	0.0090		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Total Organic Carbon by Combustion							
Total Organic Carbon	25.0		0.50	mg/L		15-AUG-19	R4757724
Total Suspended Solids							
Total Suspended Solids	9.9		2.0	mg/L		13-AUG-19	R4752484
pH							
pH	7.98		0.10	pH units		08-AUG-19	R4744874
L2324046-4 COR-5							
Sampled By: CLIENT on 31-JUL-19 @ 11:55							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	161		1.2	mg/L		09-AUG-19	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		09-AUG-19	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		09-AUG-19	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	132		1.0	mg/L		08-AUG-19	R4744874
Ammonia by colour							
Ammonia, Total (as N)	0.027		0.010	mg/L		07-AUG-19	R4744419
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	<2.0		2.0	mg/L		08-AUG-19	R4753016
Carbonaceous BOD							
BOD Carbonaceous	<2.0		2.0	mg/L		08-AUG-19	R4753016
Chloride in Water by IC							
Chloride (Cl)	28.8		0.50	mg/L		08-AUG-19	R4746733
Conductivity							
Conductivity	453		1.0	umhos/cm		08-AUG-19	R4744874
Hardness Calculated							
Hardness (as CaCO3)	150	HTC	0.20	mg/L		16-AUG-19	
Mercury Total							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L	08-AUG-19	09-AUG-19	R4746685

* 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
L2324046-4 COR-5							
Sampled By: CLIENT on 31-JUL-19 @ 11:55							
Matrix: WW							
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		08-AUG-19	R4746733
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		13-AUG-19	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		08-AUG-19	R4746733
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		12-AUG-19	R4747276
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L		09-AUG-19	R4746535
Phosphorus, Total							
Phosphorus (P)-Total	0.0353		0.0030	mg/L		09-AUG-19	R4745230
Sulfate in Water by IC							
Sulfate (SO4)	64.9		0.30	mg/L		08-AUG-19	R4746733
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0077		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Arsenic (As)-Total	0.00076		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cadmium (Cd)-Total	0.0000081		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Calcium (Ca)-Total	46.4		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Chromium (Cr)-Total	0.00039		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cobalt (Co)-Total	0.00025		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Copper (Cu)-Total	0.00116		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Iron (Fe)-Total	0.126		0.010	mg/L	15-AUG-19	15-AUG-19	R4757095
Lead (Pb)-Total	0.000052		0.000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Magnesium (Mg)-Total	8.27		0.0050	mg/L	15-AUG-19	15-AUG-19	R4757095
Manganese (Mn)-Total	0.00888		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Nickel (Ni)-Total	0.00182		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Potassium (K)-Total	7.82		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Sodium (Na)-Total	31.0		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Zinc (Zn)-Total	0.0076		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Total Organic Carbon by Combustion							
Total Organic Carbon	16.9		0.50	mg/L		15-AUG-19	R4757724
Total Suspended Solids							
Total Suspended Solids	<2.0		2.0	mg/L		13-AUG-19	R4752484
pH							
pH	8.22		0.10	pH units		08-AUG-19	R4744874
L2324046-5 COR-7							
Sampled By: CLIENT on 31-JUL-19 @ 10:54							
Matrix: WW							
BTEX plus F1-F4							
BTX plus F1 by GCMS							
Benzene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
Toluene	<0.0010		0.0010	mg/L		09-AUG-19	R4756835
Ethyl benzene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
o-Xylene	<0.00050		0.00050	mg/L		09-AUG-19	R4756835
m+p-Xylenes	<0.00040		0.00040	mg/L		09-AUG-19	R4756835
F1 (C6-C10)	<0.10		0.10	mg/L		09-AUG-19	R4756835
Surrogate: 4-Bromofluorobenzene (SS)	91.0		70-130	%		09-AUG-19	R4756835
CCME PHC F2-F4 in Water							
F2 (C10-C16)	<0.10		0.10	mg/L	14-AUG-19	14-AUG-19	R4757751
F3 (C16-C34)	<0.25		0.25	mg/L	14-AUG-19	14-AUG-19	R4757751
F4 (C34-C50)	<0.25		0.25	mg/L	14-AUG-19	14-AUG-19	R4757751

* 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
L2324046-5 COR-7							
Sampled By: CLIENT on 31-JUL-19 @ 10:54							
Matrix: WW							
CCME PHC F2-F4 in Water							
Surrogate: 2-Bromobenzotrifluoride	93.2		60-140	%	14-AUG-19	14-AUG-19	R4757751
CCME Total Hydrocarbons							
F1-BTEX	<0.10		0.10	mg/L		20-AUG-19	
F2-Naphth	<0.10		0.10	mg/L		20-AUG-19	
F3-PAH	<0.25		0.25	mg/L		20-AUG-19	
Total Hydrocarbons (C6-C50)	<0.38		0.38	mg/L		20-AUG-19	
Sum of Xylene Isomer Concentrations							
Xylenes (Total)	<0.00064		0.00064	mg/L		15-AUG-19	
Polyaromatic Hydrocarbons (PAHs)							
1-Methyl Naphthalene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
2-Methyl Naphthalene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Acenaphthene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Acenaphthylene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Anthracene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Acridine	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(a)anthracene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(a)pyrene	<0.0000050		0.0000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(b&j)fluoranthene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(g,h,i)perylene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Benzo(k)fluoranthene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Chrysene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Dibenzo(a,h)anthracene	<0.0000050		0.0000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Fluoranthene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Fluorene	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
Indeno(1,2,3-cd)pyrene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Naphthalene	<0.000050		0.000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Phenanthrene	<0.000050		0.000050	mg/L	08-AUG-19	16-AUG-19	R4757673
Pyrene	<0.000010		0.000010	mg/L	08-AUG-19	16-AUG-19	R4757673
Quinoline	<0.000020		0.000020	mg/L	08-AUG-19	16-AUG-19	R4757673
B(a)P Total Potency Equivalent	<0.000030		0.000030	mg/L	08-AUG-19	16-AUG-19	R4757673
Surrogate: Acenaphthene d10	74.5		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Acridine d9	72.7		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Chrysene d12	83.0		60-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Naphthalene d8	73.7		50-130	%	08-AUG-19	16-AUG-19	R4757673
Surrogate: Phenanthrene d10	78.7		60-130	%	08-AUG-19	16-AUG-19	R4757673
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	133		1.2	mg/L		09-AUG-19	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		09-AUG-19	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		09-AUG-19	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	109		1.0	mg/L		08-AUG-19	R4744874
Ammonia by colour							
Ammonia, Total (as N)	0.018		0.010	mg/L		07-AUG-19	R4744419
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	2.0		2.0	mg/L		08-AUG-19	R4753016
Carbonaceous BOD							
BOD Carbonaceous	<2.0		2.0	mg/L		08-AUG-19	R4753016
Chloride in Water by IC							

* 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
L2324046-5 COR-7							
Sampled By: CLIENT on 31-JUL-19 @ 10:54							
Matrix: WW							
Chloride in Water by IC							
Chloride (Cl)	4.72		0.50	mg/L		08-AUG-19	R4746733
Conductivity							
Conductivity	678		1.0	umhos/cm		08-AUG-19	R4744874
Hardness Calculated							
Hardness (as CaCO3)	328	HTC	0.20	mg/L		16-AUG-19	
Mercury Total							
Mercury (Hg)-Total	0.0000050		0.0000050	mg/L	08-AUG-19	09-AUG-19	R4746685
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		08-AUG-19	R4746733
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		13-AUG-19	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		08-AUG-19	R4746733
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		12-AUG-19	R4747276
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L		09-AUG-19	R4746535
Phosphorus, Total							
Phosphorus (P)-Total	0.0796		0.0030	mg/L		09-AUG-19	R4745230
Sulfate in Water by IC							
Sulfate (SO4)	253		0.30	mg/L		08-AUG-19	R4746733
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0207		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Arsenic (As)-Total	0.00058		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cadmium (Cd)-Total	0.0000243		0.0000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Calcium (Ca)-Total	120		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Chromium (Cr)-Total	0.00048		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Cobalt (Co)-Total	0.00030		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Copper (Cu)-Total	0.00443		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Iron (Fe)-Total	1.54		0.010	mg/L	15-AUG-19	15-AUG-19	R4757095
Lead (Pb)-Total	0.000763		0.000050	mg/L	15-AUG-19	15-AUG-19	R4757095
Magnesium (Mg)-Total	7.06		0.0050	mg/L	15-AUG-19	15-AUG-19	R4757095
Manganese (Mn)-Total	0.0331		0.00010	mg/L	15-AUG-19	15-AUG-19	R4757095
Nickel (Ni)-Total	0.00251		0.00050	mg/L	15-AUG-19	15-AUG-19	R4757095
Potassium (K)-Total	3.74		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Sodium (Na)-Total	8.86		0.050	mg/L	15-AUG-19	15-AUG-19	R4757095
Zinc (Zn)-Total	0.0629		0.0030	mg/L	15-AUG-19	15-AUG-19	R4757095
Total Organic Carbon by Combustion							
Total Organic Carbon	38.7		0.50	mg/L		15-AUG-19	R4757724
Total Suspended Solids							
Total Suspended Solids	<2.0		2.0	mg/L		13-AUG-19	R4752484
pH							
pH	8.06		0.10	pH units		08-AUG-19	R4744874

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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-WP	Water	Alkalinity, Bicarbonate	CALCULATION

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

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

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

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

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

BOD-CBOD-WP	Water	Carbonaceous BOD	APHA 5210 B

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

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

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

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

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

C-TOC-HTC-WP	Water	Total Organic Carbon by Combustion	APHA 5310 B-WP

Sample is acidified and purged to remove inorganic carbon, then injected into a heated reaction chamber where organic carbon is oxidized to CO2 which is then transported in the carrier gas stream and measured via a non-dispersive infrared analyzer.

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

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

EC-WP	Water	Conductivity	APHA 2510B

Conductivity of an aqueous solution refers to its ability to carry an electric current. Conductance of a solution is measured between two spatially fixed and chemically inert electrodes.

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.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:
1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

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

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

HARDNESS-CALC-WP	Water	Hardness Calculated	APHA 2340B

Hardness (also known as Total Hardness) is calculated from the sum of Calcium and Magnesium concentrations, expressed in CaCO3 equivalents. Dissolved Calcium and Magnesium concentrations are preferentially used for the hardness calculation.

HG-T-CVAA-WP	Water	Mercury Total	EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

MET-T-CCMS-WP	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020B (mod.)

Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.

Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.

NH3-COL-WP	Water	Ammonia by colour	APHA 4500 NH3 F

Ammonia in water samples forms indophenol when reacted with hypochlorite and phenol. The intensity is amplified by the addition of sodium nitroprusside and measured colourmetrically.

NO2+NO3-CALC-WP	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-WP	Water	Nitrite in Water by IC	EPA 300.1 (mod)

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

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

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

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

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

P-T-COL-WP	Water	Phosphorus, Total	APHA 4500 P PHOSPHORUS-L

This analysis is carried out using procedures adapted from APHA METHOD 4500-P "Phosphorus". Total Phosphorus is determined colourmetrically after persulphate digestion of the sample.

PAH,PANH-WP	Water	Polyaromatic Hydrocarbons (PAHs)	EPA 3511/8270D (mod)

PAHs are extracted from water using a hexane micro-extraction technique, with analysis by GC/MS. Because the two isomers cannot be readily separated chromatographically, benzo(j)fluoranthene is reported as part of the benzo(b)fluoranthene parameter.

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.

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

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

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:

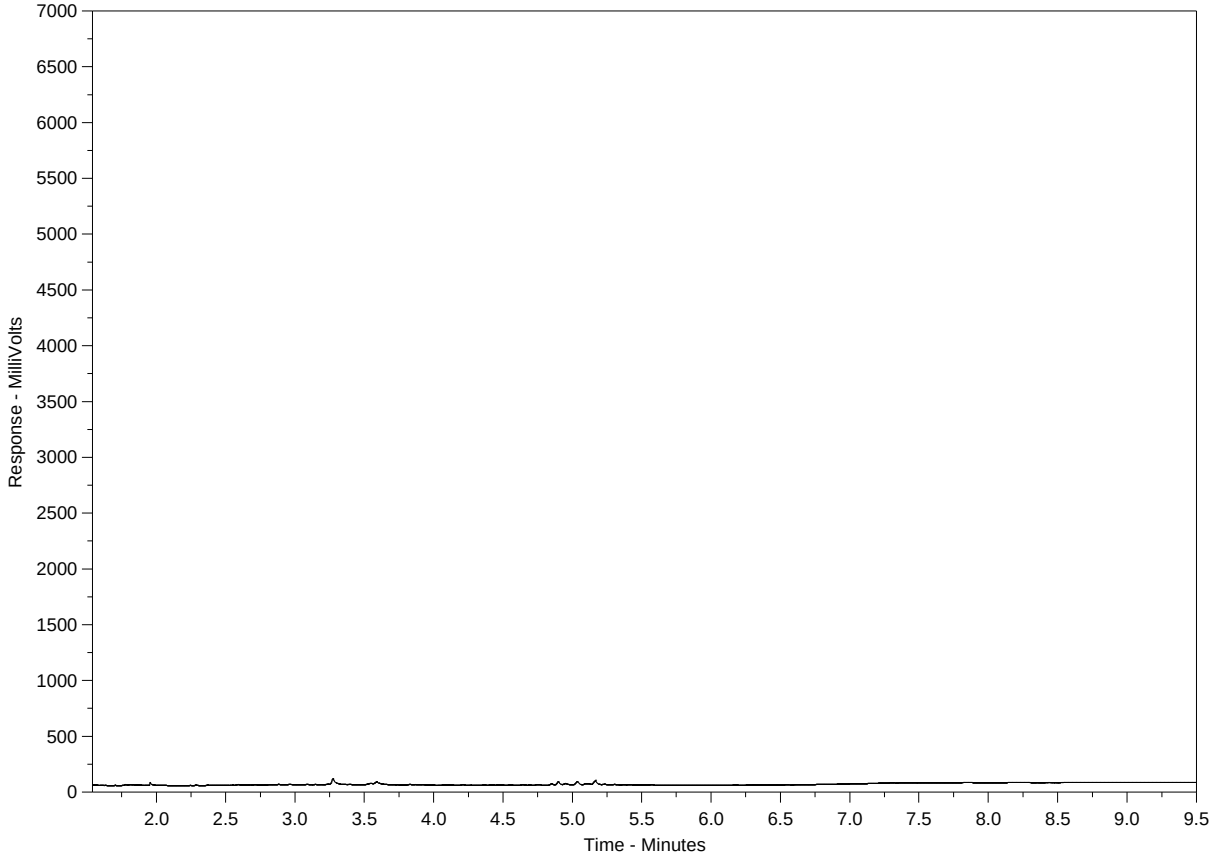
GLOSSARY OF REPORT TERMS

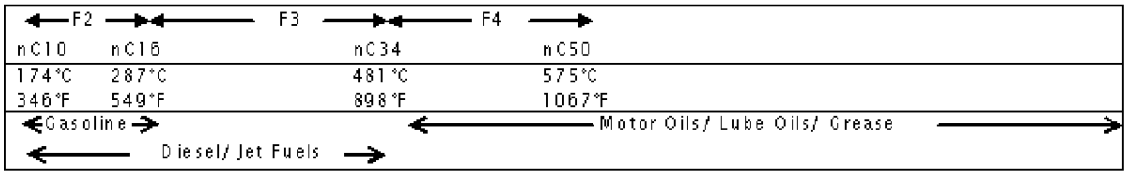
Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates 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: L2324046-3
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.

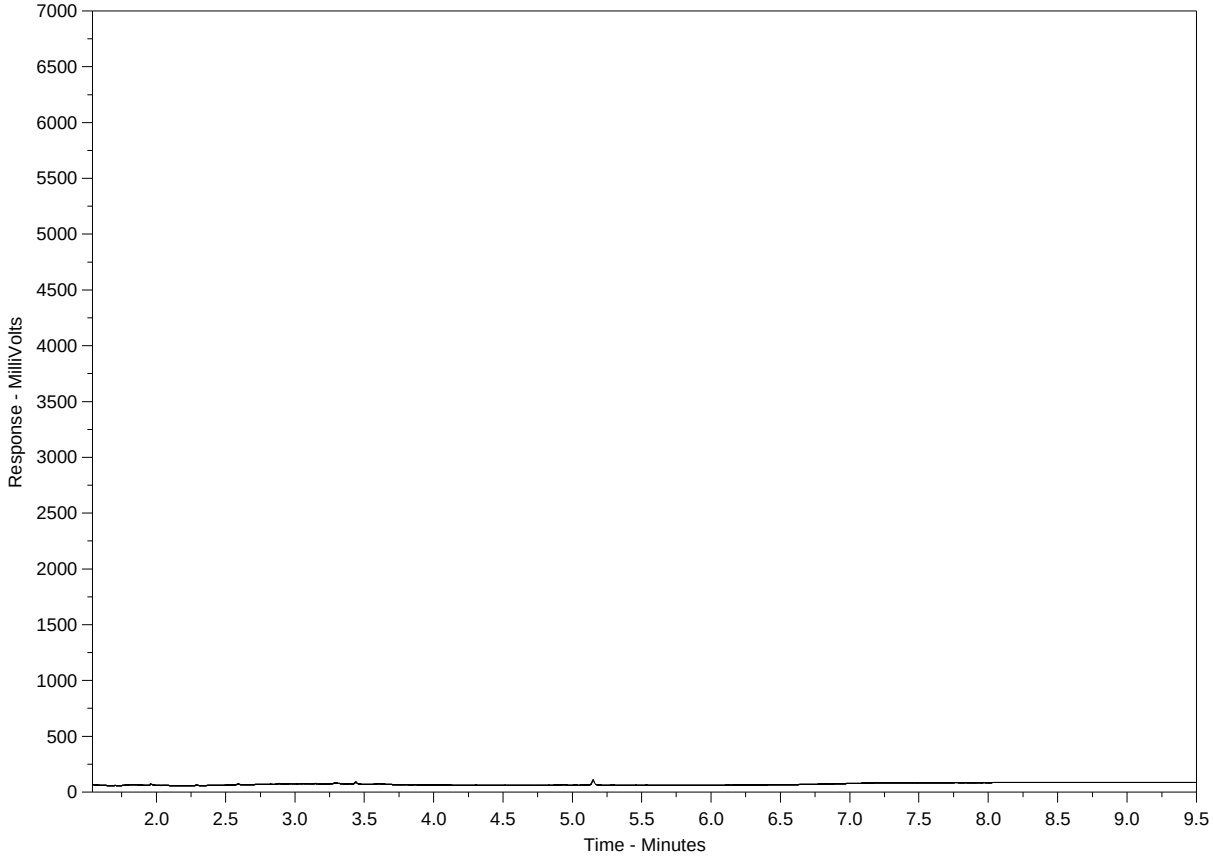
The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

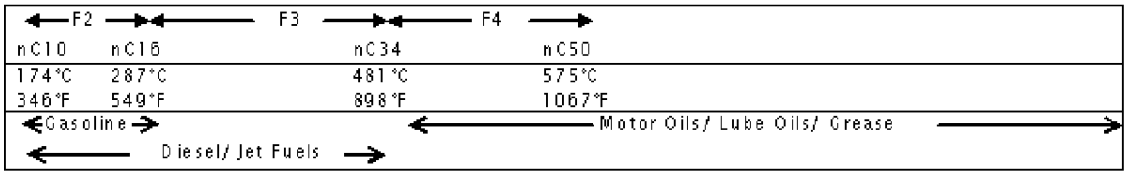
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

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.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT

ALS Sample ID: L2324046-5
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.

ALS Environmental

Chain of Custody / Analytical Request Form

L2324046-COFC

COC # _____

Report To			
Company:	Hamlet of Coral Harbour		☐ Digital ☐ Fax
Contact:	Leonie Pameolik	Email 1:	CFaulkner@gov.nu.ca
Address:	PO Box 30 Coral Harbour	Email 2:	mlusty@gov.nu.ca
	Nunavut, X0C0C0	Email 3:	foremarch@qiniq.com
Phone:	867-925-8867 Fax: 867-925-8233		
Invoice To	Same as Report ? ☑ Yes ☐ No	Client / Project Information	
Hardcopy of Invoice with Report?	☑ Yes ☐ No	Job #:	Coral Harbour Monitoring Program
Company:		PO / AFE:	
Contact:		LSD:	
Address:			
Phone:	Fax:	Quote #:	
Lab Work Order # (lab use only)		ALS Contact: Craig Riddel	Sampler: Connor Faulkner

Service Requested (Rush for routine analysis subject to availability)

- (●) Regular (Standard Turnaround Times - Business Days)
- ( ) Priority (2-4 Business Days) - 50% Surcharge - Contact ALS to Confirm TAT
- ( ) Emergency (1-2 Bus. Days) - 100% Surcharge - Contact ALS to Confirm TAT
- ( ) Same Day or Weekend Emergency - Contact ALS to Confirm TAT

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	BOD	Reactive	CBOD	Metals	Nutrients	Phenols	Mercury	O&G + Grease x2	BTEX - F1 x3	F2-F4 x2	PAH x2		Number of Containers
[redacted]	COR-3	31-Jul-19	11:22 AM	WW	✓	✓	✓	P	P	P	P	P					9
[redacted]	COR-4	31-Jul-19	11:40 AM	WW	✓	✓	✓	P	P	P	P	P					9
[redacted]	COR-6	31-Jul-19	11:11 AM	WW	✓	✓	✓	P	P	P	P	P	P	P	P		16
[redacted]	COR-5	31-Jul-19	11:55 AM	WW	✓	✓	✓	P	P	P	P	P					9
[redacted]	COR-7	31-Jul-19	10:54 AM	WW	✓	✓	✓	P	P	P	P	P	P	P	P		16
[redacted]																	
[redacted]																	
[redacted]																	
[redacted]																	
[redacted]																	
[redacted]																	
[redacted]																	

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

Nunavut-WW-GRP1-WP BTEX-F1, F2-F4, PAH

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 provided on a separate Excel tab.
Also provided on another Excel tab are the ALS location addresses, phone numbers and sample container / preservation / holding time table for common analyses.

SHIPMENT RELEASE (client use)			SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)			
Released by:	Date (dd-mmm-yy)	Time (hh-mm)	Received by:	Date:	Time:	Temperature:	Verified by:	Date:	Time:	Observations: Yes / No ? If Yes add SIF
	31-Jul-19			Aug 7/19	200	12.6 °C		Aug 7	200	

GENF 20.00 Front

Appendix D

Spills

Occurance Date

Start date

Jan | 1 | 2019

End date

Dec | 31 | 2019

Spill Region

- Any -

Spill Location

--Coral Harbour

Spill Location Description

Report Number

Items per page

100

Go

Reset

No matching spills

CSV

Appendix E

Coral Harbour
COR-3

		2014	2015				2016			2017			2018		2019	Statistics		
Parameter	**Unit**	**26-Aug-14**	**18-Jun-15**	**06-Jul-15**	**22-Jul-15**	**19-Aug-15**	**27-Jun-16**	**31-Aug-16**	**13-Sep-16**	**27-Jun-17**	**25-Jul-17**	**29-Aug-17**	**11-Jul-18**	**31-Jul-18**	**31-Jul-19**	**Min**	**Max**	**Average**
Alkalinity																		
Bicarbonate (HCO3)	mg/L	/	145	92.8	131	438	284	387	363	429	417	317	385	360	330	92.8	438	307.82
Carbonate (CO3)	mg/L	/	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.6	0.6	0.60	0.60	0.60
Hydroxide (OH)	mg/L	/	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	349	119	76.1	107	359	233	317	298	352	342	260	316	295	270	76.1	359	259.78
Ammonia by Colour																		
Total (as N)	mg/L	35.1	0.027	0.010	0.036	29.0	45.1	32.1	32.0	57.6	27.0	10.0	53.3	41.3	27.5	0.01	57.6	25.91
Biochemical Oxygen Demand (BOD)																		
Biochemical Oxygen Demand	mg/L	37.0	6.2	3.9	6.8	180	150	36	103	105	62	67	94	46	29.6	3.9	180	64.04
Carbonaceous BOD																		
BOD Carbonaceous	mg/L	/	3.4	4.3	2.8	190	140	31.7	84	84	20	44	80	20	51.8	2.8	190	56.33
Chloride in Water by IC																		
Chloride (Cl)	mg/L	62.3	11.4	4.66	7.27	66.0	33.6	52.1	48.7	44.6	69.1	71.3	38.1	58.3	712	4.66	712	95.49
Conductivity																		
Conductivity	umhos/cm	949	251	322	620	976	644	806	769	813	917	689	789	817	712	251	976	714.23
Fecal Coliforms																		
Fecal Coliforms	MPN/100mL	9300	9	3	3	2400	110000	9300	24000	20	50	1720	24200	1650		3	110000	13204.58
Hardness Calculated																		
Hardness (as CaCO3)	mg/L	179	114	151	330	151	71.7	162	139	107	173	172	84.7	137	129	71.7	330	155.05
Mercury Total																		
Mercury (Hg)	mg/L	0.000020	0.00020	0.000020	0.00020	0.00020	0.000020	0.00020	0.00020	0.0000158	0.0000050	0.0000250	0.0000117	0.000009	0.0000050	0.000005	0.0002	0.00009
Nitrate in Water by IC																		
Nitrate (as N)	mg/L	/	0.020	0.020	0.025	0.020	0.020	0.040	0.020	0.020	0.040	0.020	0.040	0.040	0.020	0.02	0.04	0.025
Nitrate + Nitrite																		
Nitrate and Nitrite as N	mg/L	0.071	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.07	0.071	0.070
Nitrite in Water by IC																		
Nitrite (as N)	mg/L	/	0.010	0.010	0.010	0.010	0.010	0.020	0.021	0.010	0.020	0.060	0.020	0.02	0.010	0.010	0.06	0.018
Oil & Grease - Gravimetric																		
Oil and Grease	mg/L	2.8	2.4	2.0	2.0	2.0	12.0	6.2	5.0	6.3	5.5	5	5.9	5	5	2	12	4.71
Phenol																		
Phenols	mg/L	0.0188	0.0010	0.0015	0.0010	0.0089	0.275	0.0141	0.0093	0.031	0.0192	0.0032	0.063	0.0155	0.0054	0.001	0.275	0.031
Phosphorus, Total																		
Phosphorus (P)	mg/L	/	0.212	0.172	0.317	5.85	6.85	7.68	6.90	8.55	6.43	7.10	8.97	8.4	6.48	0.172	8.55	5.41
Sulfate in Water by IC																		
Sulfate (SO4)	mg/L	17.9	7.43	79.2	193	28.1	3.60	15.5	16.6	10.0	13.5	15.4	1.68	24.1	13.9	3.6	193	33.71
Total Metals by ICP-MS																		
Aluminium (Al)	mg/L	0.0050	0.0370	0.0324	0.0178	0.0880	0.0950	0.155	0.127	0.0871	0.0657	0.122	0.0660	0.0968	0.0990	0.005	0.155	0.079
Arsenic (As)	mg/L	0.00047	0.00058	0.00055	0.00061	0.00088	0.00053	0.00094	0.00072	0.00086	0.00104	0.00094	0.00096	0.00105	0.00098	0.00047	0.00105	0.00078
Cadmium (Cd)	mg/L	0.000033	0.000010	0.000016	0.000016	0.000015	0.000078	0.000024	0.000020	0.000044	0.0000074	0.0000154	0.0000457	0.0000242	0.000162	0.0000074	0.000162	0.000036
Calcium (Ca)	mg/L	62	40.1	54.1	120	50.3	23.7	55.8	48.1	35.1	58.9	58.3	27.8	46.3	43.1	23.7	120	53.52
Chromium (Cr)	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.00037	0.00043	0.00045	0.00063	0.00041	0.00037	0.001	0.0008
Cobalt (Co)	mg/L	0.00073	0.00020	0.00039	0.00036	0.00054	0.00044	0.00061	0.00051	0.00070	0.00058	0.00060	0.00064	0.00061	0.00050	0.0002	0.00073	0.0005
Copper (Cu)	mg/L	0.00428	0.00083	0.00629	0.00318	0.00723	0.0314	0.0111	0.0130	0.0275	0.00695	0.01100	0.0330	0.0117	0.0106	0.00083	0.0314	0.0112
Iron (Fe)	mg/L	0.10	0.68	0.72	1.22	0.49	0.331	0.439	0.564	0.431	0.300	0.544	0.448	0.415	0.525	0.1	1.22	0.52
Lead (Pb)	mg/L	0.000090	0.000210	0.000408	0.000360	0.000261	0.000728	0.000648	0.000515	0.000423	0.000156	0.000404	0.000528	0.000263	0.000388	0.00009	0.000728	0.00037
Magnesium (Mg)	mg/L	5.94	3.44	3.79	7.24	6.21	3.06	5.52	4.57	4.79	6.19	6.47	3.72	5.2	5.2	3.06	7.24	5.20
Manganese (Mn)	mg/L	0.00714	0.0867	0.0611	0.0689	0.0651	0.0322	0.0625	0.0632	0.0482	0.0711	0.07	0.0422	0.0586	0.0587	0.00714	0.0867	0.058
Nickel (Ni)	mg/L	0.0034	0.0020	0.0023	0.0027	0.0037	0.0020	0.0035	0.0031	0.0029	0.00357	0.00376	0.00282	0.00362	0.00273	0.002	0.00376	0.0030
Potassium (K)	mg/L	7.61	5.54	3.81	5.82	24.2	15.1	22.9	19.6	22.9	29.4	29	17.7	19.8	18	3.81	29.4	17.21
Sodium (Na)	mg/L	40	8.65	5.65	10.5	58.6	30.8	55.2	47.0	46.1	63.2	72.8	36.3	52.5	46.6	5.65	72.8	41.35
Zinc (Zn)	mg/L	0.0022	0.0030	0.0270	0.0639	0.0069	0.0396	0.0129	0.0109	0.0193	0.0049	0.0132	0.0259	0.0162	0.0148	0.0022	0.0639	0.018
Total Organic Carbon by Combustion																		
Total Organic Carbon	mg/L	69.5	6.1	17.8	20.3	59	94.3	44.1	40.0	70.6	51.8	82.8	68.6	50.7	46.7	6.1	94.3	50.28
Total Suspended Solids																		
Total Suspended Solids	mg/L	49.0	5.0	8.0	10.0	695	18.0	125	71.3	120	31.0	208.0	49	46.3	35.2	5.0	695	109.37
pH																		
pH	pH Units	7.5	7.62	8.05	7.98	7.24	7.31	7.46	7.46	7.34	7.08	7.56	7.19	7.35	7.48	7.08	8.05	7.49
Benzene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Toluene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Ethyl Benzene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
o-Xylene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F1 (C6-C10)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F2 (C10-C16)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F3 (C16-C34)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F4 (C34-C50)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Total Hydrocarbons (C6-C50)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!

Coral Harbour
COR-4

		2014	2015				2016			2017			2018		2019	Statistics		
Parameter	**Unit**	**26-Aug-14**	**18-Jun-15**	**06-Jul-15**	**22-Jul-15**	**19-Aug-15**	**27-Jun-16**	**31-Aug-16**	**13-Sep-16**	**27-Jun-17**	**25-Jul-17**	**29-Aug-17**	**11-Jul-18**	**31-Jul-18**	**31-Jul-19**	**Min**	**Max**	**Average**
Alkalinity																		
Bicarbonate (HCO3)	mg/L	/	79.1	219	222	382	302	302	298	298	378	364	331	371	292	79.1	382	292.26
Carbonate (CO3)	mg/L	/	0.60	0.60	0.60	0.60	0.60	0.60	0.60	6.48	0.60	0.60	0.60	0.6	0.6	0.6	6.48	1.09
Hydroxide (OH)	mg/L	/	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	231	64.8	180	182	313	248	247	244	255	310	298	271	304	240	64.8	313	239.75
Ammonia by Colour																		
Total (as N)	mg/L	0.022	0.010	0.010	0.035	0.065	27.7	2.20	2.69	9.4	3.57	0.85	22.3	5.12	1.95	0.01	27.7	4.12
Biochemical Oxygen Demand (BOD)																		
Biochemical Oxygen Demand	mg/L	6.0	3.2	12.2	9.0	3.5	25.6	4.0	2.9	16.7	40.5	2.5	34.5	139	11.5	2.5	139	21.28
Carbonaceous BOD																		
BOD Carbonaceous	mg/L	/	3.3	7.6	4.6	2.0	21.3	2.2	3.2	10.6	2.2	2	20.0	71	2	2	71	11.00
Chloride in Water by IC																		
Chloride (Cl)	mg/L	42.4	2.55	22.8	49.0	58.1	38.4	38.6	42.9	33.8	42.6	74.5	33.5	38.6	45.4	2.55	74.5	40.74
Conductivity																		
Conductivity	umhos/cm	608	164	422	566	712	625	634	630	542	688	707	631	646	625	164	712	582.23
Fecal Coliforms																		
Fecal Coliforms	MPN/100mL	43	3	92	2400	4	1500	74	150	10	10	200	660	20	210	3	2400	362.77
Hardness Calculated																		
Hardness (as CaCO3)	mg/L	141	82.1	184	201	277	123	243	217	185	253	265	148	230	210	82.1	277	200.85
Mercury Total																		
Mercury (Hg)	mg/L	0.000020	0.00020	0.00020	0.00020	0.00020	0.000020	0.000020	0.000020	0.0000052	0.0000050	0.0000050	0.0000093	0.0000070	0.0000050	0.000005	0.0002	0.00007
Nitrate in Water by IC																		
Nitrate (as N)	mg/L	/	0.073	0.020	0.020	0.057	0.020	5.30	2.57	0.704	3.82	0.106	0.020	0.159	5.2	0.02	5.3	1.50
Nitrate + Nitrite																		
Nitrate and Nitrite as N	mg/L	0.531	0.073	0.070	0.070	0.070	0.070	5.38	2.61	0.811	5.10	0.11	0.070	0.19	5.37	0.07	5.38	1.57
Nitrite in Water by IC																		
Nitrite (as N)	mg/L	/	0.010	0.010	0.010	0.010	0.010	0.078	0.041	0.107	1.28	0.01	0.010	0.032	0.167	0.01	1.28	0.15
Oil & Grease - Gravimetric																		
Oil and Grease	mg/L	2.0	2.0	2.0	2.0	2.0	5.1	5.0	5.0	5.0	5.0	5.0	5.0	12.7	5	2.0	12.7	4.45
Phenol																		
Phenols	mg/L	0.0010	0.0010	0.0034	0.0010	0.0017	0.0102	0.0033	0.0025	0.0012	0.0010	0.0011	0.0151	0.0126	0.0011	0.001	0.0126	0.0032
Phosphorus, Total																		
Phosphorus (P)	mg/L	/	0.104	0.440	0.203	0.139	4.56	0.210	0.330	1.51	0.325	0.969	4.06	5.54	0.356	0.104	5.54	1.22
Sulfate in Water by IC																		
Sulfate (SO4)	mg/L	27	19.3	12.2	49.0	3.14	4.63	18.9	21.3	7.15	8.11	6.36	5.43	4.2	11.4	3.14	49	14.82
Total Metals by ICP-MS																		
Aluminium (Al)	mg/L	0.0803	0.0407	0.123	0.104	0.123	0.0324	0.0079	0.0140	0.0172	0.0339	0.0094	0.0342	0.0665	0.0239	0.0079	0.123	0.05
Arsenic (As)	mg/L	0.00101	0.00034	0.00081	0.00094	0.00069	0.00140	0.00108	0.00138	0.00171	0.00173	0.00115	0.00234	0.00309	0.0016	0.00034	0.00309	0.00130
Cadmium (Cd)	mg/L	0.000018	0.000053	0.000010	0.000010	0.000125	0.000065	0.000035	0.000045	0.000050	0.0000592	0.0000158	0.0000695	0.0000921	0.0000449	0.00001	0.000125	0.000048
Calcium (Ca)	mg/L	47.2	30.5	62.5	62.2	101	43.2	86.1	77.3	65.4	89.7	93	52.7	80.8	72.9	30.5	101	70.14
Chromium (Cr)	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.00031	0.00025	0.00041	0.0005	0.00048	0.00025	0.001	0.0008
Cobalt (Co)	mg/L	0.00061	0.00020	0.00021	0.00020	0.00161	0.00126	0.00105	0.00114	0.00165	0.00233	0.00096	0.00214	0.00343	0.00144	0.0002	0.00343	0.0012
Copper (Cu)	mg/L	0.0070	0.00274	0.00257	0.00172	0.00523	0.0169	0.00493	0.00527	0.00496	0.00303	0.00176	0.0151	0.00704	0.00356	0.00172	0.0169	0.005
Iron (Fe)	mg/L	0.37	0.49	0.89	0.46	1.53	0.696	0.140	0.200	0.556	0.665	0.533	0.849	1.28	0.466	0.14	1.53	0.64
Lead (Pb)	mg/L	0.000285	0.000583	0.000555	0.000268	0.000551	0.000508	0.000090	0.000090	0.000122	0.000079	0.00005	0.000366	0.000338	0.000092	0.00005	0.000583	0.00028
Magnesium (Mg)	mg/L	5.77	1.46	6.73	11.2	6.20	3.66	6.74	5.93	5.34	7.13	7.88	4.04	6.75	6.75	1.46	11.2	6.27
Manganese (Mn)	mg/L	0.0598	0.0407	0.114	0.0675	0.0512	0.173	0.0570	0.0884	0.0900	0.139	0.0587	0.133	0.136	0.0651	0.0407	0.173	0.09
Nickel (Ni)	mg/L	0.0035	0.0020	0.0020	0.0020	0.0054	0.0030	0.0047	0.0047	0.0048	0.00723	0.00477	0.00486	0.00841	0.00457	0.002	0.00841	0.0044
Potassium (K)	mg/L	27	2.18	5.83	10.2	13.9	17.3	14.2	13.4	15.1	14.4	22.5	14.0	11.7	8.45	2.18	27	13.55
Sodium (Na)	mg/L	69.1	2.27	18.6	39.5	61.3	36.8	39.6	38.2	38.1	42.1	68.7	31.5	40.3	29.7	2.27	69.1	40.33
Zinc (Zn)	mg/L	0.0073	0.0524	0.0109	0.0024	0.0192	0.0193	0.0025	0.0026	0.0038	0.0030	0.0037	0.0106	0.0065	0.020	0.0024	0.0524	0.0118
Total Organic Carbon by Combustion																		
Total Organic Carbon	mg/L	19.7	4.4	27.2	28.5	15.2	24.8	15.6	15.0	16.4	14.8	22.6	32.8	73	12.8	4.4	73	22.31
Total Suspended Solids																		
Total Suspended Solids	mg/L	5.0	5.0	9.0	9.0	67.0	37.0	5.0	5.0	10	27.0	10.0	17	845	33.5	5.0	845	82.12
pH																		
pH	pH Units	8.29	7.57	8.21	7.84	7.88	7.30	7.98	8.01	8.40	7.47	7.68	7.40	7.4	7.77	7.3	8.4	7.83
Benzene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Toluene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Ethyl Benzene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
o-Xylene	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F1 (C6-C10)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F2 (C10-C16)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F3 (C16-C34)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
F4 (C34-C50)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!
Total Hydrocarbons (C6-C50)	mg/L	/	/	/	/	/	/	/	/	/	/	/	N/A	N/A		0	0	#DIV/0!

Coral Harbour
COR-6

		2014		2015				2016			2017			2018		2019	Statistics		
Parameter	**Unit**	**30-Jun-14**	**26-Aug-14**	**18-Jun-15**	**06-Jul-15**	**22-Jul-15**	**19-Aug-15**	**27-Jun-16**	**31-Aug-16**	**13-Sep-16**	**27-Jun-17**	**25-Jul-17**	**29-Aug-17**	**11-Jul-18**	**31-Jul-18**	**43677**	**Min**	**Max**	**Average**
Alkalinity																			
Bicarbonate (HCO3)	mg/L	/	/	/	398	397	280	199	499	610	189	260	332	211	215	297	189	610	334.18
Carbonate (CO3)	mg/L	/	/	/	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.6	0.6	0.60
Hydroxide (OH)	mg/L	/	/	/	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	132	252	/	326	325	230	163	409	500	155	213	272	173	177	243	132	500	261.31
Ammonia by Colour																			
Total (as N)	mg/L	0.045	0.02	/	48.0	47.5	0.343	0.025	2.64	3.81	0.246	0.065	0.156	0.022	0.058	0.043	0.02	48	7.92
Biochemical Oxygen Demand (BOD)																			
Biochemical Oxygen Demand	mg/L	21.6	6.0	/	114	66	4.4	9.0	6.9	10.9	11.8	7.7	13.3	7.3	3.8	5.6	3.8	114	21.62
Carbonaceous BOD																			
BOD Carbonaceous	mg/L	/	/	/	100	58	5.5	5.1	4.9	8.8	8.0	5.4	8.1	3.7	2.3	2.6	2.3	100	18.97
Chloride in Water by IC																			
Chloride (Cl)	mg/L	46.9	65.1	/	50.1	58.7	65.4	24.5	97.4	129	34.0	79.3	88.2	17.3	39.4	28.6	24.5	129	62.05
Conductivity																			
Conductivity	umhos/cm	517	912	/	832	950	885	460	1210	1630	385	935	1010	423	734	636	385	1630	853.54
Fecal Coliforms																			
Fecal Coliforms	MPN/100mL	/	38	/	110000	24000	210	4	2400	7	10	10	1520	170	140	255	4	110000	11549.50
Hardness Calculated																			
Hardness (as CaCO3)	mg/L	160	335	/	100	116	352	214	484	429	172	325	428	183	292	0.0000050	0.000005	484	262.08
Mercury Total																			
Mercury (Hg)	mg/L	/	0.000020	/	0.00080	0.00040	0.00020	0.000020	0.000020	0.000020	0.0000075	0.0000050	0.0000118	0.0000050	0.000006	0.020	0.000005	0.02	0.00179
Nitrate in Water by IC																			
Nitrate (as N)	mg/L	/	/	/	0.020	0.020	0.020	0.020	0.10	0.040	0.020	0.040	0.040	0.020	0.020	0.070	0.02	0.10	0.04
Nitrate + Nitrite																			
Nitrate and Nitrite as N	mg/L	0.071	0.071	/	0.070	0.070	0.070	0.070	0.11	0.070	0.070	0.070	0.070	0.070	0.07	0.010	0.01	0.11	0.07
Nitrite in Water by IC																			
Nitrite (as N)	mg/L	/	/	/	0.010	0.010	0.010	0.010	0.050	0.020	0.010	0.020	0.020	0.010	0.01	5	0.01	5	0.47
Oil & Grease - Gravimetric																			
Oil and Grease	mg/L	2.0	2.0	/	6.2	3.8	2.0	5.0	5.0000	5.0	5.0	7.0	5.0	5.0	5	5	2.0	7.0	4.46
Phenol																			
Phenols	mg/L	0.0010	0.0010	/	0.0310	0.040	0.0017	0.0032	0.0070	0.0055	0.0010	0.0011	0.0012	0.0010	0.001	0.0010	0.001	0.04	0.007
Phosphorus, Total																			
Phosphorus (P)	mg/L	/	/	/	9.32	7.95	0.125	0.522	0.502	0.594	0.453	0.295	0.381	0.209	0.159	0.220	0.125	9.32	1.87
Sulfate in Water by IC																			
Sulfate (SO4)	mg/L	44.6	128	/	5.33	11.5	140	28.1	125	224	36.1	183	213	33.0	161	74.7	5.33	224	105.72
Total Metals by ICP-MS																			
Aluminium (Al)	mg/L	0.192	0.0734	/	0.0763	0.0557	0.0720	0.0611	0.138	0.0310	0.168	0.138	0.0727	0.126	0.119	0.0794	0.031	0.192	0.10
Arsenic (As)	mg/L	0.0016	0.00098	/	0.00075	0.00113	0.00097	0.00121	0.00235	0.00219	0.00100	0.00177	0.00192	0.00071	0.00126	0.00121	0.00075	0.00235	0.00141
Cadmium (Cd)	mg/L	0.00020	0.000010	/	0.000095	0.000041	0.000010	0.000010	0.000022	0.000010	0.000011	0.0000054	0.0000070	0.0000096	0.0000124	0.0000076	0.0000054	0.0002	0.000034
Calcium (Ca)	mg/L	49.2	107	/	32.6	38.4	111	73.8	155	135	53.6	94.4	126	61.7	87.4	77	32.6	155	87.72
Chromium (Cr)	mg/L	0.0020	0.0010	/	0.0010	0.0010	0.0010	0.0010	0.0011	0.0010	0.0010	0.00062	0.00072	0.00040	0.00045	0.00051	0.00045	0.002	0.0010
Cobalt (Co)	mg/L	0.00050	0.00028	/	0.00064	0.00063	0.00023	0.00020	0.00036	0.00029	0.00023	0.00031	0.00027	0.00016	0.00022	0.00020	0.0002	0.00064	0.00034
Copper (Cu)	mg/L	0.0053	0.0020	/	0.0322	0.0184	0.00136	0.00134	0.00280	0.00084	0.00281	0.00266	0.00190	0.00152	0.00199	0.00172	0.00084	0.0322	0.006
Iron (Fe)	mg/L	1.72	0.56	/	0.42	0.36	0.46	1.12	1.32	0.558	0.533000	0.806	1.19	0.591	0.359	0.537	0.359	1.72	0.76
Lead (Pb)	mg/L	0.0013	0.000302	/	0.00100	0.000378	0.000252	0.000326	0.00170	0.000123	0.000443	0.000578	0.000518	0.000355	0.000283	0.000386	0.000123	0.0017	0.0006
Magnesium (Mg)	mg/L	8.98	16.7	/	4.58	4.89	18.0	7.09	23.3	22.7	9.19	21.7	27.4	6.94	17.9	15.4	4.58	27.4	15.22
Manganese (Mn)	mg/L	0.121	0.0858	/	0.0731	0.0480	0.0635	0.204	0.316	0.153	0.0939	0.0796	0.131	0.0665	0.0465	0.0639	0.0465	0.316	0.11
Nickel (Ni)	mg/L	0.0024	0.0020	/	0.0027	0.0031	0.0020	0.0020	0.0032	0.0029	0.0020	0.00245	0.00271	0.00096	0.00169	0.00162	0.00162	0.0032	0.0024
Potassium (K)	mg/L	10.2	15.8	/	19.6	22.7	15.9	6.93	31.3	35.2	10.3	25.6	31.6	5.38	14.2	11.7	6.93	35.2	19.31
Sodium (Na)	mg/L	39.8	56.8	/	41.9	50.0	55.3	19.3	75.9	76.3	31.8	73.2	84.1	16.2	41.6	30.1	19.3	84.1	52.01
Zinc (Zn)	mg/L	0.020	0.0037	/	0.0390	0.0210	0.0034	0.0038	0.0082	0.0034	0.0060	0.0039	0.0033	0.0192	0.00169	0.0090	0.00169	0.039	0.010
Total Organic Carbon by Combustion																			
Total Organic Carbon	mg/L	52.7	27.5	/	87.1	62.5	26.4	16.2	34.1	34.1	22.0	40.5	41.2	14.9	24.6	25	16.2	87.1	37.99
Total Suspended Solids																			
Total Suspended Solids	mg/L	27	15	/	46.0	57.0	8.0	50.0	37.0	15.0	47.0	17.0	26.0	13.7	5.7	9.9	5.7	57	27.74
pH																			
pH	pH Units	8.23	8.11	/	7.93	7.77	8.21	7.41	7.44	7.44	7.71	7.50	7.96	8.13	8.09	7.98	7.41	8.23	7.83
Benzene	mg/L	0.00050	0.00050	/	0.00050	/	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050
Toluene	mg/L	0.0010	0.0010	/	0.0231	/	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0231	0.00301
Ethyl Benzene	mg/L	0.00050	0.00050	/	0.00050	/	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.0005	0.00050
o-Xylene	mg/L	0.00050	0.00050	/	0.00050	/	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.0005	0.00050
F1 (C6-C10)	mg/L	0.10	0.10	/	0.10	/	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
F2 (C10-C16)	mg/L	/	0.25	/	0.80	/	0.25	0.10	0.12	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.80	0.20
F3 (C16-C34)	mg/L	/	0.25	/	4.62	/	0.25	0.33	0.29	0.26	0.44	0.25	0.45	.25	0.25	0.25	0.25	4.62	0.74
F4 (C34-C50)	mg/L	/	0.25	/	1.09	/	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.09	0.33
Total Hydrocarbons (C6-C50)	mg/L	/	0.44	/	6.51	/	0.44	0.38	0.41	0.38	0.44	0.38	0.45	0.38	0.38	0.38	0.38	6.51	1.02

Coral Harbour
COR-7

		2015	2016			2017			2018		2019	Statistics		
Parameter	**Unit**	**19-Aug-15**	**27-Jun-16**	**31-Aug-16**	**13-Sep-16**	**27-Jun-17**	**25-Jul-17**	**29-Aug-17**	**11-Jul-18**	**31-Jul-18**	**31-Jul-19**	**Min**	**Max**	**Average**
Alkalinity														
Bicarbonate (HCO3)	mg/L	189	99.7	237	248	194	74.1	372	164	85.5	133	74.1	372	181.37
Carbonate (CO3)	mg/L	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	4.68	0.60	0.60	4.68	1.05
Hydroxide (OH)	mg/L	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	155	81.7	195	203	159	60.7	305	135	77.9	109	60.7	305	149.59
Ammonia by Colour														
Total (as N)	mg/L	0.205	0.024	0.022	0.036	0.169	0.047	0.128	0.075	0.031	0.018	0.018	0.205	0.08
Biochemical Oxygen Demand (BOD)														
Biochemical Oxygen Demand	mg/L	2.0	3.3	2.0	3.8	3.5	2.0	20.0	2.6	2	2	2.0	20	4.51
Carbonaceous BOD														
BOD Carbonaceous	mg/L	2.0	2.8	2.0	3.9	2.4	2.0	20.0	2.0	2	2	2.0	20	4.34
Chloride in Water by IC														
Chloride (Cl)	mg/L	10.3	3.59	6.2	6.25	7.45	5.34	10.1	4.68	5.78	4.72	3.59	10.3	6.64
Conductivity														
Conductivity	umhos/cm	1030	380	1100	1080	719	708	1200	493	743	678	380	1200	848.67
Fecal Coliforms														
Fecal Coliforms	MPN/100mL	3	93	240	3	10	10	90	10	30		3	240	59.88
Hardness Calculated														
Hardness (as CaCO3)	mg/L	494	208	706	595	404	386	900	242	398	328	208	900	491.00
Mercury Total														
Mercury (Hg)	mg/L	0.00020	0.000020	0.000020	0.000020	0.0000050	0.0000050	0.0000186	0.0000050	0.000005	0.0000050	0.000005	0.0002	0.00003
Nitrate in Water by IC														
Nitrate (as N)	mg/L	0.049	0.020	0.068	0.042	0.066	0.020	0.056	0.116	0.02	0.020	0.02	0.068	0.04
Nitrate + Nitrite														
Nitrate and Nitrite as N	mg/L	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.116	0.07	0.070	0.070	0.070	0.070
Nitrite in Water by IC														
Nitrite (as N)	mg/L	0.010	0.010	0.020	0.010	0.010	0.010	0.020	0.010	0.01	0.010	0.010	0.020	0.012
Oil & Grease - Gravimetric														
Oil and Grease	mg/L	2.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5	5	2.0	5.0	4.67
Phenol														
Phenols	mg/L	0.0025	0.0029	0.0034	0.0026	0.0011	0.0010	0.0014	0.0010	0.001	0.0010	0.001	0.0034	0.0019
Phosphorus, Total														
Phosphorus (P)	mg/L	0.129	0.179	0.075	0.132	0.170	0.091	0.660	0.102	0.0713	0.0796	0.0713	0.66	0.18
Sulfate in Water by IC														
Sulfate (SO4)	mg/L	401	105	448	396	265	317	526	117	298	253	105	526	334.33
Total Metals by ICP-MS														
Aluminium (Al)	mg/L	0.0165	0.0283	0.0186	0.0328	0.0112	0.0510	0.2880	0.0197	0.0438	0.0207	0.0112	0.288	0.0568
Arsenic (As)	mg/L	0.00050	0.00047	0.00056	0.00058	0.00051	0.00071	0.00107	0.00044	0.0005	0.00058	0.00047	0.00107	0.00061
Cadmium (Cd)	mg/L	0.000021	0.000084	0.000032	0.000046	0.000014	0.0000220	0.0000915	0.0000234	0.0000236	0.0000243	0.000014	9.15E-05	0.00004
Calcium (Ca)	mg/L	178	77.1	264	222	148	141	330	89.4	145	120	77.1	330	180.57
Chromium (Cr)	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.00041	0.00136	0.00040	0.00046	0.00048	0.00041	0.00136	0.00086
Cobalt (Co)	mg/L	0.00026	0.00028	0.00040	0.00048	0.00039	0.00038	0.00058	0.00028	0.00027	0.00030	0.00026	0.00058	0.00037
Copper (Cu)	mg/L	0.00428	0.00418	0.00662	0.00568	0.00280	0.0070	0.0059	0.00389	0.005	0.00443	0.0028	0.00702	0.0051
Iron (Fe)	mg/L	0.89	0.952	1.83	2.53	0.975	0.805	6.01	0.919	0.753	1.54	0.753	6.01	1.81
Lead (Pb)	mg/L	0.000159	0.000602	0.000715	0.00100	0.000220	0.000505	0.00145	0.000343	0.000463	0.000763	0.000159	0.00145	0.0007
Magnesium (Mg)	mg/L	12.0	3.65	11.4	10.0	8.51	8.44	18.5	4.46	8.64	7.06	3.65	18.5	9.80
Manganese (Mn)	mg/L	0.0742	0.0778	0.0635	0.0956	0.0697	0.0285	0.418	0.0428	0.0229	0.0331	0.0229	0.418	0.0981
Nickel (Ni)	mg/L	0.0024	0.0020	0.0040	0.0038	0.0027	0.00310	0.00390	0.00203	0.00257	0.00251	0.002	0.004	0.0030
Potassium (K)	mg/L	7.42	3.36	8.25	8.51	8.76	7.63	13	3.97	5.41	3.74	3.36	13	7.34
Sodium (Na)	mg/L	14.2	4.67	14.6	13.4	11.6	12.3	22.8	6.25	11	8.86	4.67	22.8	12.60
Zinc (Zn)	mg/L	0.0612	0.0831	0.0749	0.0775	0.0237	0.0261	0.0591	0.0379	0.0526	0.0629	0.0237	0.0831	0.06
Total Organic Carbon by Combustion														
Total Organic Carbon	mg/L	18.0	12.9	45.8	40.3	16.4	28.5	21.0	20.1	25.5	38.7	12.9	45.8	27.46
Total Suspended Solids														
Total Suspended Solids	mg/L	5.0	15.0	5.0	7.0	7.0	7.0	76.0	2.0	2.1	2	2.0	76.0	14.01
pH														
pH	pH Units	7.81	7.60	8.00	8.08	7.64	8.08	7.37	7.78	8.49	8.06	7.37	8.49	7.90
Benzene	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.0005	0.00050	0.00050	0.00050	0.00050
Toluene	mg/L	0.0010	0.0010	<0.0010	<0.0010	0.0010	0.0010	0.0010	0.0010	0.001	0.0010	0.0010	0.0010	0.0010
Ethyl Benzene	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.0005	0.00050	0.00050	0.00050	0.00050
o-Xylene	mg/L	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.00050	0.0004	0.00050	0.00040	0.00050	0.00049
F1 (C6-C10)	mg/L	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
F2 (C10-C16)	mg/L	0.25	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.25	0.12
F3 (C16-C34)	mg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.33	0.25	0.25	0.25	0.25	0.33	0.26
F4 (C34-C50)	mg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Total Hydrocarbons (C6-C50)	mg/L	0.44	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.44	0.39

Coral Harbour
COR-5

		2015	2016			2017			2018		2019	Statistics		
Parameter	**Unit**	**19-Aug-15**	**27-Jun-16**	**31-Aug-16**	**13-Sep-16**	**27-Jun-17**	**25-Jul-17**	**29-Aug-17**	**11-Jul-18**	**03-Jul-18**	**31-Jul-19**	**Min**	**Max**	**Average**
Alkalinity														
Bicarbonate (HCO3)	mg/L	319	264	337	253	235	341	/	239	128	161	128	341	253
Carbonate (CO3)	mg/L	0.60	0.60	0.60	7.92	12.8	0.60	/	0.60	4.92	0.60	0.6	12.8	3.58
Hydroxide (OH)	mg/L	0.34	0.34	0.34	0.34	0.34	0.34	/	0.34	0.34	0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	262	216	276	220	214	280	/	196	113	132	113	280	214.125
Ammonia by Colour														
Total (as N)	mg/L	0.018	16.9	0.119	0.025	2.29	0.148	/	0.045	0.045	0.027	0.018	16.9	2.4465
Biochemical Oxygen Demand (BOD)														
Biochemical Oxygen Demand	mg/L	107	11.6	2.0	4.3	19.7	7.7	/	12.4	2	2	2.0	107	19.5375
Carbonaceous BOD														
BOD Carbonaceous	mg/L	74	6.5	2.0	4.4	11.3	4.6	/	8.3	2	2	2.0	74	13.35
Chloride in Water by IC														
Chloride (Cl)	mg/L	53.2	39.7	48.7	41.6	35.6	38.8	/	25.5	39.9	28.8	28.8	53.2	40.7875
Conductivity														
Conductivity	umhos/cm	673	573	679	542	492	630	/	439	472	453	453	679	564.25
Fecal Coliforms														
Fecal Coliforms	MPN/100mL	4	150	93	3	10	10	/	750	10		3	150	40
Hardness Calculated														
Hardness (as CaCO3)	mg/L	233	144	260	175	189	222	/	153	150	150	144	260	190.375
Mercury Total														
Mercury (Hg)	mg/L	0.00020	0.000020	0.000020	0.000020	0.0000059	0.0000050	/	0.0000050	0.000005	0.000050	0.000005	0.0002	4.1E-05
Nitrate in Water by IC														
Nitrate (as N)	mg/L	0.832	1.25	0.824	0.992	2.70	0.020	/	0.020	0.02	0.020	0.02	2.7	0.83225
Nitrate + Nitrite														
Nitrate and Nitrite as N	mg/L	0.832	1.56	0.824	1.03	2.82	0.070	/	0.070	0.07	0.070	0.07	2.82	0.9095
Nitrite in Water by IC														
Nitrite (as N)	mg/L	0.010	0.319	0.010	0.037	0.119	0.041	/	0.010	0.01	0.010	0.01	0.319	0.0695
Oil & Grease - Gravimetric														
Oil and Grease	mg/L	2.0	5.0	5.0	5.0	7.5	5.0	/	5.0	5	5	2.0	7.5	4.9375
Phenol														
Phenols	mg/L	0.0015	0.0023	0.035	0.0021	0.0010	0.0011	/	0.0010	0.001	0.0010	0.001	0.035	0.00563
Phosphorus, Total														
Phosphorus (P)	mg/L	0.350	2.78	0.204	0.102	1.15	0.793	/	1.02	0.1	0.0353	0.0353	2.78	0.68929
Sulfate in Water by IC														
Sulfate (SO4)	mg/L	12.9	3.62	20.2	14.6	10.7	8.44	/	6.61	71.4	64.9	3.62	71.4	25.845
Total Metals by ICP-MS														
Aluminium (Al)	mg/L	0.0491	0.0187	0.0154	0.0079	0.0136	0.0269	/	0.0233	0.0087	0.0077	0.0077	0.0491	0.0185
Arsenic (As)	mg/L	0.00062	0.00093	0.00062	0.00037	0.00140	0.00088	/	0.00079	0.00084	0.00076	0.00037	0.0014	0.0008
Cadmium (Cd)	mg/L	0.000123	0.000054	0.000104	0.000034	0.000089	0.0000588	/	0.0000192	0.0000089	0.0000081	0.0000081	0.000123	6E-05
Calcium (Ca)	mg/L	82.8	51.2	90.6	60.4	66.7	77.3	/	54.6	44.1	46.4	44.1	90.6	64.9375
Chromium (Cr)	mg/L	0.0010	0.0010	0.0010	0.0010	0.0010	0.00030	/	0.00016	0.0005	0.00039	0.0003	0.001	0.00077
Cobalt (Co)	mg/L	0.00195	0.00113	0.00161	0.00108	0.00148	0.00146	/	0.00055	0.00028	0.00025	0.00025	0.00195	0.00116
Copper (Cu)	mg/L	0.0119	0.0127	0.00438	0.00262	0.00410	0.00412	/	0.00324	0.00135	0.00116	0.00116	0.0127	0.00529
Iron (Fe)	mg/L	0.10	0.504	0.063	0.060	0.039	0.071	/	0.580	0.103	0.126	0.039	0.504	0.13325
Lead (Pb)	mg/L	0.000131	0.000309	0.000090	0.000090	0.000090	0.000095	/	0.000077	0.00005	0.000052	0.00005	0.000309	0.00011
Magnesium (Mg)	mg/L	6.28	3.96	8.17	5.91	5.34	7.08	/	4.02	9.6	8.27	3.96	9.6	6.82625
Manganese (Mn)	mg/L	0.0109	0.0878	0.0866	0.0173	0.0184	0.121	/	0.0179	0.0059	0.00888	0.0059	0.121	0.0446
Nickel (Ni)	mg/L	0.0060	0.0029	0.0065	0.0044	0.0049	0.00658	/	0.00286	0.00207	0.00182	0.00182	0.00658	0.0044
Potassium (K)	mg/L	5.04	15.8	5.95	5.26	10.2	8.96	/	4.68	9.09	7.82	5.04	15.8	8.515
Sodium (Na)	mg/L	52.3	39.2	57.1	49.2	44.5	50.9	/	29.1	39.8	31	31	57.1	45.5
Zinc (Zn)	mg/L	0.0049	0.0140	0.0028	0.0045	0.0048	0.0084	/	0.0049	0.0044	0.0076	0.0028	0.014	0.00643
Total Organic Carbon by Combustion														
Total Organic Carbon	mg/L	17.9	18.1	12.5	13.2	16.6	17.0	/	20.1	20.1	16.9	12.5	20.1	16.5375
Total Suspended Solids														
Total Suspended Solids	mg/L	85.0	24.0	5.0	5.0	11.0	29.0	/	6.0	2	2	2.0	85	20.375
pH														
pH	pH Units	8.07	7.69	7.65	8.55	8.65	7.86	/	8.28	8.56	8.22	7.65	8.65	8.15625
Benzene	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
Toluene	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
Ethyl Benzene	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
o-Xylene	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
F1 (C6-C10)	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
F2 (C10-C16)	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
F3 (C16-C34)	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
F4 (C34-C50)	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!
Total Hydrocarbons (C6-C50)	mg/L	/	/	/	/	/	/	/	N/A			0	0	#DIV/0!

Appendix F

Crown-Indigenous Relations and Northern Affairs Canada | Relations Couronne-Autochtones et Affaires du Nord Canada

WATER LICENCE INSPECTION FORM

☒ **Original**
☐ **Follow-Up Report**

Licensee	**Licensee Representative**
Hamlet of Coral Harbour	Leonie Pameolik
Licence No. / Expiry	**Representative's Title**
3BM-COR1521/ April 24, 2021	Senior Administrative Officer
Land / Other Authorizations	**Land / Other Authorizations**
--	--
Date of Inspection	**Inspector**
July 31st 2019	Atuat Shouldice

Activities Inspected

☐ Camp ☐ Drilling ☐ Mining ☐ Construction ☐ Reclamation ☐ Fuel Storage
☐ Roads/Hauling ☒ Other: Waste Disposal Facility ☒ Other: Water Treatment Facility

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SECTION 1 ☒ **Comments** (s._1_) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

BACKGROUND

The Hamlet of Coral Harbour is located on the South shore of Southampton Island at N64° 08', W83° 10', within the Kivalliq region of Nunavut.

Inspector's Statement

On July 31st, 2019, a water licence inspection was conducted of water licence no. 3BM-COR1521 issued to the Hamlet for the use of water and deposit of waste as it relates to municipal undertakings.

Observation

1. Fresh water is obtained from Post River, as required by PART C item 2.
2. All sewage is directed to the Sewage Disposal Facility ('SDF').
3. The water levels in the SDF are extremely low. The inspector believes that there may be a seep from the berm wall directly adjacent to monitoring station no. COR-3.
4. The Hamlet segregates hazardous waste (e.g.: Oil, batteries, and Propane) and stores it in seacans with the intentions of shipping the materials south for appropriate treatment once funds is available.

SECTION 2 ☐ **Comments** ☒ **Non-Compliance with Act or Licence** ☐ **Action Required**

Concerns related to Water Licence no. 3BM-COR1521;

PART D item 5: Concerns related to the structural integrity of the Sewage Disposal Facility.

— *The Licensee is required to improve the berm wall directly adjacent to COR-3 at the Sewage Disposal Facility prior to the next inspection.*

SECTION 3 ☐ **Comments** ☐ **Non-Compliance with Act or Licence** ☒ **Action Required**

The community clean up initiative has made great progress since establishment and segregation of bulk items is improving every year. During the summer of 2020, the Inspector would like to see the berm of the sewage disposal facility built up to minimize seepage near sampling station COR-3.

Licensee or Representative	**Inspector's Name**
Leonie Pameolik	Atuat Shouldice
Signature	**Signature**
	Sent Electronically
Date	**Date**
	January 10th 2020

CC: Licensing Department, NWB
Justin Hack, Manager of Field Operations, CIRNAC
Megan Lusty, Municipal Works, CGS