

**2025 ANNUAL REPORT FOR 3AM-RUT2035
GOVERNMENT OF NUNAVUT – DEPARTMENT OF
TRANSPORTATION AND INFRASTRUCTURE NUNAVUT**

YEAR BEING REPORTED: 2025

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water Licence No. 3AM-RUT2035 issued to the **Government of Nunavut – Department of Transportation and Infrastructure**.

I. Monthly and annual quantities of freshwater obtained and estimated sewage waste discharged:

Table 1: Measured quantities of water discharged. The sewage volumes are not equal to the water withdrawal volumes as there is both trucked and piped (utilidor) water and sewage infrastructure. Piped sewage through the utilidor is under the scope of this licence; however, trucked sewage, which is disposed of at a sewage lagoon is not.

Month Reported	Quantity of Water Obtained from All Sources (m³)	Quantity of Sewage Waste Discharged (m³)
January	20,006.48	19,626.83
February	18,434.44	17,853.21
March	18,744.00	18,024.48
April	18,300.65	17,730.89
May	18,900.78	18,356.96
June	17,991.11	17,356.32
July	18,428.64	17,596.77
August	14,575.60	13,886.07
September	14,242.35	13,642.02
October	14,620.72	14,330.91
November	14,499.75	14,218.25
December	14,894.12	14,498.41
ANNUAL TOTAL	202,638.64	197,121.11

Note: Sludge is removed from the macerator and dumped at the landfill, but no meter exists to measure the quantity removed.

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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:

- Replacement of the Utilidor fire pump motor was completed during the 2025 year. This pump is located in the Water Treatment plant and is designed to maintain pressure in the utilidor piping system should an increase in water usage take place, such as a fire hydrant being used.

III. Updates or revisions to the approved Operation and Maintenance Plans:

No updates to the approved Plans were made in 2025. The Plans for the facilities have been implemented and are being carried out.

IV. A list of unauthorized discharges and summary of follow-up action taken:

There were no unauthorized discharges for 2025.

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

There was no abandonment and restoration work completed during 2025. There is no abandonment and restoration work anticipated for 2026.

VI. 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:

A pilot study to reduce the volume of water used for freeze protection of the sewer lines is ongoing. Work is ongoing throughout 2026; however, it is evident that the bleeding reduction is being successfully implemented as the amount of water withdrawn from Char Lake has been reduced to below the annual limit of 217,000 cubic meters.

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

No other details on water use or waste disposal requested by the Board by November 1st, 2025.

VIII. ADDITIONAL INFORMATION THAT THE LICENSEE DEEMS USEFUL: None.

IX. FOLLOW-UP REGARDING INSPECTION/COMPLIANCE CONCERNS:

A CIRNAC Inspection took place on July 6, 2025. As per the Report (Appendix A), in order to comply with the water licence:

- The bleed water reduction study will be continued through 2026, which has enabled the water use to be within the water licence annual withdrawal limit without the utilidor freezing up
- Sampling of effluent will be carried out in 2026 according to the Monitoring Program. The wastewater effluent that is discharged is heavily diluted by a constant flow of clean water from the bleeder, such that it meets the water licence effluent quality limits consistently.
- The 2024 Annual Report will be submitted with the 2025 Annual Report.
- The 2023 Annual Report will be submitted by May 2026.

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APPENDICES

Appendix A: CIRNAC Inspection Report 2025

Appendix B: Summary of Monitoring Data

Appendix C: Monitoring Program Results

- Certificate of Analysis – 25-06-30

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Appendix A: *CIRNAC Inspection Report 2025*



WATER LICENCE INSPECTION FORM

Original
 Follow-Up Report

Licensee	Licensee Representative
Transportation and Infrastructure Nunavut	Mathew Gibbon
Licence Number	Representative's Title
3AM-RUT2025	A/Director of Regional Infrastructure -Qikiqtani Region
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 6, 2025	Joseph Monteith
Activities Inspected	
<input type="checkbox"/> Camp <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Reclamation <input type="checkbox"/> Fuel Storage <input type="checkbox"/> Roads/Hauling <input type="checkbox"/> Other: Water Use and Storage <input type="checkbox"/> Other: Waste Disposal	

Conditions: A- Acceptable U-Unacceptable C-Concern NI-Not Inspected NA- Not applicable

PART:	Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT	A	
B: GENERAL CONDITIONS	U	13-15
C: CONDITIONS APPLYING TO SECURITY	NI	
D: CONDITIONS APPLYING TO WATER USE	C	1-8
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	A	10-15
F: CONDITIONS APPLYING TO MODIFICATIONS	A	2,5
G: CONDITIONS APPLYING TO CONSTRUCTION	A	2,5
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	C	6
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING	A	1
J: CONDITIONS APPLYING TO MONITORING	A	
SCHEDULES	A	

**The observation number corresponds with specific comments provided below.*

Samples taken by Inspector:	Location(s): Latitude: 74°43'01"N Longitude: 94°58'10"W
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

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

BACKGROUND

On December 20, 2020 the Nunavut Water Board issued 3AM-RUT2035 for the use of water and deposit of waste. The license authorizes the Hamlet of Resolute Bay to withdrawal 217,000 m³ annually to support community needs.

There are three water licenses in this community: The Government of Nunavut (GN) holds the Licence for the airport, the Hamlet of Resolute Bay holds the Licence for solid waste management, and Transportation and Infrastructure Nunavut (TIN) holds the licence for the Utilidor Systems. Due to delays in plans to refurbish the airport (Licence No. 3BM-YRB1621) and solid waste management facility (Licence No. 3BM-RE2025), the Board decided to process the Renewal Application for the Utilidor System independently.

Relevant infrastructure include in this license, a Utilidor system which is maintained and operated by the GN-TIN. The water supply system constitutes Char Lake, the old pump-house(decommissioned), the new water pump house, the water treatment plant and associated delivery mediums, whereas sewage effluent travels from buildings via pipes and is discharged untreated into ‘bleeders’ where it is diluted, and any solids are captured by a macerator before exiting into Resolute Bay. The outfall pipe is located on the shore of the Bay at the high tide water mark.

Inspector Statement

On July 6, 2025, A Water Licence Inspection was conducted by Water Resource Officer(WRO) Joseph Monteith on the Hamlet of Resolute Bay, Qikiqtani Region, Nunavut, for water licence 3BM-RUT2035.

General Condition

On April 3, 2023 Robert Hunter, Nunavut Water Board, Manager of Licencing emailed WRO Monteith a copy of The Hamlet of Resolute Bay’s 2022 Annual Report. The submission of the annual report was made in



regards to satisfying Part B: Subsection 1 of the Water Licence. Typically these annual reports are sent out between January and March. From here on in, they will be acknowledged a year behind due to the submission requirements of the community water license reports.

Water Supply Facilities

Water Pump House at Char Lake(See photo 1):

1. New Pump House(photo 1) contains 3 intake pipes(photo 3), indoor day tank, generator, heater, external double walled storage tank for fuel with a capacity of 9176 Litres(within 31 metres of the high water mark of Char Lake). Building could have been a form of secondary containment, one entry way has compromised the containment as a form of secondary containment. The indoor day tank is in secondary containment.
2. Natural Signs of sedimentation observed along the banks of Char Lake (photo 2).
3. ABB Water Meter observed in the water pump house(photo 4).
4. From the Pump house, freshwater is piped to the Water Treatment Plant to be piped to the Water Treatment Centre (photo 5).

Water Treatment Plant(See photo 6)

5. The upgraded Water Treatment Plant contains sump pits, pumps, a chlorine mix pot, 12,300 cubic metre water storage tank, UV Filtration, 3x charcoal filtrations tanks, and 2 x filter tanks and pipes the treated water to the residents by gravity using underground pipes, also trucked water service.
6. Sign of spill next to back door. Typically sump water pumped out of sump (photo 6).
7. New water meter reads 951006030 litres, (951006 m³)withdrawn from Char Lake (photo 7).
8. water usage logs Water Usage Logs June 3, 2023 to June 6, 2023. Total Flow Chart from Char Lake reads for June 6, 2023 is 9509903 Litres (9509903 m³)(photo 8).

Macerator Building

9. An old Trailer Building contains a macerator, which takes any solids such as toilet paper, and captures it from being discharged with the waste water (See photo 8).
10. Macerator Flume Meter reading is 1589679597 Litres (1589679 m³) deposited into the marine environment.
11. Macerator room water meter for metering deposits reads 1589848453 Litres (1589848 m³).

Water Consumption Reports

12. The licence authorizes the use of 217,000 cubic metres per year.
13. On November 13, 2025,RES, Frontdesk (Belinda) Frontdesk.RES@atco.com emailed WRO Monteith the water usage records for the Hamlet of Resolute Bay. 2025 Utilidor Water withdraw amount listed as 31,415,562,640 total litres (31,415,562.64m³) withdrawn between January 1, 2025 to November 7, 2025. (photo 12).

Arctic Waters Pollution Prevention Act

Although there is ongoing work to construct a new facility:

14. It was observed that the waste water that discharges from the Utilidor system goes directly into the ocean (photo 11).
15. The direct discharge into the marine environment constitutes a breach of Subsection 4(1) of the *Arctic Waters Pollution Prevention Act (AWPPA)*.
16. The direct discharge into the marine environment constitutes a breach of Subsection 5 of the *Arctic Waters Pollution Prevention Regulations (ASSPPR)*.

SECTION 2	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
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The following information is a summary of the Actions Required by the licensee to promote and ensure compliance:

- Develop a plan to address the breach of subsection 4(1) of the *Arctic Waters Pollution Prevention Act*.
- Develop a plan to address the breach of subsection 5 of the *Arctic Waters Pollution Prevention Regulation*.
- Provide a rationale for the exceedance in water withdrawal. Do not exceed the authorized withdrawal amount without prior approval by the Nunavut Water Board.
- Submit Annual Reports 2023, 2024, and 2025.
- The Licensee is reminded to remain diligent to prevent wastes from entering water, the environment, and to adhere to the discharge requirements listed in this licence.

SECTION 3	<input type="checkbox"/> Comments	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
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Part B: Item 1
 The Licensee shall file, with the Board for review, no later than the 31st of March of the year following the calendar year being reported, an Annual Report formulated in accordance with the requirements under Schedule B of this Licence.

Part D: Item 2
 The annual quantity of Water used for all purposes from Char Lake shall not exceed two hundred and seventeen thousand (217,000) cubic metres per annum or as otherwise

approved by the Board in writing.

Arctic Waters Pollution Prevention Act

Deposit of Waste -Prohibition

4 (1) Except as authorized by regulations made under this section, no person or ship shall deposit or permit the deposit of waste of any type in the arctic waters or in any place on the mainland or islands of the Canadian arctic under any conditions where the waste or any other waste that results from the deposit of the waste may enter the arctic waters.

Arctic Waters Pollution Prevention Regulations

Deposit of Industrial Waste

6 Any person may deposit or permit the deposit of industrial waste if the industrial waste is of a type and in a quantity and is deposited under conditions authorized by or under the *Oil and Gas Production and Conservation Act*, the [Territorial Lands Act](#) or the *Public Lands Grants Act*, whichever is applicable.

Licensee or Representative	Inspector's Name
Mathew Gibbon	Joseph Monteith
Signature	Signature
Date	Date
	November 14, 2025

CC: Licensing Department, NWB
 Jeremy Fraser, Manager of Field Operations, CIRNAC

PHOTO LOG

Date	Camera	Inspector
July 6, 2025	Samsung Galaxy S11	Joseph Monteith
Photo Log #	Location	
Photo 1	New Pump House, Char Lake, Resolute Bay, NU	
		
Description: Char Lake Water Source, Signage observed as Water Source.		



Photo Log #

Location

Photo 2

Resolute Bay, NU



Description: Natural Sedimentation observed along the coast of Char Lake. No signs of the silt fencing and hose observed in 2022.

Photo Log #

Location

Photo 3

Resolute Bay, NU



Description: 3 water withdrawal pipes coming out of Char Lake into the water pump



Photo Log #1

Location

Photo 4

Resolute Bay, NU



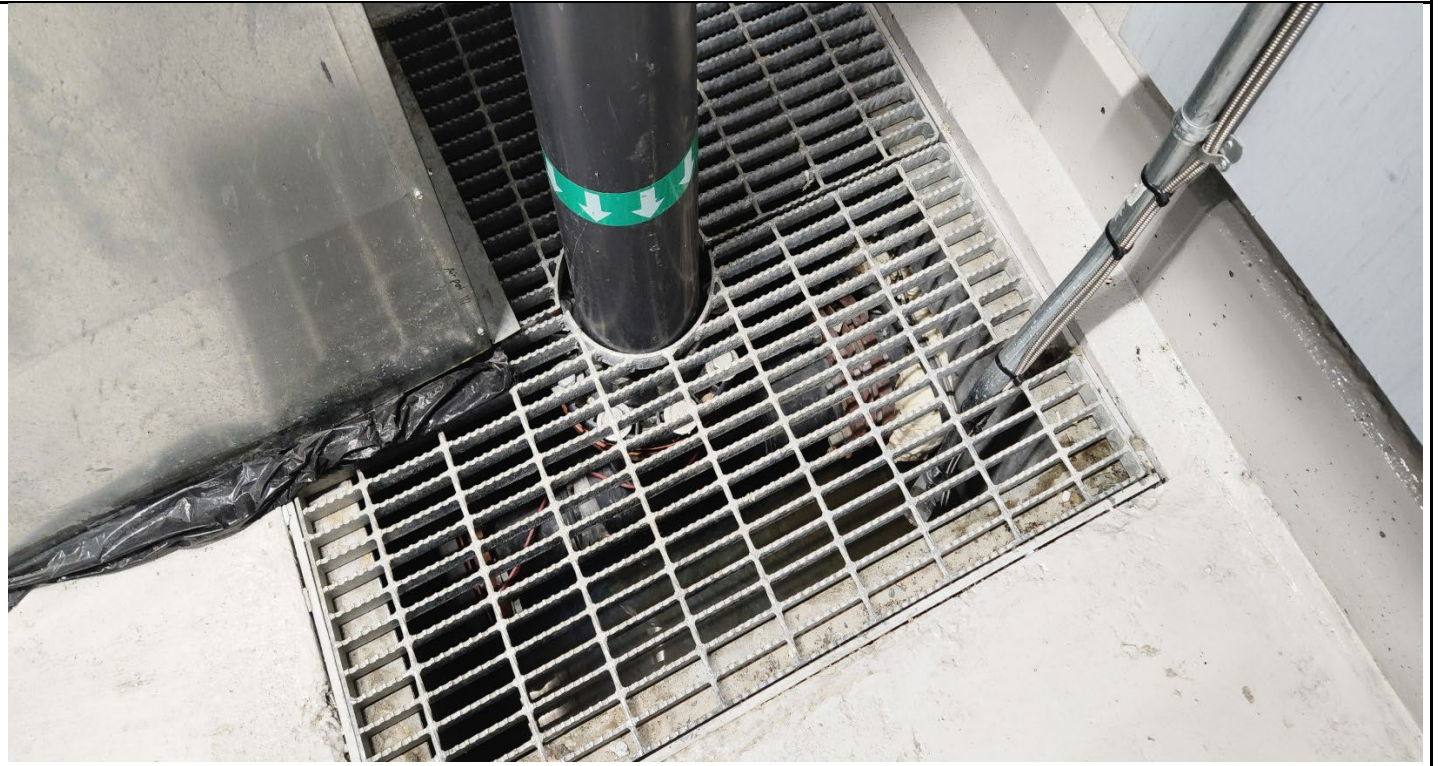
Description: ABB meter observed in the water pump house. 979203708Litres, 979203.708 m³

Photo Log #1

Location

Photo 5

Resolute Bay, NU



Description: Water Pump House Sump Pit. Water pipe from pump house to Water Treatment Plant.



Photo Log #1

Location

Photo 6

Resolute Bay, NU



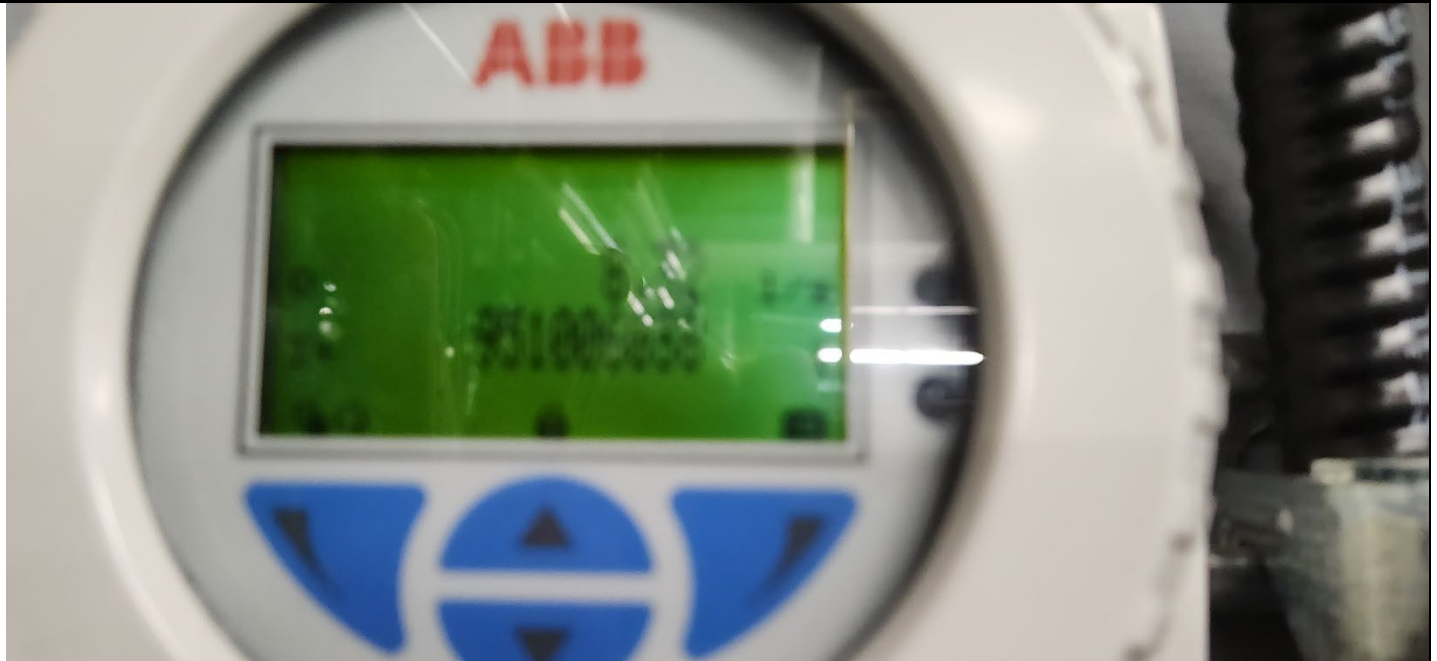
Description: Water Treatment Plant – sign of a discharge, possibly from their sump pit.

Photo Log #1

Location

Photo 7

Resolute Bay, NU



Description: Water Treatment Plant – ABB Water Meter from Char Lake reads 951006030 litres, (951006 m³).



Photo Log #1

Location

Photo 8

Macerator Building, Resolute Bay, NU

Item	Monday 30-06-2025			Tuesday 01-07-2025			Wednesday 02-07-2025			Thursday 03-07-2025			Friday 04-07-2025			Saturday 05-07-2025			Sunday 06-07-2025		
	Lab Test	SCADA	Init	Lab Test	SCADA	Init	Lab Test	SCADA	Init	Lab Test	SCADA	Init	Lab Test	SCADA	Init	Lab Test	SCADA	Init	Lab Test	SCADA	Init
UVT Post Treatment (%)	99.80	72.00	mn	99.80	72.00	mn	99.90	72.00	mn	99.70	72.00	mn	98.80	72.00	mn				98.40	72.00	mn
Cl. Post Treatment 10-AIT-03 (PPM)	1.16	1.12		1.10	1.11		1.26	1.27		1.26	1.04										
Cl. Post Treatment (PPM)																					
Cl. Hamlet Supply 12-AIT-02 (PPM)	1.18	1.35		1.08	1.25		1.06	1.23		1.07	1.25		1.09	1.22					1.02	1.14	
Cl. Hamlet Return 12-AIT-01 (PPM)	1.20	1.31		1.07	1.20		1.03	1.16		1.07	1.22		1.05	1.12					1.01	1.10	
Turbidity Char Lake 10-AIT-01 (NTU)	0.386	0.350		0.426	0.430		0.371	0.380		0.365	0.350		0.560	0.53					0.604	0.650	
Turbidity Post Treatment 10-AIT-04 (NTU)	0.254	0.220		0.281	0.24		0.306	0.350		0.273	0.260		0.418	0.390					0.408	0.450	
Turbidity Hamlet Supply (NTU)	0.292			0.270			0.284			0.285			0.425						0.426		
Temp. Hamlet Supply 12-TT-02 (°C)	5.2	5.4	mn	5.2	5.4	mn	5.2	5.4	mn	5.2	5.4	mn	5.4	5.3	mn				5.3	5.4	mn
Temp. Hamlet Return 12-TT-01 c	4.8	5.8		4.8	5.7		4.8	5.7		4.8	5.8		4.3	5.8					4.5	5.9	
Temp. Tank 10-TT-05 ©	3.5	5.6		3.5	5.7		3.5	5.7		3.5	5.6		4.3	5.5					3.5	5.7	
Tank Level 10-LIT-01 (M)		4.1			4.12			4.13			4.05			4.11						5.2	
Pump Suction Pressure (PSI)	5.4			5.4			5.4			5.3			5.2								
Pump Discharge Pressure 12-PIT-02 (PSI)	22	17.9		21	17.5		21	17.9		21	17.9		21	18.6							
Inst. Flow Hamlet Return 12-FIT-03 (L/s)	14.77			14.39			14.71			14.66			13.85								
Ttl. Flow Hamlet Return (L)	1519646387			1520889008			1522164668			1523406992			1524682830								
Inst. Flow Hamlet Supply 12-FIT-04 (L/s)	22.24			22.44			22.02			22.54			22.44								
Ttl. Flow Hamlet Supply (L)	2690249256			2692127562			2694056770			2695942931			2697873260								
Inst. Flow Char Lake 10-FIT-01 (L/s)	5.63			5.87			5.92			5.88			5.91								
Ttl. Flow Char Lake (L)	947147755			947743569			948362361			948976494			949612942								
Inst. Flow Truckfill/Backwash 12-FIT-05 (L/s)	0			0			0			0			0								
Ttl. Flow Truckfill/Backwash (L)	14510331			14510331			14510331			14510331			14517161								
Chlorine Day Tank Level (%)	63		mn	53		mn	42		mn	88		mn	80		mn				62		mn
Boiler 1 Pressure (PSI) & Temp. ©	8	83		10	82		7	77		8	80		8	81					8	83	
Boiler 2 Pressure (PSI) & Temp. ©	10	77		11	80		8	76		9	79		9	80					10	80	
Boiler 3 Pressure (PSI) & Temp. ©	12	77		13	81		10	77		11	80		11	80					12	82	
HX1 Inlet Glycol Temp. (°C)	66			69			66			68			68						70		
HX1 Outlet Water Temp. (°C)	23			24			19			25			24						26		
HX2 Inlet Glycol Temp. (°C)	67			71			67			70			70						72		
HX2 Outlet Water Temp. (°C)	24			25			19			25			25						27		
Filter Pressure Differential (PSI)	3			3			4			4			3						4		
Total Time On Filters (Hrs)	258			282			306			330			354						402		
L/s At Time Of Check 10-FIT-01 (L/s)	6			6.0			5.9			6			5.8						5.9		
Boiler Rm Temp. (°C)	21.7			23.5			22.8			23.1			21.7						21.5		
Chemical Rm Temp. (°C)	22.9			23.7			24.5			23.8			22.5						23.9		

Description: Water Usage Logs June 30, 2025 to July 6, 2025. Total Flow Chart from Char Lake reads for July 6, 2025 is 950990440 Litres (950990m³). Macerator Flume Meter reading is 1589679597 Litres (1589679 m³) deposited into the marine environment.

Photo Log #1

Location

Photo 9

Macerator Building, Resolute Bay, NU



Description: Macerator in Old Trailer Building – Solids such as toilet paper is extracted from the macerator, and deposited into a waste bucket.

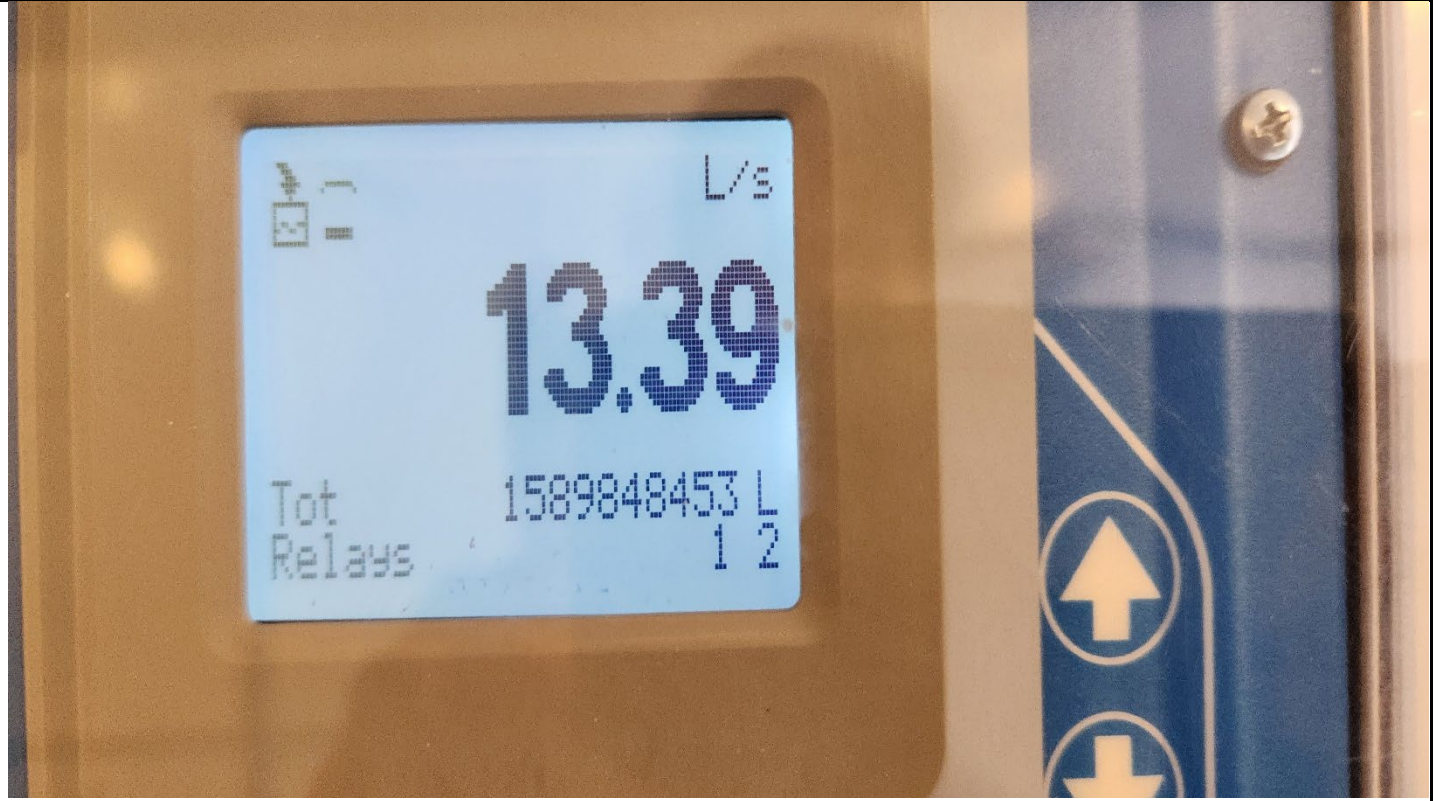


Photo Log #1

Location

Photo 10

Macerator Building, Resolute Bay, NU



Description: Macerator water meter. Reads 1589848453 Litres (1589848 m³).

Photo Log #1

Location

Photo 11

Resolute Bay, NU



Description: Utilidor Sewage Discharge Pipe. Direct Discharge to the ocean.



Photo Log #1

Location

Photo 12

Resolute Bay, NU

2025 WATER CONSUMPTION

	January	February	March	April	May	June	July	August	September	October	November	December
1	678,212	783,741	535,720	657,996	620,347	774,300	618,792	483,613	499,907	327,437	505,511	
2	637,501	659,966	627,819	649,757	751,639	564,284	614,133	482,672	487,730	494,198	449,296	
3	621,751	679,334	668,813	689,514	661,814	426,186	636,448	545,554	489,338	502,558	580,598	
4	653,649	467,116	668838	518,878	603,529	618,686	949,612,942	491,167	558,043	516,640	0	
5	664,469	699,643	561405	601,966	496,172	737,668	0	489,052	398,438	441,866	0	
6	594,475	591,146	588,243	333,562	601,477	635,620	950,990,440	482,559	0	497,719	0	
7	669,230	894,777	0	974,996	706,734	524,848	0	491,844	511,798	0	480,680	
8	763,971	638,266	0	634,279	546,444	615,764	839,386	489,398	502,714	0	0	
9	511,156	625,283	605,943	642,643	630,092	630,612	413,749	498,888	513,101	490,211	0	
10	685,322	795,566	624,966	568,604	673,458	631,319	637,187	496,450	435,234	436,193	0	
11	656,141	478,449	796,285	653,219	584,228	627,881	628,302	470,490	548,570	514,126	0	
12	643,189	701,656	402,695	625,212	642,444	611,321	667,907	462,525	0	492,182	0	
13	678,437	666,795	653,985	803,604	617,809	635,982	576,372	515,172	0	533,480	0	
14	652,910	0	649,118	415,756	620,730	649,753	955,868,373	483,254	466,009	496,451	0	
15	0	0	634,166	682,218	618,201	50,642,188	0	972,884,126	0	467,969	0	
16	0	599,025	633,301	647,853	581,227	1,258,518	957,121,212	0	0	0	0	
17	858,251	698,370	620,699	583,121	780,187	611,436	616,043	973,881,009	0	0	0	
18	688,716	632,969	635,347	606,456	464,396	8,463,267,502	670,874	515,282	0	0	0	
19	522,319	729,878	781,438	0	605,481	#####	626,322	413,918	0	414,991	0	
20	608,736	753,022	624,535	0	931,770	623,473	688,634	477,375	526,974	606,298	0	
21	683,827	715,960	642,868	0	319,667	941,548,182	580,011	501,933	464,918	535,706	0	
22	663,374	701,661	473,508	731,895	597,845	0	584,510	0	487,469	310,232	0	
23	638,275	700,164	0	380,442	622,727	537,851	583,863	0	504,684	495,162	0	
24	788,216	830,900	0	625,926	659,654	632,611	549,441	0	427,813	0	0	
25	613,389	578,932	621,123	440,312	563,692	715,536	509,385	0	598,662	0	0	
26	666,893	603,275	667,229	566,556	772,585	692,939	533,425	2,503,368	0	458,282	0	
27	659,305	677,400	593,359	618,697	474,821	759,275	444,472	0	0	0	0	
28	728,111	623,045	621,123	613,760	1,847,546	485,594	533,391	0	0	0	0	
29	508,789	735,485	599,363	646,826	604,457	639,420	498,779	470,624	0	0	0	
30	716,226	680,049	636,677	656,713	656,713	595,814	504,849	457,978	589,206	456,999	0	
31	638,034	595,229	595,229	536,352	536,352	483,613	613,734	495,457	495,457	0	0	
Total Imp G	19,092,874	18,261,824	16,271,447	18,496,492	20,394,238	1,009,679,933	3,827,632,855	1,959,601,985	9,010,608	9,984,157	2,016,085	0
Total Liters	86,798,114	83,020,078	73,971,625	84,086,902	92,714,245	4,590,105,943	#####	8,908,546,584	40,963,125	45,388,976	9,165,324	0
										Yearly Total Imp. G		6,910,442,498
										Yearly Total Liters		31,415,562,640
ATCO Truck												
Liters	0	0	0	0	0	0	0	0	0	0	0	0

Description: 2025 Utilidor Water withdraw amount listed as 31,415,562,640 total litres (31,415,562.64m³) withdrawn between January 1, 2025 to November 7, 2025.

**2025 ANNUAL REPORT FOR 3AM-RUT2035
GOVERNMENT OF NUNAVUT – DEPARTMENT OF
TRANSPORTATION AND INFRASTRUCTURE NUNAVUT**

Appendix B: Summary of Monitoring Data

Res-2 Effluent Quality Limits as per Part E, Item 3

Parameter	Maximum Concentration of any Grab Sample for RUT-2	Units	30-Jun-2025 RUT-2
BOD ₅	80	mg/L	<3
Total Suspended Solids	70	mg/L	8
Fecal Coliforms	1.6x10 ⁶	CFU/100 mL	30
pH	Between 6 and 9	N/A	6.79
Oil and grease	No visible sheen	N/A	8.8

Note: The wastewater effluent was compliant with the effluent quality limits.

**2025 ANNUAL REPORT FOR 3AM-RUT2035
GOVERNMENT OF NUNAVUT – DEPARTMENT OF
TRANSPORTATION AND INFRASTRUCTURE NUNAVUT**

Appendix C: Monitoring Program Sample Results

C.O.C.: -

REPORT No: 25-019323 - Rev. 0

Report To:

ATCO Frontec Ltd.
 PO Box 88
 Hamlet of Resolute Bay
 , NU X0A 0V0

CADUCEON Environmental Laboratories

2378 Holly Lane
 Ottawa, ON K1V 7P1

Attention: Ian Dudla

DATE RECEIVED: 2025-Jul-04
 DATE REPORTED: 2025-Jul-14
 SAMPLE MATRIX: Waste Water

CUSTOMER PROJECT:
 P.O. NUMBER:

Analyses	Qty	Site Analyzed	Authorized	Date Analyzed	Lab Method	Reference Method
Anions (Liquid)	1	OTTAWA	PCURIEL	2025-Jul-07	A-IC-01	SM 4110B
BOD5 (Liquid)	1	KINGSTON	DCASSIDY	2025-Jul-09	BOD-001	SM 5210B
Cond/pH/Alk Auto (Liquid)	1	OTTAWA	SBOUDREAU	2025-Jul-07	COND-02/PH-02/A LK-02	SM 2510B/4500H/ 2320B
Fecal Coliforms (Liquid)	1	OTTAWA	AHIRSI	2025-Jul-04	FC-001	SM 9222D
ICP/MS Total (Liquid)	1	OTTAWA	AOZKAYMAK	2025-Jul-09	D-ICPMS-01	EPA 6020
ICP/OES Total (Liquid)	1	OTTAWA	SGORMAN	2025-Jul-07	D-ICP-01	SM 3120B
Mercury (Liquid)	1	OTTAWA	TBENNETT	2025-Jul-07	D-HG-02	SM 3112B
Ammonia (Liquid)	1	KINGSTON	VHAMMOND	2025-Jul-09	NH3-001	SM 4500NH3
Oil & Grease (Liquid)	1	KINGSTON	DCHAUDHARI	2025-Jul-08	O&G-001	SM 5520
Phenols (Liquid)	1	KINGSTON	EHINCH	2025-Jul-09	PHEN-01	MECP E3179
Total Organic Carbon (TOC)	1	OTTAWA	SLOZO	2025-Jul-07	C-OC-01	EPA 415.2
TSS (Liquid)	1	KINGSTON	KYUILL	2025-Jul-09	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

CADUCEON Environmental Laboratories Certificate of Analysis

Final Report
REPORT No: 25-019323 - Rev. 0

Parameter	Units	R.L.	Client I.D.
			Sewer Outfall
			Sample I.D.
			25-019323-1
			Date Collected
			2025-06-30
			-
Fecal Coliform	CFU/100mL	1	30
Alkalinity(CaCO3) to pH4.5	mg/L	5	77
Conductivity @25°C	uS/cm	1	3360
pH @25°C	pH units	-	6.79
Chloride	mg/L	0.5	967
Nitrate (N)	mg/L	0.05	<0.05
Nitrite (N)	mg/L	0.05	<0.05
Sulphate	mg/L	1	142
BOD5	mg/L	3	<3
Total Suspended Solids	mg/L	3	8
Ammonia (N)-Total (NH3+NH4)	mg/L	0.05	<0.05
Total Organic Carbon	mg/L	0.8	<0.8
Phenolics	mg/L	0.001	<0.001
Hardness (as CaCO3)	mg/L	0.02	334
Aluminum (Total)	mg/L	0.01	0.04
Cadmium (Total)	mg/L	0.005	<0.005
Calcium (Total)	mg/L	0.02	39.7
Chromium (Total)	mg/L	0.002	<0.002
Cobalt (Total)	mg/L	0.005	<0.005
Copper (Total)	mg/L	0.002	<0.002
Iron (Total)	mg/L	0.005	0.053



Michelle Dubien
Data Specialist

The analytical results reported herein refer to the samples as received and relate only to the items tested. Reproduction of this analytical report in full or in part is prohibited without prior consent from Caduceon Environmental Laboratories.

			Client I.D.
			Sewer Outfall
			Sample I.D.
			25-019323-1
			Date Collected
			2025-06-30
Parameter	Units	R.L.	-
Lead (Total)	mg/L	0.02	<0.02
Magnesium (Total)	mg/L	0.02	57.0
Manganese (Total)	mg/L	0.001	0.002
Nickel (Total)	mg/L	0.01	<0.01
Potassium (Total)	mg/L	0.1	20.3
Sodium (Total)	mg/L	0.2	420
Zinc (Total)	mg/L	0.005	<0.005
Arsenic (Total)	mg/L	0.0005	<0.0005
Mercury	mg/L	0.00002	<0.00002

			Client I.D.
			Sewer Outfall
			Sample I.D.
			25-019323-1
			Date Collected
			2025-06-30
Parameter	Units	R.L.	-
Oil & Grease (Total)	mg/L	1.0	8.8
Oil and Grease (Mineral)	mg/L	1.0	<1.0
Oil and Grease (Anim/Veg)	mg/L	1.0	8.0

Bacteria passed holding time.



Michelle Dubien
Data Specialist

