ANNUAL REPORT 2025

RESOLUTE BAY AIRPORT SEWAGE LAGOON, Airport Division of GN-TIN

The information in this report is compiled pursuant to the requirements of Part B, Item 1 of Water Licence # 3BM-YRB 2126 issued to TIN of the Government of Nunavut.

I to iii)*Monthly and annual quantities of freshwater obtained from all sources, as well as monthly and annual quantities wastes discharged*.

The monthly quantities below were compiled based on all the data generated under the "Monitoring Program",and reported in our On Tap Water Delivery System (recorded from truck deliveries). The quantities of sewage discharge are estimates only and assumed to be approximately equal to quantities of fresh water used.

Month Reported	Quantity of Water Obtained from all sources (Litre)	Quantity of Sewage Waste Discharged (Estimated Litre)
January	379,654	Same
February	581,233	Same
March	719,522	Same
April	569,763	Same
May	543,817	Same
June	634,790	Same
July	831,868	Same
August	689,532	Same
September	600,333	Same
October	289,808	Same
November	281,500	Same
December	305,714	Same
ANNUAL TOTAL	6,427,533	Same

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 Resolute Bay community has a new Water treatment plant located at the Signal Hill and this is operated under the Utilidor Water Licence #3AM-RUT2035. A local contractor ATCO collects water by a truck from this Water Plant and delivers to the facilities located in the Airport area since this area is isolated from the Utilidor system. The Hamlet is the Licensee of the Utilidor system, and they look after the operation and maintenance of the water plant including the Utilidor system.

ATCO also collects wastewater from all the facilities of the airport area and dumps into a Sewage lagoon which was built in 1980s. The Licensee of the sewage lagoon is the Airport Division of the GN -TIN. They are looking after the O&M of this lagoon.

No modifications and/or major maintenance work was carried out to this wastewater treatment facility owned by the airport division of the GN-TIN during this reporting period.

v. ***A list of unauthorized discharges and summary of follow-up action taken.***

The Airport Division of GN-TIN is the Licensee of the Sewage Lagoon. This is a two-cells lagoon, with an additional cell which is used for overflow in winter. All cells comprise earth berms and are unlined. Sewage exfiltrates through the berms during summer and often overflows in winter. Exfiltrated and overflown waters typically travel over the wetland which is almost 3km long from the Lagoon to the Sea. The surface runoff is absorbed by the soil prior to reaching the sea water.

Samplings were collected at the 1b, 2,3 and 4 stations from the wetland during summer and during overflow in winter.

No further action was taken beside sampling. A new WWTP is expected to be built and commissioned to receive also the trucked sewage in the next 4 to 5 yrs. to solve the unauthorized discharge issues.

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

No abandonment and restoration work were carried out during this reporting period. The sewage lagoon will be abandoned and decommissioned only when a new Mechanical wastewater Treatment Plant is built and successfully commissioned, which is expected in next four to five years.
The decommissioning Plan(Abandonment and Restoration work) of the sewage lagoon will be implemented once the trucked sewage will be redirected to the new WWTP.

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.***

No specific study was requested by the Board. However,

- The current potable water source is Char Lake, not strip lake.
- The chemical analysis of the raw water is conducted in an accredited lab in Ottawa.
- The new water treatment plant was built and in operation.
- The berms of the sewage lagoon are monitored by the Resolute airport authority on regular basis. A minor patching works was carried out in order to maintain this facility.
- Any overflow is being reported right way if required.
- The local contractor sometimes helps with sampling and shipping samples to Caduceon Lab in Ottawa for testing.
- This process will be continued.

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

Not specific. However, the Resolute Airport authority is planning for an extended summer sampling of sewage effluent in each summer to satisfy the conditions of the License. Samples will be taken from the lagoon and wetland during summer and winter. The Resolute Bay Airport manager was assigned to take this initiative in 2025.

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

This Airport sewage lagoon is not an engineered facility. No as-built drawings are available. However, a conceptual O&M manual has been prepared and is used to operate this facility. The latest update of the O&M was made in 2025 and is attached to support the renewal of the Water License.

Additional information that the licensee deems useful

The airport division of the GN-TIN is the licensee of this facility. This facility was inspected by a Professional Engineer in 2025 and recommended repairing two dumping spots to stabilize the berms. The Licensee is planning to repair the berms in the summer of 2026.

Until the new WWTP is built and operational, this sewage lagoon will be maintained by the Airport Division to serve the Airport customers and the best use for treating sewage dumped into this facility.

x. ***Follow-up regarding inspection/compliance concerns.***

The Licensee works closely with CIRNAC inspectors and GN -TIN and follows provided advice and direction to keep this facility in compliance as best as possible.

The Lab test results of the Sewage lagoon for **2025** are attached.

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: -

REPORT No: 25-027196 - Rev. 0

Report To:
Government of Nunavut Department of Transportation and Infrastructu
PO Box 30
Resolute Bay, Nu X0A 0V0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Philip Manik

DATE RECEIVED: 2025-Sep-08
DATE REPORTED: 2025-Sep-15
SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	5	OTTAWA	LMACGREGOR	2025-Sep-09	A-IC-01	SM 4110B
BOD5 (Liquid)	5	KINGSTON	DCASSIDY	2025-Sep-10	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	5	OTTAWA	SBOUDREAU	2025-Sep-09	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
ICP/MS Total (Liquid)	5	OTTAWA	GFENTON	2025-Sep-10	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	5	OTTAWA	SGORMAN	2025-Sep-09	D-ICP-01	SM 3120B
Mercury (Liquid)	4	OTTAWA	TBENNETT	2025-Sep-09	D-HG-02	SM 3112B
Ammonia (Liquid)	5	KINGSTON	VHAMMOND	2025-Sep-12	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	2	KINGSTON	DCHAUDHARI	2025-Sep-11	O&G-001	SM 5520
Phenols (Liquid)	3	KINGSTON	EHINCH	2025-Sep-11	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	5	OTTAWA	LMACGREGOR	2025-Sep-08	C-OC-01	EPA 415.2
TSS (Liquid)	5	KINGSTON	MCLOSS	2025-Sep-10	TSS-001	SM 2540D

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

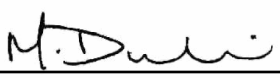
Michelle Dubien
Data Specialist

	Client I.D.	YRB-1a	YRB-1b	YRB-2	YRB-3	YRB-4
	Sample I.D.	25-027196-1	25-027196-2	25-027196-3	25-027196-4	25-027196-5
	Date Collected	2025-09-05	2025-09-05	2025-09-05	2025-09-05	2025-09-05
Parameter	**Units** / **R.L.**	-	-	-	-	-
Alkalinity(CaCO3) to pH4.5	mg/L / 5	86	190	230	102	125
Conductivity @25°C	uS/cm / 1	243	587	560	246	322
pH @25°C	pH units / -	7.94	7.59	7.66	7.65	8.42
Chloride	mg/L / 0.5	10.0	38.2	33.0	13.9	22.3
Nitrate (N)	mg/L / 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite (N)	mg/L / 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L / 1	19	10	2	3	7
BOD5	mg/L / 3	<3	202	68	94	<3
Total Suspended Solids	mg/L / 3	<3	172	175	610	14
Ammonia (N)-Total (NH3+NH4)	mg/L / 0.05	<0.05	56.8	11.0	0.50	0.08
Total Organic Carbon	mg/L / 0.8	1.5	100	46.6	16.4	9.4
Phenolics	mg/L / 0.001	<0.001		0.015	0.002	
Hardness (as CaCO3)	mg/L / 0.02	64.0	125	268	186	145
Aluminum (Total)	mg/L / 0.01	0.02	0.62	0.07	0.07	0.03
Cadmium (Total)	mg/L / 0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Calcium (Total)	mg/L / 0.02	19.8	36.1	77.7	57.7	34.2
Chromium (Total)	mg/L / 0.002	<0.002	<0.002	0.002	<0.002	<0.002
Cobalt (Total)	mg/L / 0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper (Total)	mg/L / 0.002	<0.002	0.024	0.007	0.006	0.002
Iron (Total)	mg/L / 0.005	<0.005	0.518	3.88	1.96	0.097
Lead (Total)	mg/L / 0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Michelle Dubien
Data Specialist

	Client I.D.	YRB-1a	YRB-1b	YRB-2	YRB-3	YRB-4
	Sample I.D.	25-027196-1	25-027196-2	25-027196-3	25-027196-4	25-027196-5
	Date Collected	2025-09-05	2025-09-05	2025-09-05	2025-09-05	2025-09-05
Parameter	**Units** / **R.L.**	-	-	-	-	-
Magnesium (Total)	mg/L / 0.02	3.54	8.35	17.9	10.2	14.4
Manganese (Total)	mg/L / 0.001	<0.001	0.060	0.327	0.320	0.004
Nickel (Total)	mg/L / 0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Potassium (Total)	mg/L / 0.1	0.6	24.8	12.4	2.0	1.5
Sodium (Total)	mg/L / 0.2	4.5	68.2	39.5	15.3	17.9
Zinc (Total)	mg/L / 0.005	<0.005	0.068	0.025	0.019	<0.005
Arsenic (Total)	mg/L / 0.0005	<0.0005	0.0008	0.0016	0.0022	<0.0005
Mercury	mg/L / 0.00002	<0.00002	0.00003	<0.00002	<0.00002	

	Client I.D.	YRB-1a	YRB-2
	Sample I.D.	25-027196-1	25-027196-3
	Date Collected	2025-09-05	2025-09-05
Parameter	**Units** / **R.L.**	-	-
Oil & Grease (Total)	mg/L / 1.0	6.4	5.0
Oil and Grease (Mineral)	mg/L / 1.0	<1.0	<1.0
Oil and Grease (Anim/Veg) (Calculated)	mg/L / 1.0	6.3	4.9



Michelle Dubien
Data Specialist

Resolute Bay Airport Lagoon

GENERAL SAMPLE SUBMISSION FORM

CADUCEON ENVIRONMENTAL LABORATORIES
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SAMPLES SUBMITTED TO: Kingston ☐ Ottawa ☐ Richmond Hill ☐ Barrie ☐ Windsor ☐

TESTING REQUIREMENTS: ☐ O'Reg 153/04 ☐ O'Reg 406/19 ☐ RPI ☐ Coarse ☐ MISA ☐ Other: | Table (1 - 9) ☐ Table (1 - 9.1) ☐ | ICC ☐ Medium/Fine ☐ PWQO ☐ | Record of Site ☐ SPLP Table (1-9.1) ☐ | ☐ Agricultural ☐ O'Reg 558 TCLP ☐ Landfill Monitoring

REPORT NUMBER (Lab Use): 25/09/11 25-027768

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? ☐ Yes ☒ No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization: Nunavut Airports	Address: PO Box 30 Resolute Bay NU, X0A 0V0	Invoicing Address (if different): PO Box 30 Resolute Bay NU, X0A 0V0
Contact: Philip Manik		
Tel: (867)252-3923 Fax: (867)252-3684	Quote #:	Project Name or #:
Email: pmanik@gov.nu.ca	P.O. #:	Additional Info:
Additional Info (email, cell, etc):		

ANALYSES REQUESTED: Item 3 a test

Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page) *Must be arranged in advance

☐ Platinum* 200% Surcharge
☐ Gold* 100% Surcharge
☐ Silver 50% Surcharge
☐ Bronze 25% Surcharge
☐ Standard
☐ Specific Date:

* Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	WaterTrax (SPL)	Sample Matrix *	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	X	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
1	~~HBYRB-1b~~ 074044' 23"N 095000' 18"W	N/A	SW	25-09-09	0930	Item 3 a test		N/A	N/A	9	N
	Bacteria samples passed holding time										

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	Philip Manik	Philip Manik
Sign:		
Date (yy-mm-dd)/Time:	25-09-09	25-9-9

SHIPPING INFORMATION: After Hours Drop Off ☐ Drop Off ☐ Courier (Client account) ☐ Courier (Caduceon account) ☐ Caduceon (Pick-up) ☒ (Airport) # of Pieces

REPORTING: XLSX ☒ XLSX / CofA Guideline ☒ CSV ☐ ESdat ☐

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)

Received By (print): Alexis P. Signature:
Date Received (yy-mm-dd): 25-09-11 Time Received: 11:28am
Laboratory Prepared Bottles: ☒ Yes ☐ No
Sample Temperature °C: 13.8° Labeled by:

Comments: 1Phenols, 1HG, 1M, 2NP, 1Bact, 1Pet, 1R, 1LOG

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CofC, Feb 2024 Revision No: 25

Resolute Bay Sewage Lagoon Nunavut

Monitoring Program Station ID	Description	Frequency	Status
YRB-1a	Water Sampling Point at Strip Lake	Annually during Periods of Flow	Active (Water Quality)
YRB-1b	Effluent from the Sewage Disposal Facility	Volume Monthly and Annually during Periods of Flow	Active (Volume) (Water Quality)
YRB-2	Effluent within the Wetland Area	Water Quality Monthly during periods of flow	Active (Water Quality)
YRB-3	Effluent within the Wetland Area	Water Quality Annually during periods	Active (Water Quality)
YRB-4	Effluent at the Final Discharge Point / Downstream of the Wetland	Water Quality Annually during periods of flow	Active (Water Quality)

2. The Licensee shall confirm the locations and GPS coordinates for all monitoring stations referred to in Part H, Item 1 with an Inspector.

3. ✓ The Licensee shall sample Monitoring Stations YRB-1a, YRB-1b, YRB-2, YRB-3, and YRB-4 for the following parameters in accordance with the frequency outlined in Part H, Item 1:

Biochemical Oxygen Demand BOD_5
Total Suspended Solids
Conductivity
Oil and Grease (visual)
Magnesium
Sodium
Chloride
Total Hardness
Ammonia Nitrogen
Total Cadmium
Total Cobalt
Total Chromium
Total Copper
Total Mercury Total
Total Aluminum
Fecal Coliforms
pH
Nitrate-Nitrite
Total Phenols
Calcium
Potassium
Sulphate
Total Alkalinity
Total Zinc
Total Iron
Total Manganese
Total Nickel
Total Lead
Organic Carbon (TOC)
Total Arsenic

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CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: -

REPORT No: 25-027768 - Rev. 0

Report To:
Government of Nunavut Department of Transportation and Infrastructu
PO Box 30
Resolute Bay, Nu X0A 0V0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Philip Manik

DATE RECEIVED: 2025-Sep-11
DATE REPORTED: 2025-Sep-18
SAMPLE MATRIX: Surface Water

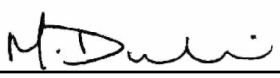
CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	STAILLON	2025-Sep-11	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	JWOLFE2	2025-Sep-12	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2025-Sep-11	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	HALIPDA	2025-Sep-11	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	GFENTON	2025-Sep-12	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	SGORMAN	2025-Sep-15	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2025-Sep-12	D-HG-02	SM 3112B
Ammonia (Liquid)	1	KINGSTON	DCASSIDY	2025-Sep-17	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	TMCBRYDE	2025-Sep-15	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	EHINCH	2025-Sep-15	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	SLOZO	2025-Sep-15	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	MCLOSS	2025-Sep-15	TSS-001	SM 2540D

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

Michelle Dubien
Data Specialist

Parameter	Units	R.L.	Client I.D.: YRB-1b 074'44'23"N 095'00'18"W	Sample I.D.: 25-027768-1	Date Collected: 2025-09-09
			-		
Fecal Coliform	CFU/100mL	1	7600000		
Alkalinity(CaCO3) to pH4.5	mg/L	5	415		
Conductivity @25°C	uS/cm	1	1210		
pH @25°C	pH units	-	7.71		
Chloride	mg/L	0.5	77.0		
Nitrate (N)	mg/L	0.05	<0.05		
Nitrite (N)	mg/L	0.05	<0.05		
Nitrate (N) + Nitrite (N) (Calculated)	mg/L	0.1	<0.1		
Sulphate	mg/L	1	18		
BOD5	mg/L	3	194		
Total Suspended Solids	mg/L	3	125		
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	72.4		
Total Organic Carbon	mg/L	0.8	118		
Phenolics	mg/L	0.001	0.300		
Hardness (as CaCO3)	mg/L	0.02	122		
Aluminum (Total)	mg/L	0.01	0.64		
Calcium (Total)	mg/L	0.02	34.9		
Iron (Total)	mg/L	0.005	0.546		
Magnesium (Total)	mg/L	0.02	8.57		
Manganese (Total)	mg/L	0.001	0.060		
Potassium (Total)	mg/L	0.1	25.1		



Michelle Dubien
Data Specialist

		Client I.D.	YRB-1b 074'44'23"N 095'00'18"W
		Sample I.D.	25-027768-1
		Date Collected	2025-09-09
Parameter	**Units**	**R.L.**	-
Sodium (Total)	mg/L	0.2	71.4
Zinc (Total)	mg/L	0.005	0.074
Arsenic (Total)	mg/L	0.0001	0.0008
Cadmium (Total)	mg/L	0.000015	0.000390
Chromium (Total)	mg/L	0.001	0.001
Cobalt (Total)	mg/L	0.0001	0.0005
Copper (Total)	mg/L	0.0001	0.0570
Lead (Total)	mg/L	0.00002	0.00152
Nickel (Total)	mg/L	0.0002	0.0039
Mercury	mg/L	0.00002	<0.00002

		Client I.D.	YRB-1b 074'44'23"N 095'00'18"W
		Sample I.D.	25-027768-1
		Date Collected	2025-09-09
Parameter	**Units**	**R.L.**	-
Oil & Grease (Total)	mg/L	1.0	31.3
Oil and Grease (Mineral)	mg/L	1.0	<1.0
Oil and Grease (Anim/Veg) (Calculated)	mg/L	1.0	31.1

Bacteria samples passed holding time

Michelle Dubien
Data Specialist

Resolute Bay Airport Lagoon

GENERAL SAMPLE SUBMISSION FORM

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured. Proudly Canadian

SAMPLES SUBMITTED TO: Kingston ☐ Ottawa ☑ Richmond Hill ☐ Barrie ☐ Windsor ☐

TESTING REQUIREMENTS: ☐ O'Reg 153/04 ☐ O'Reg 406/19 ☐ RPI ☐ Coarse ☐ MISA ☐ Other: | Table (1 - 9) ____ Table (1 - 9.1) ____ | ☐ ICC ☐ Medium/Fine ☐ PWQO | Record of Site ____ SPLP Table (1-9.1) ____ | ☐ Agricultural ☐ O'Reg 558 TCLP ☐ Landfill Monitoring

REPORT NUMBER (Lab Use): 25109/11
25-027772

Are any samples to be submitted intended for Human Consumption under any Drinking Water Regulations? ☐ Yes ☐ No (If yes, submit all Drinking Water Samples on a Drinking Water Chain of Custody)

Organization: Nunavut Airports	Address: PO Box 30 Resolute Bay Nunavut, X0A0V0	Invoicing Address (if different): PO Box 30 Resolute Bay NU, X0A 0V0
Contact: Philip Manik		
Tel: (867)252-3923 Fax: (867)252-3684		
Email: pmanik@gov.nu.ca	Quote #:	Project Name or #:
Additional Info (email, cell, etc):	P.O. #:	Additional Info:

ANALYSES REQUESTED: Item 3 a test

Suspected Highly Contaminated

TURNAROUND SERVICE REQUESTED (see back page) *Must be arranged in advance
☐ Platinum* 200% Surcharge
☐ Gold* 100% Surcharge
☐ Silver 50% Surcharge
☐ Bronze 25% Surcharge
☒ Standard
☐ Specific Date: ____

* Sample Matrix Legend: WW=Waste Water, SW=Surface Water, GW=Groundwater, LS=Liquid Sludge, SS=Solid Sludge, S=Soil, Sed=Sediment, PC=Paint Chips, F=Filter, Oil = Oil

Lab No.	Sample Source and/or Sample Identification	WaterTrax (SPL)	Sample Matrix *	Date Collected (yy-mm-dd)	Time Collected	Indicate Test For Each Sample By Using A Check Mark In The Box Provided	X	Field pH	Field Temp.	# Bottles/ Sample	Field Filtered Y/N
1	YRB 1a 074°42'10"N 094°53'19"W	NA	SW	25-09-09	0980	Item 3 a test		N/A	N/A	9	N
	Bacteria Samples passed holding time										

SAMPLE SUBMISSION INFORMATION

	Sampled by:	Submitted by:
Print:	Philip Manik	Philip Manik
Sign:		
	Date (yy-mm-dd)/Time:	Date (yy-mm-dd)/Time:

SHIPPING INFORMATION: After Hours Drop Off ☐ Drop Off ☐ Courier (Client account) ☐ Courier (Caduceon account) ☐ Caduceon (Pick-up) ☑ Airport # of Pieces

REPORTING: XLSX ☒ XLSX / CofA Guideline ☒ CSV ☐ ESdat ☐

SAMPLE RECEIVING INFORMATION (LABORATORY USE ONLY)
Received By (print): Alexis P. Signature:
Date Received (yy-mm-dd): 25-09-11 Time Received: 11:25 am
Laboratory Prepared Bottles: ☒ Yes ☐ No
Sample Temperature °C: 13.8° Labeled by:

Comments: 1Phenols, 1HG, 1M, 2NP, 1Bact, 1Pet, 1R, 1LOG

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CofC, Feb 2024 Revision No: 25

Resolute Bay Sewage Lagoon Nunavut

Monitoring Program Station ID	Description	Frequency	Status
YRB-1a	Water Sampling Point at Strip Lake	Annually during Periods of Flow	Active (Water Quality)
YRB-1b	Effluent from the Sewage Disposal Facility	Volume Monthly and Annually during Periods of Flow	Active (Volume) (Water Quality)
YRB-2	Effluent within the Wetland Area	Water Quality Monthly during periods of flow	Active (Water Quality)
YRB-3	Effluent within the Wetland Area	Water Quality Annually during periods	Active (Water Quality)
YRB-4	Effluent at the Final Discharge Point / Downstream of the Wetland	Water Quality Annually during periods of flow	Active (Water Quality)

2. The Licensee shall confirm the locations and GPS coordinates for all monitoring stations referred to in Part H, Item 1 with an Inspector.

3. ✓ The Licensee shall sample Monitoring Stations YRB-1a, YRB-1b, YRB-2, YRB-3, and YRB-4 for the following parameters in accordance with the frequency outlined in Part H, Item 1:

Biochemical Oxygen Demand BOD_5
Total Suspended Solids
Conductivity
Oil and Grease (visual)
Magnesium
Sodium
Chloride
Total Hardness
Ammonia Nitrogen
Total Cadmium
Total Cobalt
Total Chromium
Total Copper
Total Mercury Total
Total Aluminum
Fecal Coliforms
pH
Nitrate-Nitrite
Total Phenols
Calcium
Potassium
Sulphate
Total Alkalinity
Total Zinc
Total Iron
Total Manganese
Total Nickel
Total Lead
Organic Carbon (TOC)
Total Arsenic

CADUCEON ENVIRONMENTAL LABORATORIES
Client committed. Quality assured. Proudly Canadian.

CERTIFICATE OF ANALYSIS

Final Report

C.O.C.: -

REPORT No: 25-027772 - Rev. 0

Report To:
Government of Nunavut Department of Transportation and Infrastructu
PO Box 30
Resolute Bay, Nu X0A 0V0

CADUCEON Environmental Laboratories
2378 Holly Lane
Ottawa, ON K1V 7P1

Attention: Philip Manik

DATE RECEIVED: 2025-Sep-11
DATE REPORTED: 2025-Sep-18
SAMPLE MATRIX: Surface Water

CUSTOMER PROJECT:
P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	STAILLON	2025-Sep-11	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	JWOLFE2	2025-Sep-12	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2025-Sep-12	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	HALIPDA	2025-Sep-11	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	GFENTON	2025-Sep-12	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	SGORMAN	2025-Sep-15	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2025-Sep-12	D-HG-02	SM 3112B
Ammonia (Liquid)	1	KINGSTON	DCASSIDY	2025-Sep-17	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	TMCBRYDE	2025-Sep-15	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	EHINCH	2025-Sep-15	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	TPRICE	2025-Sep-11	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	MCLOSS	2025-Sep-15	TSS-001	SM 2540D

R.L. = Reporting Limit
NC = Not Calculated
Test methods may be modified from specified reference method unless indicated by an *

Michelle Dubien
Data Specialist

		Client I.D.	YRB-1a 074'42'10"N 094'53'19"W
		Sample I.D.	25-027772-1
		Date Collected	2025-09-09
Parameter	**Units**	**R.L.**	-
Fecal Coliform	CFU/100mL	1	<2
Alkalinity(CaCO3) to pH4.5	mg/L	5	89
Conductivity @25°C	uS/cm	1	252
pH @25°C	pH units	-	8.07
Chloride	mg/L	0.5	10.2
Nitrate (N)	mg/L	0.05	<0.05
Nitrite (N)	mg/L	0.05	<0.05
Nitrate (N) + Nitrite (N) (Calculated)	mg/L	0.1	<0.1
Sulphate	mg/L	1	19
BOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	<3
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05
Total Organic Carbon	mg/L	0.8	1.5
Phenolics	mg/L	0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02	104
Aluminum (Total)	mg/L	0.01	0.03
Calcium (Total)	mg/L	0.02	31.8
Iron (Total)	mg/L	0.005	0.006
Magnesium (Total)	mg/L	0.02	5.99
Manganese (Total)	mg/L	0.001	0.001
Potassium (Total)	mg/L	0.1	0.9

Michelle Dubien
Data Specialist

		Client I.D.	YRB-1a 074'42'10"N 094'53'19"W
		Sample I.D.	25-027772-1
		Date Collected	2025-09-09
Parameter	**Units**	**R.L.**	-
Sodium (Total)	mg/L	0.2	7.5
Zinc (Total)	mg/L	0.005	<0.005
Arsenic (Total)	mg/L	0.0001	<0.0001
Cadmium (Total)	mg/L	0.000015	<0.000015
Chromium (Total)	mg/L	0.001	<0.001
Cobalt (Total)	mg/L	0.0001	<0.0001
Copper (Total)	mg/L	0.0001	0.0002
Lead (Total)	mg/L	0.00002	0.00003
Nickel (Total)	mg/L	0.0002	0.0004
Mercury	mg/L	0.00002	<0.00002

		Client I.D.	YRB-1a 074'42'10"N 094'53'19"W
		Sample I.D.	25-027772-1
		Date Collected	2025-09-09
Parameter	**Units**	**R.L.**	-
Oil & Grease (Total)	mg/L	1.0	1.8
Oil and Grease (Mineral)	mg/L	1.0	<1.0
Oil and Grease (Anim/Veg) (Calculated)	mg/L	1.0	1.8

Bacteria samples passed holding time

Michelle Dubien
Data Specialist