ANNUAL REPORT
FOR THE HAMLET OF CHESTERFIELD INLET

YEAR BEING REPORTED: 2021

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. **3BM-CHE1523** issued to the **Hamlet of Chesterfield Inlet**.

Below are tabular summaries of all data generated under the "Monitoring Program". This report also includes results for Monitoring Station CHE-1, as well as detailed chemical, physical and biological analysis required at CHE-2, CHE-3 and CHE-4 monitoring station. Details on monitoring station locations are provided in the report later.

I. Monthly and annual quantities of freshwater obtained by daily logs for all freshwater sources and estimated sewage waste discharged.

Table 1: Summary of water obtained from the Reservoir and estimated sewage water discharge in m^3

Month Reported	Quantity of Water Obtained from all sources (m^3)	Quantity of Sewage Waste Discharged (m^3)
January	1,400.120	Same
February	1,257.396	Same
March	1,340.216	Same
April	1,320.013	Same
May	1,325.810	Same
June	1,381.856	Same
July	1,423.050	Same
August	1,387.104	Same
September	1,380.514	Same
October	1,461.273	Same
November	1,062.009	Same
December	1,388.437	Same
ANNUAL TOTAL	16,127.798	Same

Note: No meter exists to measure the sewage discharge volumes, therefore Sewage discharge volumes are considered equal to the water consumption volumes.

Summary of water obtained from First Lake to the Reservoir in m^3

Pumping from First Lake began on August 24th, 2021 (approx.) and ended on September 08, 2021. An estimated total of 12,000 m^3 (approx.) was pumped to the Reservoir in 2021.

II. 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:
- Segregation at the Solid Waste Site improved over the course of the summer. Solid Waste Site is well sorted and well maintained.
- No other modifications.

III. A list of unauthorized discharges and summary of follow-up action taken:
- No unauthorized discharges for the infrastructure under licence 3BM-CHE1523 occurred in 2021.

IV. A summary of any abandonment and restoration work completed during the year and an outline of any work anticipated for the next year:
- None

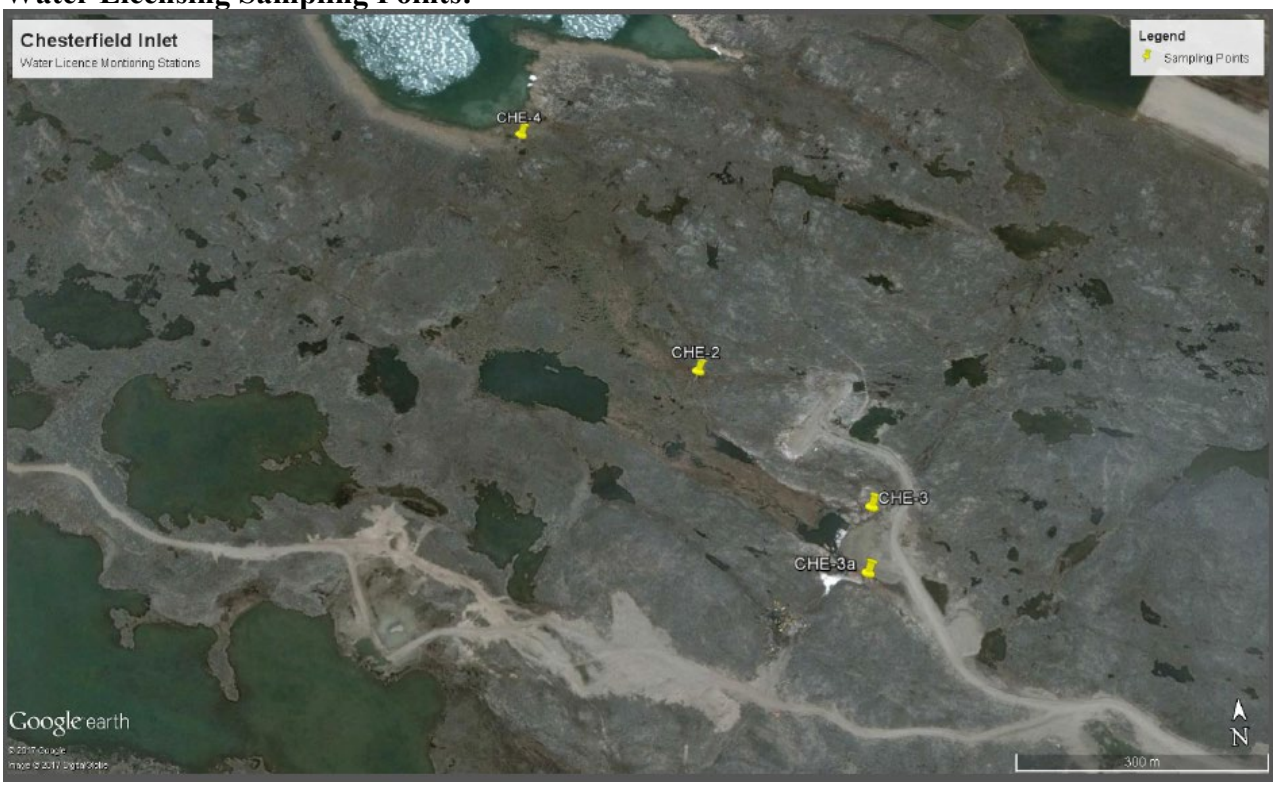
V. A summary of any studies requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned:
- None

VI. Any other details on water use or waste disposal requested by the Board by November 1st of the year being reported; and
- None

VII. updates or revisions to the approved Operation and Maintenance Plans:
- None

ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL:

Water Licensing Sampling Points:



CHE-2: Runoff from Solid Waste Disposal Facilities
CHE-3: Effluent from Sewage Holding Cell 1
CHE-3a: Effluent from Sewage Holding Cell 2
CHE-4: Final Discharge Point for Effluent from the wetland treatment area prior to Finder Bay

FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

- None

Appendix A: CHE-2 Effluent Quality Limits

Appendix B: Weekly Inspections at Monitoring Program Station

Appendix C: Certificate of Analysis June 22, 2021

Appendix D: Hazardous Materials Spill Database, Chesterfield Inlet 2021

Appendix E: Chesterfield Inlet 2021 Sampling Summary

Appendix F: Chesterfield Inlet CIRNAC Inspection Report

Appendix A

3BM- CHE1523 Chesterfield Inlet Monitoring Program Results 2021

CHE-2 Effluent Quality limits

Parameter	Maximum Concentration of any grab sample	CHE-2
		22-Jun-21
BOD_5	80 mg/L	67
Total Suspended Solids	100 mg/L	100
Fecal Coliforms	1 x 10^4 CFU/100mL	13000
Oil & Grease	no visible sheen	19.2
pH	between 6 and 9	7.2

Appendix B

No Weekly Inspections at Monitoring Stations were received by CGS.

Appendix C

Hamlet of Chesterfield Inlet
ATTN: DON TANUYAK (Waste Water)
PO Box 10
Chesterfield Inlet NU X0C 0B0

Date Received: 23-JUN-21
Report Date: 05-JUL-21 13:48 (MT)
Version: FINAL

Client Phone: 867-898-9926

Certificate of Analysis

Lab Work Order #: L2605129

Project P.O. #: NOT SUBMITTED
Job Reference: CHESTERFIELD INLET - WASTE WATER
C of C Numbers:
Legal Site Desc:

Hua Wo
Chemistry Laboratory Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L2605129-1 CHE-1							
Sampled By: CLIENT on 22-JUN-21 @ 09:00							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	274		1.2	mg/L		28-JUN-21	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		28-JUN-21	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		28-JUN-21	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	225		1.0	mg/L		25-JUN-21	R5504167
Ammonia by colour							
Ammonia, Total (as N)	46.0		2.0	mg/L		28-JUN-21	R5505886
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	219		50	mg/L		24-JUN-21	R5505623
Carbonaceous BOD							
BOD Carbonaceous	204		50	mg/L		24-JUN-21	R5505623
Chloride in Water by IC							
Chloride (Cl)	49.7		0.50	mg/L		23-JUN-21	R5500837
Conductivity							
Conductivity	671		1.0	umhos/cm		25-JUN-21	R5504167
Fecal coliforms, 1:10 dilution by QT97							
Fecal Coliforms	>24200	MBHT	10	MPN/100mL		23-JUN-21	R5499585
Hardness Calculated							
Hardness (as CaCO3)	43.2	HTC	0.20	mg/L		29-JUN-21	
Mercury Total							
Mercury (Hg)-Total	0.000071		0.000050	mg/L	29-JUN-21	29-JUN-21	R5506103
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		23-JUN-21	R5500837
Nitrate+Nitrite							
Nitrate and Nitrite as N	<0.070		0.070	mg/L		26-JUN-21	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		23-JUN-21	R5500837
Oil & Grease - Gravimetric							
Oil and Grease	45.0		5.0	mg/L		25-JUN-21	R5503198
Phenol (4AAP)							
Phenols (4AAP)	0.128	DLHC	0.010	mg/L		29-JUN-21	R5506515
Phosphorus, Total							
Phosphorus (P)-Total	8.13		0.030	mg/L		30-JUN-21	R5506857
Sulfate in Water by IC							
Sulfate (SO4)	12.9		0.30	mg/L		23-JUN-21	R5500837
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.259		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Arsenic (As)-Total	0.00074		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cadmium (Cd)-Total	0.000121		0.0000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Calcium (Ca)-Total	11.4		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Chromium (Cr)-Total	0.00122		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cobalt (Co)-Total	0.00052		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Copper (Cu)-Total	0.116		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827
Iron (Fe)-Total	1.34		0.010	mg/L	28-JUN-21	28-JUN-21	R5505827
Lead (Pb)-Total	0.00199		0.000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Magnesium (Mg)-Total	3.58		0.0050	mg/L	28-JUN-21	28-JUN-21	R5505827
Manganese (Mn)-Total	0.0383		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Nickel (Ni)-Total	0.00274		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827

* 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
L2605129-1 CHE-1							
Sampled By: CLIENT on 22-JUN-21 @ 09:00							
Matrix: WW							
Total Metals in Water by CRC ICPMS							
Potassium (K)-Total	16.5		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Sodium (Na)-Total	33.9		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Zinc (Zn)-Total	0.130		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Total Organic Carbon by Combustion							
Total Organic Carbon	185		5.0	mg/L		02-JUL-21	R5511677
Total Suspended Solids							
Total Suspended Solids	169		3.0	mg/L		28-JUN-21	R5506376
pH							
pH	7.41		0.10	pH units		25-JUN-21	R5504167
L2605129-2 CHE-2							
Sampled By: CLIENT on 22-JUN-21 @ 09:15							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	190		1.2	mg/L		28-JUN-21	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		28-JUN-21	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		28-JUN-21	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	156		1.0	mg/L		25-JUN-21	R5504167
Ammonia by colour							
Ammonia, Total (as N)	33.0		2.0	mg/L		28-JUN-21	R5505886
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	67		20	mg/L		24-JUN-21	R5505623
Carbonaceous BOD							
BOD Carbonaceous	72		20	mg/L		24-JUN-21	R5505623
Chloride in Water by IC							
Chloride (Cl)	41.4		0.50	mg/L		23-JUN-21	R5500837
Conductivity							
Conductivity	511		1.0	umhos/cm		25-JUN-21	R5504167
Fecal coliforms, 1:10 dilution by QT97							
Fecal Coliforms	13000	MBHT	10	MPN/100mL		23-JUN-21	R5499585
Hardness Calculated							
Hardness (as CaCO3)	68.7	HTC	0.20	mg/L		29-JUN-21	
Mercury Total							
Mercury (Hg)-Total	0.0000372		0.0000050	mg/L	29-JUN-21	29-JUN-21	R5506103
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		23-JUN-21	R5500837
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.131		0.070	mg/L		26-JUN-21	
Nitrite in Water by IC							
Nitrite (as N)	0.131		0.010	mg/L		23-JUN-21	R5500837
Oil & Grease - Gravimetric							
Oil and Grease	19.2		5.0	mg/L		25-JUN-21	R5503198
Phenol (4AAP)							
Phenols (4AAP)	0.182	DLHC	0.0050	mg/L		30-JUN-21	R5506515
Phosphorus, Total							
Phosphorus (P)-Total	7.00		0.030	mg/L		30-JUN-21	R5506857
Sulfate in Water by IC							
Sulfate (SO4)	10.2		0.30	mg/L		23-JUN-21	R5500837

* 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
L2605129-2 CHE-2							
Sampled By: CLIENT on 22-JUN-21 @ 09:15							
Matrix: WW							
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.510		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Arsenic (As)-Total	0.00122		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cadmium (Cd)-Total	0.000290		0.0000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Calcium (Ca)-Total	19.6		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Chromium (Cr)-Total	0.00167		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cobalt (Co)-Total	0.00088		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Copper (Cu)-Total	0.108		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827
Iron (Fe)-Total	2.20		0.010	mg/L	28-JUN-21	28-JUN-21	R5505827
Lead (Pb)-Total	0.00758		0.000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Magnesium (Mg)-Total	4.81		0.0050	mg/L	28-JUN-21	28-JUN-21	R5505827
Manganese (Mn)-Total	0.184		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Nickel (Ni)-Total	0.00358		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827
Potassium (K)-Total	14.1		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Sodium (Na)-Total	27.6		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Zinc (Zn)-Total	0.195		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Total Organic Carbon by Combustion							
Total Organic Carbon	103		5.0	mg/L		02-JUL-21	R5511677
Total Suspended Solids							
Total Suspended Solids	100		3.0	mg/L		28-JUN-21	R5506376
pH							
pH	7.20		0.10	pH units		25-JUN-21	R5504167
L2605129-3 CHE-3							
Sampled By: CLIENT on 22-JUN-21 @ 09:30							
Matrix: WW							
Nunavut WW Group 1							
Alkalinity, Bicarbonate							
Bicarbonate (HCO3)	64.4		1.2	mg/L		28-JUN-21	
Alkalinity, Carbonate							
Carbonate (CO3)	<0.60		0.60	mg/L		28-JUN-21	
Alkalinity, Hydroxide							
Hydroxide (OH)	<0.34		0.34	mg/L		28-JUN-21	
Alkalinity, Total (as CaCO3)							
Alkalinity, Total (as CaCO3)	52.8		1.0	mg/L		25-JUN-21	R5504167
Ammonia by colour							
Ammonia, Total (as N)	0.368		0.010	mg/L		28-JUN-21	R5505886
Biochemical Oxygen Demand (BOD)							
Biochemical Oxygen Demand	<2.0		2.0	mg/L		24-JUN-21	R5505623
Carbonaceous BOD							
BOD Carbonaceous	<2.0		2.0	mg/L		24-JUN-21	R5505623
Chloride in Water by IC							
Chloride (Cl)	28.2		0.50	mg/L		23-JUN-21	R5500837
Conductivity							
Conductivity	247		1.0	umhos/cm		25-JUN-21	R5504167
Fecal coliforms, 1:10 dilution by QT97							
Fecal Coliforms	<10		10	MPN/100mL		23-JUN-21	R5499585
Hardness Calculated							
Hardness (as CaCO3)	55.4	HTC	0.20	mg/L		29-JUN-21	
Mercury Total							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L	29-JUN-21	29-JUN-21	R5506103
Nitrate in Water by IC							
Nitrate (as N)	0.572		0.020	mg/L		23-JUN-21	R5500837

* 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
L2605129-3 CHE-3							
Sampled By: CLIENT on 22-JUN-21 @ 09:30							
Matrix: WW							
Nitrate+Nitrite							
Nitrate and Nitrite as N	0.572		0.070	mg/L		26-JUN-21	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		23-JUN-21	R5500837
Oil & Grease - Gravimetric							
Oil and Grease	<5.0		5.0	mg/L		25-JUN-21	R5503198
Phenol (4AAP)							
Phenols (4AAP)	<0.0010		0.0010	mg/L		29-JUN-21	R5506515
Phosphorus, Total							
Phosphorus (P)-Total	0.0291		0.0030	mg/L		30-JUN-21	R5506857
Sulfate in Water by IC							
Sulfate (SO4)	21.1		0.30	mg/L		23-JUN-21	R5500837
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	0.0091		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Arsenic (As)-Total	0.00032		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cadmium (Cd)-Total	<0.0000050		0.0000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Calcium (Ca)-Total	16.0		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Chromium (Cr)-Total	0.00022		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Cobalt (Co)-Total	0.00031		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Copper (Cu)-Total	0.00269		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827
Iron (Fe)-Total	0.038		0.010	mg/L	28-JUN-21	28-JUN-21	R5505827
Lead (Pb)-Total	<0.000050		0.000050	mg/L	28-JUN-21	28-JUN-21	R5505827
Magnesium (Mg)-Total	3.75		0.0050	mg/L	28-JUN-21	28-JUN-21	R5505827
Manganese (Mn)-Total	0.00027		0.00010	mg/L	28-JUN-21	28-JUN-21	R5505827
Nickel (Ni)-Total	0.00196		0.00050	mg/L	28-JUN-21	28-JUN-21	R5505827
Potassium (K)-Total	6.65		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Sodium (Na)-Total	22.2		0.050	mg/L	28-JUN-21	28-JUN-21	R5505827
Zinc (Zn)-Total	0.0042		0.0030	mg/L	28-JUN-21	28-JUN-21	R5505827
Total Organic Carbon by Combustion							
Total Organic Carbon	11.1		0.50	mg/L		29-JUN-21	R5506566
Total Suspended Solids							
Total Suspended Solids	<3.0		3.0	mg/L		28-JUN-21	R5506376
pH							
pH	7.57		0.10	pH units		25-JUN-21	R5504167

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

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
HTC	Hardness was calculated from Total Ca and/or Mg concentrations and may be biased high (dissolved Ca/Mg results unavailable).
MBHT	The APHA 30 hour hold time was exceeded for microbiological testing. Samples processed within 48 hours from time of sampling may be valid in some cases (refer to Health Canada guidance).
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.

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.

FC10-QT97-WP	Water	Fecal coliforms, 1:10 dilution by QT97	APHA 9223B QT97

Analysis is carried out using procedures adapted from APHA 9223 "Enzyme Substrate Coliform Test". Fecal (thermotolerant) coliform bacteria are determined by mixing a 1:10 dilution of sample with a product containing hydrolyzable substrates and sealing in a 97-well packet. The packet is incubated at 44.5 +/- 0.2 degrees C for 18 hours and then the number of wells exhibiting positive responses are counted. The final results are obtained by comparing the number of positive responses to a probability table.

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.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
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.			
PH-WP	Water	pH	APHA 4500H
The pH of a sample is the determination of the activity of the hydrogen ions by potentiometric measurement using a standard hydrogen electrode and a reference electrode.			
PHENOLS-4AAP-WT	Water	Phenol (4AAP)	EPA 9066
An automated method is used to distill the sample. The distillate is then buffered to pH 9.4 which reacts with 4AAP and potassium ferricyanide to form a red complex which is measured colorimetrically.			
SO4-IC-N-WP	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TOTSUS-WP	Water	Total Suspended Solids	APHA 2540 D (modified)
Total suspended solids in aquesous matrices is determined gravimetrically after drying the residue at 103 105°C.			

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

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

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.

Quality Control Report

Client: Hamlet of Chesterfield Inlet
PO Box 10
Chesterfield Inlet NU X0C 0B0
Contact: DON TANUYAK (Waste Water)

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
ALK-TITR-WP	**Water**							
Batch R5504167								
WG3564146-15 DUP		**L2605129-1**						
Alkalinity, Total (as CaCO3)		225	223		mg/L	0.7	20	25-JUN-21
WG3564146-14 LCS								
Alkalinity, Total (as CaCO3)			101.9		%		85-115	25-JUN-21
WG3564146-11 MB								
Alkalinity, Total (as CaCO3)			1.0		mg/L		1	25-JUN-21
BOD-CBOD-WP	**Water**							
Batch R5505623								
WG3562181-2 LCS								
BOD Carbonaceous			98.1		%		85-115	24-JUN-21
WG3562181-1 MB								
BOD Carbonaceous			<2.0		mg/L		2	24-JUN-21
BOD-WP	**Water**							
Batch R5505623								
WG3562181-2 LCS								
Biochemical Oxygen Demand			104.1		%		85-115	24-JUN-21
WG3562181-1 MB								
Biochemical Oxygen Demand			<2.0		mg/L		2	24-JUN-21
C-TOC-HTC-WP	**Water**							
Batch R5506566								
WG3566788-6 LCS								
Total Organic Carbon			99.2		%		80-120	29-JUN-21
WG3566788-5 MB								
Total Organic Carbon			<0.50		mg/L		0.5	29-JUN-21
Batch R5511677								
WG3568950-2 LCS								
Total Organic Carbon			97.9		%		80-120	02-JUL-21
WG3568950-1 MB								
Total Organic Carbon			<0.50		mg/L		0.5	02-JUL-21
CL-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-11 DUP		**L2605129-3**						
Chloride (Cl)		28.2	27.9		mg/L	1.2	20	23-JUN-21
WG3561378-10 LCS								
Chloride (Cl)			97.0		%		90-110	23-JUN-21
WG3561378-9 MB								
Chloride (Cl)			<0.50		mg/L		0.5	23-JUN-21
WG3561378-12		**L2605129-3**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-12 MS		**L2605129-3**						
Chloride (Cl)			104.2		%		75-125	23-JUN-21
EC-WP	**Water**							
Batch R5504167								
WG3564146-15 DUP		**L2605129-1**						
Conductivity		671	667		umhos/cm	0.6	10	25-JUN-21
WG3564146-13 LCS								
Conductivity			99.2		%		90-110	25-JUN-21
WG3564146-11 MB								
Conductivity			<1.0		umhos/cm		1	25-JUN-21
FC10-QT97-WP	**Water**							
Batch R5499585								
WG3561703-1 MB								
Fecal Coliforms			<1		MPN/100mL		1	23-JUN-21
HG-T-CVAA-WP	**Water**							
Batch R5506103								
WG3566107-6 LCS								
Mercury (Hg)-Total			98.8		%		80-120	29-JUN-21
WG3566107-5 MB								
Mercury (Hg)-Total			<0.000005C		mg/L		0.000005	29-JUN-21
MET-T-CCMS-WP	**Water**							
Batch R5505827								
WG3564759-2 LCS								
Aluminum (Al)-Total			99.0		%		80-120	28-JUN-21
Arsenic (As)-Total			99.2		%		80-120	28-JUN-21
Cadmium (Cd)-Total			101.8		%		80-120	28-JUN-21
Calcium (Ca)-Total			102.5		%		80-120	28-JUN-21
Chromium (Cr)-Total			98.9		%		80-120	28-JUN-21
Cobalt (Co)-Total			99.0		%		80-120	28-JUN-21
Copper (Cu)-Total			99.5		%		80-120	28-JUN-21
Iron (Fe)-Total			97.3		%		80-120	28-JUN-21
Lead (Pb)-Total			98.3		%		80-120	28-JUN-21
Magnesium (Mg)-Total			103.6		%		80-120	28-JUN-21
Manganese (Mn)-Total			100.2		%		80-120	28-JUN-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-WP	**Water**							
Batch R5505827								
WG3564759-2 LCS								
Nickel (Ni)-Total			98.6		%		80-120	28-JUN-21
Potassium (K)-Total			98.8		%		80-120	28-JUN-21
Sodium (Na)-Total			94.0		%		80-120	28-JUN-21
Zinc (Zn)-Total			102.1		%		80-120	28-JUN-21
WG3564759-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	28-JUN-21
Arsenic (As)-Total			<0.00010		mg/L		0.0001	28-JUN-21
Cadmium (Cd)-Total			<0.000005(	B	mg/L		0.000005	28-JUN-21
Calcium (Ca)-Total			<0.050		mg/L		0.05	28-JUN-21
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	28-JUN-21
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	28-JUN-21
Copper (Cu)-Total			<0.00050		mg/L		0.0005	28-JUN-21
Iron (Fe)-Total			<0.010		mg/L		0.01	28-JUN-21
Lead (Pb)-Total			<0.000050		mg/L		0.00005	28-JUN-21
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	28-JUN-21
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	28-JUN-21
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	28-JUN-21
Potassium (K)-Total			<0.050		mg/L		0.05	28-JUN-21
Sodium (Na)-Total			<0.050		mg/L		0.05	28-JUN-21
Zinc (Zn)-Total			<0.0030		mg/L		0.003	28-JUN-21
NH3-COL-WP	**Water**							
Batch R5505886								
WG3565982-14 LCS								
Ammonia, Total (as N)			95.9		%		85-115	28-JUN-21
WG3565982-13 MB								
Ammonia, Total (as N)			<0.010		mg/L		0.01	29-JUN-21
NO2-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-11 DUP		**L2605129-3**						
Nitrite (as N)		<0.010	<0.010	RPD-NA	mg/L	N/A	20	23-JUN-21
WG3561378-10 LCS								
Nitrite (as N)			98.4		%		90-110	23-JUN-21
WG3561378-9 MB								
Nitrite (as N)			<0.010		mg/L		0.01	23-JUN-21
WG3561378-12 MS		**L2605129-3**						

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO2-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-12 MS		**L2605129-3**						
Nitrite (as N)			105.7		%		75-125	23-JUN-21
NO3-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-11 DUP		**L2605129-3**						
Nitrate (as N)		0.572	0.565		mg/L	1.2	20	23-JUN-21
WG3561378-10 LCS								
Nitrate (as N)			95.9		%		90-110	23-JUN-21
WG3561378-9 MB								
Nitrate (as N)			<0.020		mg/L		0.02	23-JUN-21
WG3561378-12 MS		**L2605129-3**						
Nitrate (as N)			102.6		%		75-125	23-JUN-21
OG-GRAV-WP	**Water**							
Batch R5503198								
WG3563736-2 LCS								
Oil and Grease			92.4		%		70-130	25-JUN-21
WG3563736-1 MB								
Oil and Grease			<5.0		mg/L		5	25-JUN-21
P-T-COL-WP	**Water**							
Batch R5506857								
WG3566240-30 LCS								
Phosphorus (P)-Total			95.8		%		80-120	30-JUN-21
WG3566240-29 MB								
Phosphorus (P)-Total			<0.0030		mg/L		0.003	30-JUN-21
PH-WP	**Water**							
Batch R5504167								
WG3564146-15 DUP		**L2605129-1**						
pH		7.41	7.42	J	pH units	0.01	0.2	25-JUN-21
WG3564146-12 LCS								
pH			6.99		pH units		6.9-7.1	25-JUN-21
PHENOLS-4AAP-WT	**Water**							
Batch R5506515								
WG3565311-2 LCS								
Phenols (4AAP)			101.0		%		85-115	29-JUN-21
WG3565311-1 MB								
Phenols (4AAP)			<0.0010		mg/L		0.001	29-JUN-21

Quality Control Report

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-WP	**Water**							
Batch R5500837								
WG3561378-11 DUP		**L2605129-3**						
Sulfate (SO4)		21.1	21.0		mg/L	0.9	20	23-JUN-21
WG3561378-10 LCS								
Sulfate (SO4)			97.2		%		90-110	23-JUN-21
WG3561378-9 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	23-JUN-21
WG3561378-12 MS		**L2605129-3**						
Sulfate (SO4)			102.6		%		75-125	23-JUN-21
SOLIDS-TOTSUS-WP	**Water**							
Batch R5506376								
WG3563796-2 LCS								
Total Suspended Solids			100.3		%		85-115	28-JUN-21
WG3563796-1 MB								
Total Suspended Solids			<3.0		mg/L		3	28-JUN-21

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
B	Method Blank exceeds ALS DQO. Associated sample results which are < Limit of Reporting or > 5 times blank level are considered reliable.
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH							
	1	22-JUN-21 09:00	25-JUN-21 12:00	0.25	75	hours	EHTR-FM
	2	22-JUN-21 09:15	25-JUN-21 12:00	0.25	75	hours	EHTR-FM
	3	22-JUN-21 09:30	25-JUN-21 12:00	0.25	74	hours	EHTR-FM
Aggregate Organics							
Biochemical Oxygen Demand (BOD)							
	1	22-JUN-21 09:00	24-JUN-21 10:27	48	49	hours	EHTL
	2	22-JUN-21 09:15	24-JUN-21 10:27	48	49	hours	EHTL

Legend & Qualifier Definitions:

EHTR-FM:	Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR:	Exceeded ALS recommended hold time prior to sample receipt.
EHTL:	Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT:	Exceeded ALS recommended hold time prior to analysis.
Rec. HT:	ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L2605129 were received on 23-JUN-21 12:00.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

L2605129-COFC

Number: 17 - 877169

Page 1 of 1

Report To	Contact and company name below will appear on the final report
Company:	Hamlet of Chesterfield Inlet
Contact:	Don Tarwick
Phone:	867-898-9935
Company address below will appear on the final report	
Street:	Box 10
City/Province:	Chesterfield Inlet N.U.
Postal Code:	X0C-0B0

Report Format / Distribution	
Select Report Format:	PDF ☑ EXCEL ☐ EDD (DIGITAL) ☐
Quality Control (QC) Report with Report	YES ☐ NO ☐
Compare Results to Criteria on Report - provide details below if box checked	☐
Select Distribution:	EMAIL ☑ MAIL ☐ FAX ☐
Email 1 or Fax	Chesterfieldmanager@qiniq.com
Email 2	
Email 3	

Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)	
Regular [R] ☐	Standard TAT if received by 3 pm - business days - no surcharges apply
PRIORITY (Business Days) 4 day [P4-20%] ☐	EMERGENCY 1 Business day [E - 100%] ☐
PRIORITY (Business Days) 3 day [P3-25%] ☐	EMERGENCY Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] ☐
PRIORITY (Business Days) 2 day [P2-50%] ☐	
Date and Time Required for all E&P TATs:	dd-mmm-yy hh:mm
For tests that can not be performed according to the service level selected, you will be contacted.	

Invoice To	Same as Report To ☐ YES ☐ NO
	Copy of Invoice with Report ☐ YES ☐ NO
Company:	
Contact:	

Invoice Distribution	
Select Invoice Distribution:	EMAIL ☐ MAIL ☐ FAX ☐
Email 1 or Fax	
Email 2	

Project Information	
ALS Account # / Quote #:	
Job #:	
PO / AFE:	
LSD:	

Oil and Gas Required Fields (client use)	
AFE/Cost Center:	PO#
Major/Minor Code:	Routing Code:
Requisitioner:	
Location:	

ALS Lab Work Order # (lab use only):

ALS Contact:

Sampler: Matt

Analysis Request

Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

NUMBER OF CONTAINERS

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
		Jun 22/21	9:00	WW		
	CHC-1					
	CHC-2	Jun 22/21	9:15	WW		
	CHC-3	Jun. 22/21	9:30	WW		

Drinking Water (DW) Samples[1] (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? ☐ YES ☑ NO	Nunavut - NWB - GRP1
Are samples for human consumption/ use? ☐ YES ☑ NO	BTX-F1-F4, PAH

SAMPLE CONDITION AS RECEIVED (lab use only)

Frozen	☐	SIF Observations	Yes ☐	No	☑
Ice Packs	☑	Ice Cubes ☐	Custody seal intact	Yes ☑	No ☐
Cooling Initiated	☐				

INITIAL COOLER TEMPERATURES °C	FINAL COOLER TEMPERATURES °C
	10.4

SHIPMENT RELEASE (client use)		
Released by:	Date:	Time:

INITIAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: JUN 23 2021	Time:

FINAL SHIPMENT RECEPTION (lab use only)		
Received by:	Date: JUN 23 2021	Time:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

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

Appendix D

List of spills reported to the NT-NU Spill Report Line and are listed on the Hazardous Materials Spills Database of Chesterfield Inlet in 2021

Spill	Occurrence Date	Location Description	Product Spilled	Quantity
2021424	3-Oct-21	63 28.73N 090 57.36W near Ellis Island, NU		Unknown Quantity
2021125	14-Apr-21	Chesterfield Inlet, NU	Petroleum- fuel oil (jet A, diesel, turbo A, heat)	200 Liters

Appendix E

Chesterfield Inlet CHE-1

			2016		2017			2018				2019		2021	Statistics		
Parameter	**Unit**	**DL**	**11-Aug-16**	**09-Sep-16**	**13-Jun-17**	**31-Jul-17**	**16-Aug-17**	**20-Jun-18**	**31-Jul-18**	**17-Aug-18**	**11-Sep-18**	**20-Jun-19**	**15-Jul-19**	**22-Jun-21**	**Min**	**Max**	**Average**
Alkalinity																	
Bicarbonate (HCO3)	mg/L	1.2	104	176	92.6	312	128	108	N/A	N/A	245	193	365	274	93	365	218
Carbonate (CO3)	mg/L	0.60	0.60	0.60	0.60	0.60	0.60	0.60	N/A	N/A	0.60	0.60	0.60	<0.60	0.60	0.60	0.60
Hydroxide (OH)	mg/L	0.34	0.34	0.34	0.34	0.34	0.34	0.34	N/A	N/A	0.34	0.34	0.34	<0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	1.0	85.4	144	75.9	256	105	88.9	N/A	N/A	201	158	300	225	76	300	179
Ammonia by Colour																	
Total (as N)	mg/L	0.20	4.53	6.87	7.9	49.3	0.021	13.3	N/A	N/A	23.6	27.7	64.3	46	0.02	64.30	20.31
Biochemical Oxygen Demand (BOD)																	
Biochemical Oxygen Demand	mg/L	6.0	8.7	360	9.6	229	2.0	17.8	N/A	N/A	36.6	3.2	306	219	2	360	100
Carbonaceous BOD																	
BOD Carbonaceous	mg/L	6.0	6.5	340	8.6	224	2.0	11.0	N/A	N/A	20.2	111	258	204	2.0	340.0	99.1
Chloride in Water by IC																	
Chloride (Cl)	mg/L	10	31.0	42.2	22.5	68.0	74.5	33.4	N/A	N/A	62.7	36.9	71.4	49.7	22.5	355.0	94.6
Conductivity																	
Conductivity	umhos/cm	1.0	392	560	267	775	515	456	N/A	N/A	623	480	879	671	267	2260	804
Fecal Coliforms																	
Fecal Coliforms	MPN/100mL	3	930	240	190	24200	10	2010	N/A	N/A	8660			>24200	4	24200	4028
Hardness Calculated																	
Hardness (as CaCO3)	mg/L	0.30	111	194	50.0	60.8	169	117	N/A	N/A	99.2	40.8	60.9	43.2	41	524	152
Mercury Total																	
Mercury (Hg)	mg/L	0.00020	0.000020	0.00040	0.0000052	0.000050	0.0000050	0.0000056	N/A	N/A	0.000005	0.000034	0.000012	0.000710	0.000005	0.000710	0.000107
Nitrate in Water by IC																	
Nitrate (as N)	mg/L	0.40	0.316	0.020	0.020	0.020	0.020	0.233	N/A	N/A	0.594	0.020	0.040	<0.020	0.020	0.594	0.124
Nitrate + Nitrite																	
Nitrate and Nitrite as N	mg/L	0.45	0.348	0.070	0.070	0.070	0.070	0.248	N/A	N/A	0.664	0.070	0.070	<0.070	0.070	0.664	0.165
Nitrite in Water by IC																	
Nitrite (as N)	mg/L	0.20	0.032	0.011	0.010	0.010	0.010	0.015	N/A	N/A	0.069	0.010	0.020	<0.010	0.010	0.069	0.021
Oil & Grease - Gravimetric																	
Oil and Grease	mg/L	5.0	5.0	8.6	10.8	51.7	5.0	5	N/A	N/A	5	31.8	73.6	45	2.0	73.6	20.5
Phenol																	
Phenols	mg/L	0.0010	0.0017	0.0030	0.0135	0.190	0.0010	0.0058	N/A	N/A	0.001	0.0694	0.2010	0.1280	0.0010	0.2010	0.0516
Phosphorus, Total																	
Phosphorus (P)	mg/L	0.010	1.93	50.8	2.66	8.72	0.021	1.70	N/A	N/A	2.65	4.46	8.18	8.13	0.02	50.80	7.45
Sulfate in Water by IC																	
Sulfate (SO4)	mg/L	6.0	55.2	73.8	14.4	9.76	54.9	85.5	N/A	N/A	14.4	8.13	17.8	12.90	8.13	419.00	85.07
Total Metals by ICP-MS																	
Aluminium (Al)	mg/L	0.0050	0.154	1.71	0.0545	0.5060	0.0121	0.0228	N/A	N/A	0.0355	0.275	0.254	0.259	0.012	1.710	0.277
Arsenic (As)	mg/L	0.00020	0.00080	0.0037	0.00062	0.00091	0.00033	0.00091	N/A	N/A	0.00091	0.00090	0.00076	0.0074	0.00033	0.00740	0.00159
Cadmium (Cd)	mg/L	0.000010	0.000073	0.00073	0.000035	0.000243	0.0000142	0.0000212	N/A	N/A	0.0000079	0.000219	0.000135	0.000121	0.00001	0.00073	0.00014
Calcium (Ca)	mg/L	0.10	36.6	62.1	15.5	15.7	46.1	37.8	N/A	N/A	29.4	11	15.3	11.4	11	151	45
Chromium (Cr)	mg/L	0.0010	0.0010	0.010	0.0010	0.00158	0.00027	0.00024	N/A	N/A	0.00041	0.00126	0.00143	0.00122	0.00024	0.01000	0.00170
Cobalt (Co)	mg/L	0.00020	0.00051	0.0039	0.00035	0.00107	0.00017	0.00047	N/A	N/A	0.00042	0.00062	0.00067	0.0005	0.0002	0.0039	0.0009
Copper (Cu)	mg/L	0.00020	0.00960	0.0580	0.00687	0.101	0.00076	0.00488	N/A	N/A	0.00393	0.0794	0.122	0.116	0.001	0.122	0.042
Iron (Fe)	mg/L	0.010	6.15	26.9	2.35	4.43	1.00	2.39	N/A	N/A	1.37	1.73	3.06	1.34	0.34	26.90	4.29
Lead (Pb)	mg/L	0.000090	0.00192	0.0165	0.000387	0.00430	0.000050	0.000196	N/A	N/A	0.000184	0.00250	0.00174	0.00199	0.00005	0.01650	0.00251
Magnesium (Mg)	mg/L	0.010	4.74	9.54	2.74	5.27	13.1	5.53	N/A	N/A	6.29	3.22	5.5	3.58	2.7	35.8	9.8
Manganese (Mn)	mg/L	0.00030	0.0839	0.301	0.118	0.0622	0.0203	0.200	N/A	N/A	0.129	0.0417	0.0479	0.0383	0.02	0.30	0.10
Nickel (Ni)	mg/L	0.0020	0.0028	0.020	0.0020	0.00552	0.00185	0.00204	N/A	N/A	0.00335	0.00301	0.00396	0.00274	0.0019	0.0200	0.0049
Potassium (K)	mg/L	0.020	3.84	13.7	7.50	18.7	8.19	12.5	N/A	N/A	14.7	11.7	20.6	16.5	3.8	65.2	19.3
Sodium (Na)	mg/L	0.030	26.7	38.0	14.1	50.4	59.3	25.4	N/A	N/A	50.9	23.7	54.8	33.9	14.1	262.0	66.9
Zinc (Zn)	mg/L	0.0020	0.0342	0.251	0.0119	0.202	0.0030	0.0102	N/A	N/A	0.0063	0.0905	0.163	0.13	0.003	0.251	0.077
Total Organic Carbon by Combustion																	
Total Organic Carbon	mg/L	0.50	14.1	252	11.9	126	8.24	24.6	N/A	N/A	29.5	103	157	185	8	252	80
Total Suspended Solids																	
Total Suspended Solids	mg/L	13	255	507	18.0	113	15.0	30.5	N/A	N/A	52.9	65.2	313	169	5.0	507.0	140.3
pH																	
pH	pH Units	0.10	6.90	7.53	7.08	7.22	7.27	7.06	N/A	N/A	7.62	7.13	7.73	7.41	6.90	7.73	7.32
Benzene	mg/L	0.00050	0.00050	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	N/A	0.00050	0.00050	0.00050
Toluene	mg/L	0.0010	0.0010	0.00010	/	0.0027	/	N/A	N/A	N/A	N/A		0.0097	N/A	0.0001	0.0097	0.0026
Ethyl Benzene	mg/L	0.00050	0.00050	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	N/A	0.00050	0.00050	0.00050
o-Xylene	mg/L	0.00050	0.00050	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	N/A	0.00050	0.00050	0.00050
F1 (C6-C10)	mg/L	0.10	0.10	0.10	0.10	0.10	/	N/A	N/A	N/A	N/A		0.14	N/A	0.10	0.14	0.11
F2 (C10-C16)	mg/L	0.25	0.10	0.12	0.10	1.74	/	N/A	N/A	N/A	N/A		2.33	N/A	0.10	2.33	0.70
F3 (C16-C34)	mg/L	0.25	0.28	2.23	0.53	27.1	/	N/A	N/A	N/A	N/A		29.5	N/A	0.3	29.5	8.6
F4 (C34-C50)	mg/L	0.25	0.25	0.88	0.25	8.94	/	N/A	N/A	N/A	N/A		7.16	N/A	0.25	8.94	2.59
Total Hydrocarbons (C6-C50)	mg/L	0.44	0.38	3.22	0.53	37.8	/	N/A	N/A	N/A	N/A		39.1	N/A	0.4	39.1	11.7

Chesterfield Inlet CHE-2

			2017			2018				2019		2020				2021	Statistics		
Parameter	**Unit**	**DL**	**13-Jun-17**	**31-Jul-17**	**16-Aug-17**	**20-Jun-18**	**31-Jul-18**	**17-Aug-18**	**11-Sep-18**	**20-Jun-19**	**15-Jul-19**	**08-Jul-20**	**11-Aug-20**	**18-Aug-20**	**11-Sep-20**	**22-Jun-21**	**Min**	**Max**	**Average**
Alkalinity																			
Bicarbonate (HCO3)	mg/L	1.2	92.6	312	128	108	N/A	N/A	245	193	365	249	958	177	77.7	190	77.70	958.00	257.94
Carbonate (CO3)	mg/L	0.60	0.60	0.60	0.60	0.60	N/A	N/A	0.60	0.60	0.60	0.60	0.60	0.60	<0.60	<0.60	0.60	0.60	0.60
Hydroxide (OH)	mg/L	0.34	0.34	0.34	0.34	0.34	N/A	N/A	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	1.0	75.9	256	105	88.9	N/A	N/A	201	158	300	204	785	145	63.7	156	63.70	785.00	211.54
Ammonia by Colour																			
Total (as N)	mg/L	0.20	7.9	49.3	0.021	13.3	N/A	N/A	23.6	27.7	64.3	3.63	48.1	17.1	5.2	33	0.02	64.30	24.43
Biochemical Oxygen Demand (BOD)																			
Biochemical Oxygen Demand	mg/L	6.0	9.6	229	2.0	17.8	N/A	N/A	36.6	3.2	306	490	2470	72	69	67	2.00	2470.00	314.35
Carbonaceous BOD																			
BOD Carbonaceous	mg/L	6.0	8.6	224	2.0	11.0	N/A	N/A	20.2	111	258	241	1570	45	34.4	72	2.00	1570.00	216.43
Chloride in Water by IC																			
Chloride (Cl)	mg/L	10	22.5	68.0	74.5	33.4	N/A	N/A	62.7	36.9	71.4	39.9	67.9	69.9	28	41.4	22.50	74.50	51.38
Conductivity																			
Conductivity	umhos/cm	1.0	267	775	515	456	N/A	N/A	623	480	879	523	947	512	231	511	231.00	947.00	559.92
Fecal Coliforms																			
Fecal Coliforms	MPN/100mL	3	190	24200	10	2010	N/A	N/A	8660			2190	24200	24200	320	13000	10.00	24200.00	9898.00
Hardness Calculated																			
Hardness (as CaCO3)	mg/L	0.30	50.0	60.8	169	117	N/A	N/A	99.2	40.8	60.9	628	577	89.8	48.2	68.7	40.80	628.00	167.45
Mercury Total																			
Mercury (Hg)	mg/L	0.00020	0.0000052	0.000050	0.0000050	0.0000056	N/A	N/A	0.000005	0.000034	0.000012	0.000430	0.00250	0.0000600	0.0000410	0.000037	0.00	0.00	0.00
Nitrate in Water by IC																			
Nitrate (as N)	mg/L	0.40	0.020	0.020	0.020	0.233	N/A	N/A	0.594	0.020	0.040	0.020	0.040	0.020	0.052	<0.020	0.02	0.59	0.10
Nitrate + Nitrite																			
Nitrate and Nitrite as N	mg/L	0.45	0.070	0.070	0.070	0.248	N/A	N/A	0.664	0.070	0.070	0.070	0.070	0.070	<0.070	0.131	0.07	0.66	0.15
Nitrite in Water by IC																			
Nitrite (as N)	mg/L	0.20	0.010	0.010	0.010	0.015	N/A	N/A	0.069	0.010	0.020	0.010	0.020	0.010	0.014	0.131	0.01	0.13	0.03
Oil & Grease - Gravimetric																			
Oil and Grease	mg/L	5.0	10.8	51.7	5.0	5	N/A	N/A	5	31.8	73.6	23.9	987	92	<5.0	19.2	5.00	987.00	118.64
Phenol																			
Phenols	mg/L	0.0010	0.0135	0.190	0.0010	0.0058	N/A	N/A	0.001	0.0694	0.2010	0.0050	0.094	0.0050	0.0037	0.1820	0.00	0.20	0.06
Phosphorus, Total																			
Phosphorus (P)	mg/L	0.010	2.66	8.72	0.021	1.70	N/A	N/A	2.65	4.46	8.18	344	30.5	7.61	3.88	7	0.02	344.00	35.12
Sulfate in Water by IC																			
Sulfate (SO4)	mg/L	6.0	14.4	9.76	54.9	85.5	N/A	N/A	14.4	8.13	17.8	0.30	0.60	5.50	9.19	10.20	0.30	85.50	19.22
Total Metals by ICP-MS																			
Aluminium (Al)	mg/L	0.0050	0.0545	0.5060	0.0121	0.0228	N/A	N/A	0.0355	0.275	0.254	2.36	41.5	0.747	0.958	0.51	0.01	41.50	3.94
Arsenic (As)	mg/L	0.00020	0.00062	0.00091	0.00033	0.00091	N/A	N/A	0.00091	0.00090	0.00076	0.0567	0.0262	0.00285	0.00268	0.0012	0.00	0.06	0.01
Cadmium (Cd)	mg/L	0.000010	0.000035	0.000243	0.0000142	0.0000212	N/A	N/A	0.0000079	0.000219	0.000135	0.00166	0.00642	0.000221	0.000172	0.00029	0.00	0.01	0.00
Calcium (Ca)	mg/L	0.10	15.5	15.7	46.1	37.8	N/A	N/A	29.4	11	15.3	220	170	24.5	12.8	19.6	11.00	220.00	51.48
Chromium (Cr)	mg/L	0.0010	0.0010	0.00158	0.00027	0.00024	N/A	N/A	0.00041	0.00126	0.00143	0.0161	0.168	0.00206	0.0026	0.00167	0.00	0.17	0.02
Cobalt (Co)	mg/L	0.00020	0.00035	0.00107	0.00017	0.00047	N/A	N/A	0.00042	0.00062	0.00067	0.0270	0.0218	0.00113	0.00095	0.0009	0.00	0.03	0.00
Copper (Cu)	mg/L	0.00020	0.00687	0.101	0.00076	0.00488	N/A	N/A	0.00393	0.0794	0.122	0.152	2.17	0.0532	0.0426	0.108	0.00	2.17	0.24
Iron (Fe)	mg/L	0.010	2.35	4.43	1.00	2.39	N/A	N/A	1.37	1.73	3.06	679	122	6.35	5.68	2.2	1.00	679.00	69.30
Lead (Pb)	mg/L	0.000090	0.000387	0.00430	0.000050	0.000196	N/A	N/A	0.000184	0.00250	0.00174	0.0189	0.134	0.00457	0.00451	0.00758	0.00	0.13	0.01
Magnesium (Mg)	mg/L	0.010	2.74	5.27	13.1	5.53	N/A	N/A	6.29	3.22	5.5	18.9	37	6.94	3.96	4.81	2.74	37.00	9.44
Manganese (Mn)	mg/L	0.00030	0.118	0.0622	0.0203	0.200	N/A	N/A	0.129	0.0417	0.0479	5.93	0.989	0.2	0.201	0.184	0.02	5.93	0.68
Nickel (Ni)	mg/L	0.0020	0.0020	0.00552	0.00185	0.00204	N/A	N/A	0.00335	0.00301	0.00396	0.0342	0.129	0.00576	0.00355	0.00358	0.00	0.13	0.02
Potassium (K)	mg/L	0.020	7.50	18.7	8.19	12.5	N/A	N/A	14.7	11.7	20.6	26.2	44.3	15.1	5.79	14.1	5.79	44.30	16.62
Sodium (Na)	mg/L	0.030	14.1	50.4	59.3	25.4	N/A	N/A	50.9	23.7	54.8	45.8	67.2	56	24.1	27.6	14.10	67.20	41.61
Zinc (Zn)	mg/L	0.0020	0.0119	0.202	0.0030	0.0102	N/A	N/A	0.0063	0.0905	0.163	0.647	6.69	0.111	0.098	0.195	0.00	6.69	0.69
Total Organic Carbon by Combustion																			
Total Organic Carbon	mg/L	0.50	11.9	126	8.24	24.6	N/A	N/A	29.5	103	157	794	2220	7.72	2.95	103	2.95	2220.00	298.99
Total Suspended Solids																			
Total Suspended Solids	mg/L	13	18.0	113	15.0	30.5	N/A	N/A	52.9	65.2	313	5660	14600	148	35.3	100	15.00	14600.00	1762.58
pH																			
pH	pH Units	0.10	7.08	7.22	7.27	7.06	N/A	N/A	7.62	7.13	7.73	7.35	6.04	7.54	7.34	7.2	6.04	7.73	7.22
Benzene	mg/L	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	0.00050	0.00050	0.00050	<0.00050	N/A	0.00	0.00	0.00
Toluene	mg/L	0.0010	/	0.0027	/	N/A	N/A	N/A	N/A		0.0097	0.0037	0.119	0.0010	0.0088	N/A	0.00	0.01	0.01
Ethyl Benzene	mg/L	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	0.00050	0.00050	0.0050	<0.00050	N/A	0.00	0.00	0.00
o-Xylene	mg/L	0.00050	/	0.00050	/	N/A	N/A	N/A	N/A		0.00050	0.00050	0.00050	0.00050	<0.00050	N/A	0.00	0.00	0.00
F1 (C6-C10)	mg/L	0.10	0.10	0.10	/	N/A	N/A	N/A	N/A		0.14	0.10	0.17	0.10	<0.10	N/A	0.10	0.14	0.11
F2 (C10-C16)	mg/L	0.25	0.10	1.74	/	N/A	N/A	N/A	N/A		2.33	1.79	1.71	0.10	<0.10	N/A	0.10	2.33	1.39
F3 (C16-C34)	mg/L	0.25	0.53	27.1	/	N/A	N/A	N/A	N/A		29.5	37.8	140	2.41	1.55	N/A	0.53	29.50	19.04
F4 (C34-C50)	mg/L	0.25	0.25	8.94	/	N/A	N/A	N/A	N/A		7.16	8.81	15.9	0.78	0.43	N/A	0.25	8.94	5.45
Total Hydrocarbons (C6-C50)	mg/L	0.44	0.53	37.8	/	N/A	N/A	N/A	N/A		39.1	48.5	157	3.19	N/A	N/A	0.53	39.10	25.81

Chesterfield Inlet
CHE-3

			2016			2017			2018				2019	2021	Statistics		
Parameter	**Unit**	**DL**	**06-Jul-16**	**11-Aug-16**	**09-Sep-16**	**13-Jun-17**	**31-Jul-17**	**16-Aug-17**	**20-Jun-18**	**31-Jul-18**	**17-Aug-18**	**11-Sep-18**	**15-Jul-19**	**22-Jun-21**	**Min**	**Max**	**Average**
Alkalinity																	
Bicarbonate (HCO3)	mg/L	1.2	399	389	435	28.4	114	250	N/A	215	N/A	N/A	173	64.4	28.4	435	229.76
Carbonate (CO3)	mg/L	0.60	0.60	0.60	0.60	0.60	0.60	0.60	N/A	0.6	N/A	N/A	0.6	<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	N/A	0.34	N/A	N/A	0.34	<0.34	0.34	0.34	0.34
Total (as CaCO3)	mg/L	1.0	327	319	356	23.3	93.7	205	N/A	176	N/A	N/A	142	52.8	23.3	356	188.31
Ammonia by Colour																	
Total (as N)	mg/L	0.20	68.9	74.4	68.8	1.71	0.024	19.1	N/A	20	N/A	N/A	17.6	0.368	0.024	74.4	30.10
Biochemical Oxygen Demand (BOD)																	
Biochemical Oxygen Demand	mg/L	6.0	250	300	57	7.8	3.1	10.8	N/A	100	N/A	N/A	17.4	<2.0	3.1	300	93.26
Carbonaceous BOD																	
BOD Carbonaceous	mg/L	6.0	270	283	40	5.8	2.3	5.0	N/A	32	N/A	N/A	12.2	<2.0	2.3	283	81.29
Chloride in Water by IC																	
Chloride (Cl)	mg/L	10	71.1	57.5	60.2	8.44	107	54.6	N/A	67.1	N/A	N/A	34.6	28.2	8.44	107	54.30
Conductivity																	
Conductivity	umhos/cm	1.0	1010	973	989	83.2	866	568	N/A	587	N/A	N/A	434	247	83.2	1010	639.69
Fecal Coliforms																	
Fecal Coliforms	MPN/100mL	3	110000	110000	110000	10	1660	610	N/A	24200	N/A	N/A		<10	10	110000	50925.71
Hardness Calculated																	
Hardness (as CaCO3)	mg/L	0.30	47.2	57.5	52.1	17.7	246	118	N/A	78.9	N/A	N/A	74.6	55.4	17.7	246	83.04
Mercury Total																	
Mercury (Hg)	mg/L	0.00020	0.00040	0.00040	0.00020	0.0000063	0.0000050	0.0000050	N/A	0.000025	N/A	N/A	0.0000050	<0.0000050	0.000005	0.0004	0.00
Nitrate in Water by IC																	
Nitrate (as N)	mg/L	0.40	0.040	0.040	0.040	0.333	0.040	0.020	N/A	0.141	N/A	N/A	0.206	0.572	0.02	0.572	0.16
Nitrate + Nitrite																	
Nitrate and Nitrite as N	mg/L	0.45	0.070	0.070	0.070	0.366	0.070	0.070	N/A	0.182	N/A	N/A	0.271	0.572	0.07	0.572	0.19
Nitrite in Water by IC																	
Nitrite (as N)	mg/L	0.20	0.020	0.020	0.020	0.033	0.020	0.010	N/A	0.041	N/A	N/A	0.066	<0.010	0.01	0.066	0.03
Oil & Grease - Gravimetric																	
Oil and Grease	mg/L	5.0	62.4	61.0	55.9	5.0	5.0	5.0	N/A	5	N/A	N/A	5	<5.0	5	62.4	25.54
Phenol																	
Phenols	mg/L	0.0010	0.0015	0.329	0.085	0.0043	0.0010	0.0010	N/A	0.001	N/A	N/A	0.0012	<0.0010	0.001	0.329	0.05
Phosphorus, Total																	
Phosphorus (P)	mg/L	0.010	11.8	11.9	11.4	0.477	0.186	4.54	N/A	5.6	N/A	N/A	3.38	0.0291	0.0291	11.9	5.48
Sulfate in Water by IC																	
Sulfate (SO4)	mg/L	6.0	10.3	24.6	19.5	3.28	198	5.80	N/A	12.1	N/A	N/A	23.1	21.1	3.28	198	35.31
Total Metals by ICP-MS																	
Aluminium (Al)	mg/L	0.0050	0.517	0.953	0.470	0.179	0.0150	0.0325	N/A	0.0957	N/A	N/A	0.0537	0.0091	0.0091	0.953	0.26
Arsenic (As)	mg/L	0.00020	0.00057	0.00109	0.00092	0.00087	0.00083	0.00088	N/A	0.00111	N/A	N/A	0.00093	0.00032	0.00032	0.00111	0.00
Cadmium (Cd)	mg/L	0.000010	0.000190	0.000452	0.000185	0.000024	0.0000334	0.0000050	N/A	0.0000208	N/A	N/A	0.0000217	<0.0000050	0.000005	0.000452	0.00
Calcium (Ca)	mg/L	0.10	11.9	14.1	12.8	5.19	74.0	35.3	N/A	22.3	N/A	N/A	22.5	16	5.19	74	23.79
Chromium (Cr)	mg/L	0.0010	0.0016	0.0027	0.0017	0.0010	0.00029	0.00041	N/A	0.00083	N/A	N/A	0.00072	0.00022	0.00022	0.0027	0.00
Cobalt (Co)	mg/L	0.00020	0.00063	0.00095	0.00068	0.00031	0.00084	0.00039	N/A	0.00079	N/A	N/A	0.00048	0.00031	0.00031	0.00095	0.00
Copper (Cu)	mg/L	0.00020	0.124	0.182	0.157	0.0116	0.00242	0.00134	N/A	0.0177	N/A	N/A	0.0116	0.00269	0.00134	0.182	0.06
Iron (Fe)	mg/L	0.010	1.13	1.75	1.11	0.310	0.739	1.44	N/A	2.86	N/A	N/A	2.16	0.038	0.038	2.86	1.28
Lead (Pb)	mg/L	0.000090	0.00267	0.00383	0.00224	0.000694	0.000142	0.000073	N/A	0.00526	N/A	N/A	0.000454	<0.000050	0.000073	0.00526	0.00
Magnesium (Mg)	mg/L	0.010	4.25	5.40	4.92	1.15	14.7	7.19	N/A	5.62	N/A	N/A	4.49	3.75	1.15	14.7	5.72
Manganese (Mn)	mg/L	0.00030	0.0475	0.0709	0.0541	0.0290	0.116	0.171	N/A	0.198	N/A	N/A	0.119	0.00027	0.00027	0.198	0.09
Nickel (Ni)	mg/L	0.0020	0.0039	0.0053	0.0041	0.0020	0.00385	0.00358	N/A	0.00583	N/A	N/A	0.00333	0.00196	0.00196	0.00583	0.00
Potassium (K)	mg/L	0.020	25.7	33.1	26.5	2.68	12.0	14.9	N/A	19.9	N/A	N/A	10.7	6.65	2.68	33.1	16.90
Sodium (Na)	mg/L	0.030	56.7	61.4	50.3	4.85	90.9	50.6	N/A	51	N/A	N/A	29.6	22.2	4.85	90.9	46.39
Zinc (Zn)	mg/L	0.0020	0.173	0.254	0.203	0.0670	0.0151	0.0058	N/A	0.0244	N/A	N/A	0.0161	0.0042	0.0042	0.254	0.08
Total Organic Carbon by Combustion																	
Total Organic Carbon	mg/L	0.50	212	209	167	6.53	15.3	23.3	N/A	51.1	N/A	N/A	28.2	11.1	6.53	212	80.39
Total Suspended Solids																	
Total Suspended Solids	mg/L	13	130	288	100	12	17.0	11.0	N/A	250	N/A	N/A	36.1	<3.0	11	288	105.51
pH																	
pH	pH Units	0.10	7.85	7.18	7.94	7.05	7.15	7.45	N/A	7.52	N/A	N/A	7.87	7.57	7.05	7.94	7.51
Benzene	mg/L	0.00050	/	/	/	0.0005	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.0005	0.0005	0.00
Toluene	mg/L	0.0010	/	/	/	0.0141	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.0141	0.0141	0.01
Ethyl Benzene	mg/L	0.00050	/	/	/	0.0005	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.0005	0.0005	0.00
o-Xylene	mg/L	0.00050	/	/	/	0.0005	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.0005	0.0005	0.00
F1 (C6-C10)	mg/L	0.10	/	/	/	0.1	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.1	0.1	0.10
F2 (C10-C16)	mg/L	0.25	/	/	/	0.1	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.1	0.1	0.10
F3 (C16-C34)	mg/L	0.25	/	/	/	0.25	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.25	0.25	0.25
F4 (C34-C50)	mg/L	0.25	/	/	/	0.25	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.25	0.25	0.25
Total Hydrocarbons (C6-C50)	mg/L	0.44	/	/	/	0.38	/	/	N/A	N/A	N/A	N/A	N/A	N/A	0.38	0.38	0.38

Appendix F

WATER LICENCE INSPECTION FORM

☒ **Original**
☐ **Follow-Up Report**

Licensee	**Licensee Representative**
Hamlet of Chesterfield Inlet	John Ivey
Licence No. / Expiry	**Representative's Title**
3BM-CHE1523/ May 14th 2023	Chief Administrative Officer
Land / Other Authorizations	**Land / Other Authorizations**
--	--
Date of Inspection	**Inspector**
September 21st 2021	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

On September 21st, 2021, a regularly scheduled inspection was conducted by Resources Management Officer Atuat Shouldice of the Crown Indigenous Relations and Northern Affairs Canada of the Nunavut Water Board (NWB) water licence no. 3BM-CHE1523 issued to the Hamlet of Chesterfield Inlet. The inspection was conducted to ensure compliance with applicable terms and conditions of the licence. Community and Government Services representatives Matthew Hewey accompanied the Inspector during the inspection.

Observation

1. The 2020 annual report was available for review as required by PART B item 1.
2. The total fresh water used in 2020, according to the Annual Report was 16,810 m^3. Water is stored in the water reservoir (photo 1).
3. The Hamlet is allotted 23,000 m^3 of water per year.
4. Sewage is directed to the Sewage Disposal Facility. The facility consists of a holding cell which allows solids to settle out before flowing into a tundra wetland (photo 2).
5. Hazardous waste (e.g.: batteries and propane) is segregated and collected at the entrance of the Landfill in sea can. This initiative is working very well and has improved greatly over the last three years (photo 3).
6. The Hamlet has been implementing the Operations and Maintenance Plan for the Landfill; ensuring that waste is capped to decrease wind blown debris (photo 4).
7. Waste in Bulk Storage Area is well segregated (photo 5).

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

Concerns related to Water Licence no. 3BM-CHE1523;

-No instances of non-compliance were noted at the time of the inspection.

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

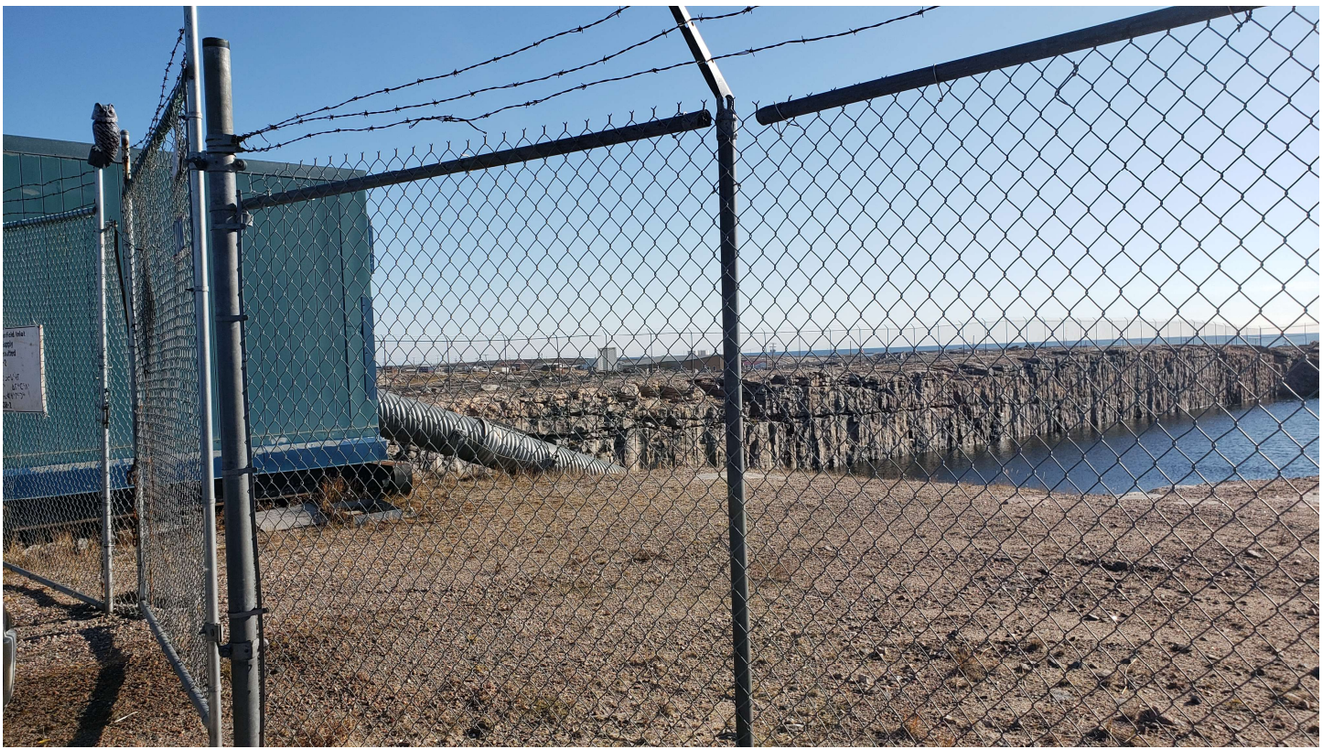
The Hamlet has been working diligently to ensure compliance with the Water Licence terms and conditions. The inspector noted no concerns related to non-compliance.

Licensee or Representative	**Inspector's Name**
John Ivey	Atuat Shouldice
Signature	**Signature**
	Sent Electronically
Date	**Date**
	November 12th 2021

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

Date:	Licence No.:	Camera/Model:	Inspector:
September 21st, 2021	3BM-CHE1523	Samsung S9	RMO Shouldice

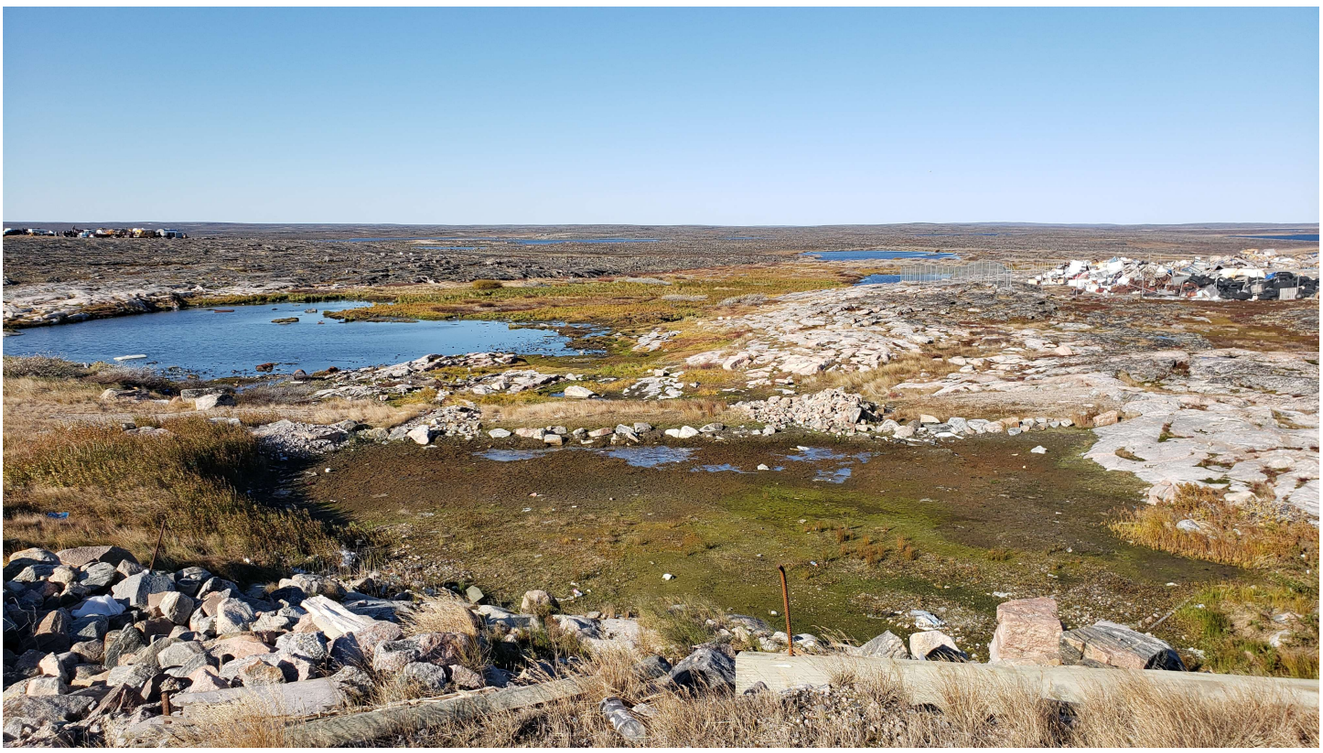
Photo #:	Location:
1	Water Reservoir



Description:
Potable water reservoir .

Date:	Licence No.:	Camera/Model:	Inspector:
September 21st, 2021	3BM-CHE1523	Samsung S9	RMO Shouldice

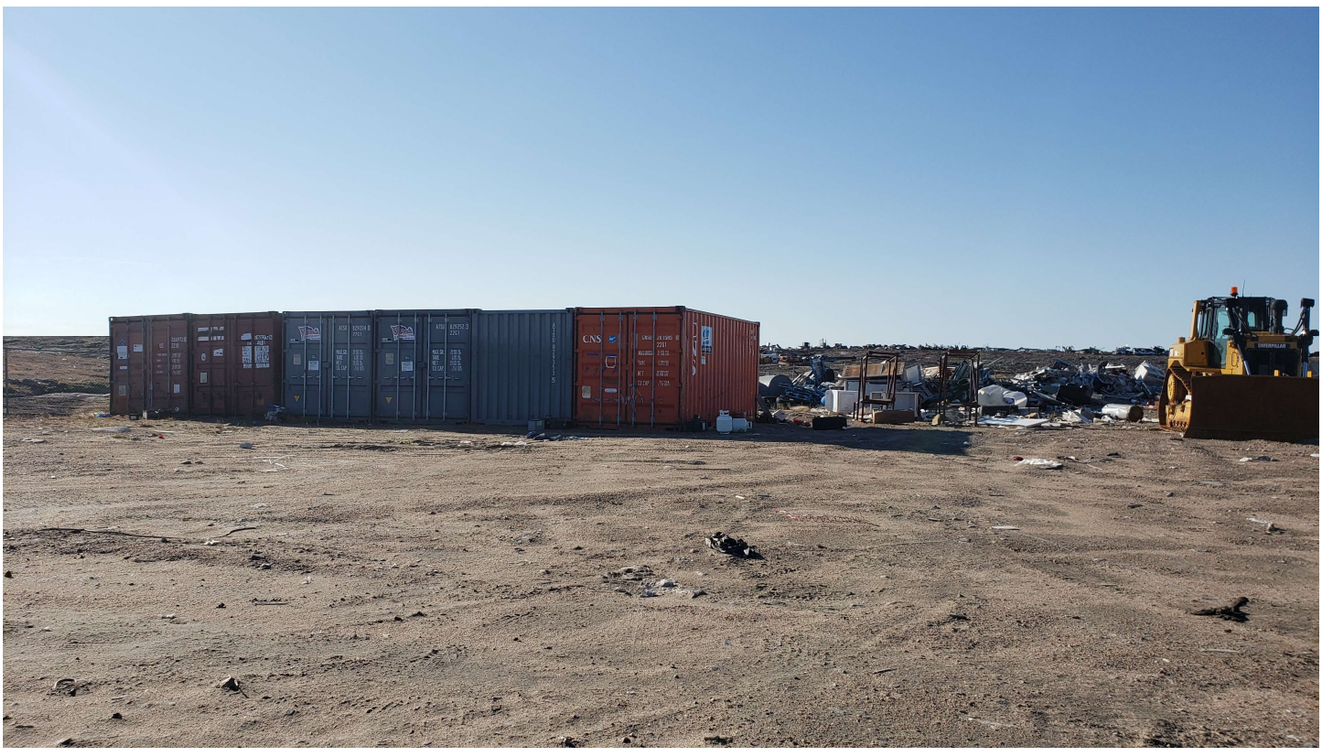
Photo #:	Location:
2	Sewage Holding Cell



Description:
Sewage discharge to wetland treatment.

Date:	Licence No.:	Camera/Model:	Inspector:
September 21st 2021	3BM-CHE1523	Samsung S9	RMO Shouldice

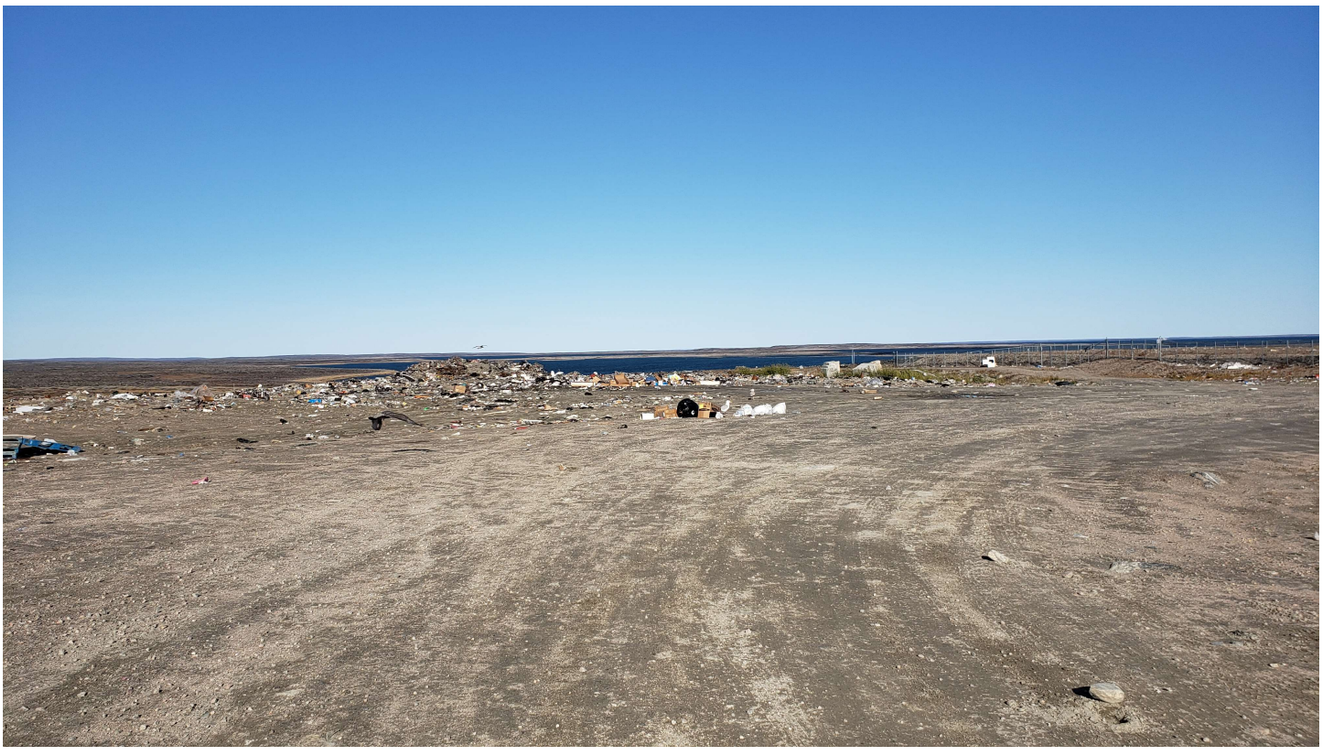
Photo #:	Location:
3	Hazardous Waste Storage



Description:
Seacan Storage for Hazard Waste e.g.: batteries and propane.

Date:	Licence No.:	Camera/Model:	Inspector:
September 21st 2021	3BM-CHE1523	Samsung S9	RMO Shouldice

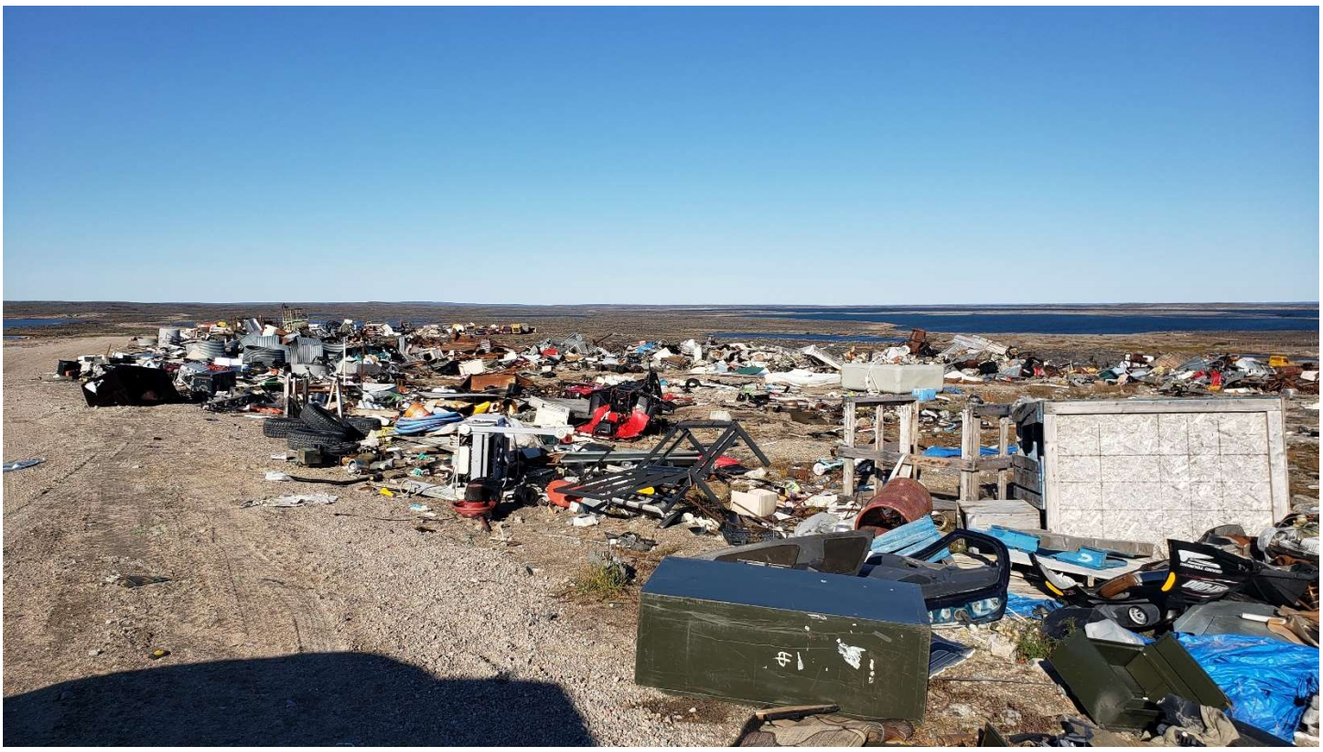
Photo #:	Location:
1	Landfill



Description:
Landfill.

Date:	Licence No.:	Camera/Model:	Inspector:
September 21st 2021	3BM-CHE1523	Samsung S9	RMO Shouldice

Photo #:	Location:
1	Bulky Waste Area



Description:
Road dividing domestic waste (right) and bulk waste (left), image facing North-West.