

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Resolute Bay	Bhabesh Roy
Licence Number	Representative's Title
3BM-RUT2035	Municipal Engineer, Senior Administrative Officer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 19, 2021	Joseph Monteith
Activities Inspected	
<div><div><input type="checkbox"/> Camp</div><div><input type="checkbox"/> Drilling</div><div><input type="checkbox"/> Mining</div><div><input checked="" type="checkbox"/> Construction</div><div><input type="checkbox"/> Reclamation</div><div><input type="checkbox"/> Fuel Storage</div></div> <div><div><input type="checkbox"/> Roads/Hauling</div><div><input checked="" type="checkbox"/> Other: Pump house, Water Treatment Facility, Waste Water Utilidor,</div><div><input type="checkbox"/> Other:</div></div>	

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				A	
C: CONDITIONS APPLYING TO SECURITY				NI	
D: CONDITIONS APPLYING TO WATER USE				A	1-9
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				A	10-16
F: CONDITIONS APPLYING TO MODIFICATIONS				NI	
G: CONDITIONS APPLYING TO CONSTRUCTION				NI	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING				A	
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING				NA	
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	<input type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
BACKGROUND <p>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.</p> <p>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 Community and Government Services (CGS) hold 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.</p> <p>Relevant infrastructure include in this license, a Utilidor system which is maintained and operated by the GN-CGS. The water supply system constitutes Char Lake, the 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.</p> Inspector Statement <p>On July 19, 2021, A Water Licence Inspection was conducted on the Hamlet of Resolute Bay, Qikiqtani Region, Nunavut, for water licence 3BM-RUT2035.</p> General Condition <p>On October 6, 2021 Richard Dwyer, Nunavut Water Board, Manager of Licencing emailed WRO Monteith a copy of The Hamlet of Resolute Bay’s 2010 Annual Report. Suggesting a submission was made in regards to</p>			

satisfying Part B: Subsection 1 of the Water Licence.

Water Supply Facilities

Intake Structure at Char Lake(See photo 1):

1. Intake structure contains 4 water pumps, a reservoir/sump like structure, a generator, a boiler, indoor day tank, and has an external double walled storage tank for fuel with a capacity of 9176 Litres(within 31 metres of the high water mark of Char Lake). This is the site of a spill report that has caused the odours to be announced by the public. Construction of a new pump house is ongoing.
2. New pipes for new pump house is already installed, no building constructed at the time of the inspection.
3. Banks of Char River appear to be eroding into Char Lake (See photo 2)
4. Water is withdrawn from the water well within the building. Building scheduled to be decommissioned upon completion of the new pump house.
5. 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 5)

6. The Water Treatment Plant contains sump pits, pumps, a chlorine mix pot, 12,300 cubic metre water storage tank, and pipes the treated water to the residents by gravity using underground pipes.
7. Building was in a state of construction, and operating(photo 5).
8. New water meter reads 16.54 Litres per second. Total 243423510 Litres withdrawn.
9. Water Usage Logs read 242663979 (photo 3).

Old Trailer Building

10. An old Trailer Building contains a macerator, which takes any solids such toilet paper, and traps it from being discharged with the waste water. (See photo 6)

Water Consumption Reports

11. The licence authorizes the use of 217,000 cubic metres per year.
12. On November 18, 2021 Bhabesh Roy, Government of Nunavut(GN), Community Government and Services(CGS) emailed WRO Monteith a PDF of 2021Annual Report for Water Consumption Report Total for Truck service 3,013,509 Litres withdrawn (photo 8).
13. On November 18, 2021 Bhabesh Roy, Government of Nunavut(GN), Community Government and Services(CGS) emailed WRO Monteith a PDF of 2021 Utilidor Water withdraw amount listed as 165,812,847 Litres withdrawn (photo 9).

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 8).
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:			
<ul style="list-style-type: none">• Develop a plan to address the breach of subsection 4(1) of the <i>Arctic Waters Pollution Prevention Act</i>.• Develop a plan to address the breach of subsection 5 of the <i>Arctic Waters Pollution Prevention Regulation</i>.• Submit the Operation and Maintenance Manual for the Water Supply Facilities, Utilidor, and Sewage Disposal Facility.• Seek approval from the Nunavut Water board for any planned future withdrawals of water that exceeds 217,000 m³.• Provide reason for exceedance in water withdrawal amount.• 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 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
Bhabesh Roy	Joseph Monteith
Signature	Signature
	
Date	Date
	November 23, 2021

CC: Licensing Department, NWB
Justin Hack, Manager of Field Operations, CIRNAC

PHOTO LOG


Date	Camera	Inspector	
July 19, 2021	Nikon Cool Pix	Joseph Monteith	
Photo Log #	Location		
Photo 1	Pump House, Char Lake, Resolute Bay, NU		
			
Description: Char Lake Water Source, Pump House. Signage observed as Water Source. Pump house set to be decommissioned once new pump house construction is complete.			

Photo Log #
Photo 2

Location
Resolute Bay



Description: erosion on the banks of Char Lake, Pump House parking pad

Photo Log #1
Photo 3

Location
Resolute Bay

Month: July Year: 2021

Sheet: 1

Customer: ATCO Project: FREIGHT

ATCO FREIGHT

Line	Water Meter	Reading	Unit	Reading	Unit	Reading	Unit	Reading	Unit
1	✓	12.74	6.17	13.32	7.6				
2	✓	13.32	7.6	14.53	8.015				
3	✓	14.53	8.015	15.80	8.49				
4	✓	15.80	8.49	17.04	8.9				
5	✓	17.04	8.9	18.24	9.3				
6	✓	18.24	9.3	19.44	9.7				
7	✓	19.44	9.7	20.64	10.1				
8	✓	20.64	10.1	21.84	10.5				
9	✓	21.84	10.5	23.04	10.9				
10	✓	23.04	10.9	24.24	11.3				
11	✓	24.24	11.3	25.44	11.7				
12	✓	25.44	11.7	26.64	12.1				
13	✓	26.64	12.1	27.84	12.5				
14	✓	27.84	12.5	29.04	12.9				
15	✓	29.04	12.9	30.24	13.3				
16	✓	30.24	13.3	31.44	13.7				
17	✓	31.44	13.7	32.64	14.1				
18	✓	32.64	14.1	33.84	14.5				
19	✓	33.84	14.5	35.04	14.9				
20	✓	35.04	14.9	36.24	15.3				
21	✓	36.24	15.3	37.44	15.7				
22	✓	37.44	15.7	38.64	16.1				
23	✓	38.64	16.1	39.84	16.5				
24	✓	39.84	16.5	41.04	16.9				
25	✓	41.04	16.9	42.24	17.3				
26	✓	42.24	17.3	43.44	17.7				
27	✓	43.44	17.7	44.64	18.1				
28	✓	44.64	18.1	45.84	18.5				
29	✓	45.84	18.5	47.04	18.9				
30	✓	47.04	18.9	48.24	19.3				
31	✓	48.24	19.3	49.44	19.7				
32	✓	49.44	19.7	50.64	20.1				
33	✓	50.64	20.1	51.84	20.5				
34	✓	51.84	20.5	53.04	20.9				
35	✓	53.04	20.9	54.24	21.3				
36	✓	54.24	21.3	55.44	21.7				
37	✓	55.44	21.7	56.64	22.1				
38	✓	56.64	22.1	57.84	22.5				
39	✓	57.84	22.5	59.04	22.9				
40	✓	59.04	22.9	60.24	23.3				
41	✓	60.24	23.3	61.44	23.7				
42	✓	61.44	23.7	62.64	24.1				
43	✓	62.64	24.1	63.84	24.5				
44	✓	63.84	24.5	65.04	24.9				
45	✓	65.04	24.9	66.24	25.3				
46	✓	66.24	25.3	67.44	25.7				
47	✓	67.44	25.7	68.64	26.1				
48	✓	68.64	26.1	69.84	26.5				
49	✓	69.84	26.5	71.04	26.9				
50	✓	71.04	26.9	72.24	27.3				
51	✓	72.24	27.3	73.44	27.7				
52	✓	73.44	27.7	74.64	28.1				
53	✓	74.64	28.1	75.84	28.5				
54	✓	75.84	28.5	77.04	28.9				
55	✓	77.04	28.9	78.24	29.3				
56	✓	78.24	29.3	79.44	29.7				
57	✓	79.44	29.7	80.64	30.1				
58	✓	80.64	30.1	81.84	30.5				
59	✓	81.84	30.5	83.04	30.9				
60	✓	83.04	30.9	84.24	31.3				
61	✓	84.24	31.3	85.44	31.7				
62	✓	85.44	31.7	86.64	32.1				
63	✓	86.64	32.1	87.84	32.5				
64	✓	87.84	32.5	89.04	32.9				
65	✓	89.04	32.9	90.24	33.3				
66	✓	90.24	33.3	91.44	33.7				
67	✓	91.44	33.7	92.64	34.1				
68	✓	92.64	34.1	93.84	34.5				
69	✓	93.84	34.5	95.04	34.9				
70	✓	95.04	34.9	96.24	35.3				
71	✓	96.24	35.3	97.44	35.7				
72	✓	97.44	35.7	98.64	36.1				
73	✓	98.64	36.1	99.84	36.5				
74	✓	99.84	36.5	101.04	36.9				
75	✓	101.04	36.9	102.24	37.3				
76	✓	102.24	37.3	103.44	37.7				
77	✓	103.44	37.7	104.64	38.1				
78	✓	104.64	38.1	105.84	38.5				
79	✓	105.84	38.5	107.04	38.9				
80	✓	107.04	38.9	108.24	39.3				
81	✓	108.24	39.3	109.44	39.7				
82	✓	109.44	39.7	110.64	40.1				
83	✓	110.64	40.1	111.84	40.5				
84	✓	111.84	40.5	113.04	40.9				
85	✓	113.04	40.9	114.24	41.3				
86	✓	114.24	41.3	115.44	41.7				
87	✓	115.44	41.7	116.64	42.1				
88	✓	116.64	42.1	117.84	42.5				
89	✓	117.84	42.5	119.04	42.9				
90	✓	119.04	42.9	120.24	43.3				
91	✓	120.24	43.3	121.44	43.7				
92	✓	121.44	43.7	122.64	44.1				
93	✓	122.64	44.1	123.84	44.5				
94	✓	123.84	44.5	125.04	44.9				
95	✓	125.04	44.9	126.24	45.3				
96	✓	126.24	45.3	127.44	45.7				
97	✓	127.44	45.7	128.64	46.1				
98	✓	128.64	46.1	129.84	46.5				
99	✓	129.84	46.5	131.04	46.9				
100	✓	131.04	46.9	132.24	47.3				
101	✓	132.24	47.3	133.44	47.7				
102	✓	133.44	47.7	134.64	48.1				
103	✓	134.64	48.1	135.84	48.5				
104	✓	135.84	48.5	137.04	48.9				
105	✓	137.04	48.9	138.24	49.3				
106	✓	138.24	49.3	139.44	49.7				
107	✓	139.44	49.7	140.64	50.1				
108	✓	140.64	50.1	141.84	50.5				
109	✓	141.84	50.5	143.04	50.9				
110	✓	143.04	50.9	144.24	51.3				
111	✓	144.24	51.3	145.44	51.7				
112	✓	145.44	51.7	146.64	52.1				
113	✓	146.64	52.1	147.84	52.5				
114	✓	147.84	52.5	149.04	52.9				
115	✓	149.04	52.9	150.24	53.3				
116	✓	150.24	53.3	151.44	53.7				
117	✓	151.44	53.7	152.64	54.1				
118	✓	152.64	54.1	153.84	54.5				
119	✓	153.84	54.5	155.04	54.9				
120	✓	155.04	54.9	156.24	55.3				
121	✓	156.24	55.3	157.44	55.7				
122	✓	157.44	55.7	158.64	56.1				
123	✓	158.64	56.1	159.84	56.5				
124	✓	159.84	56.5	161.04	56.9				
125	✓	161.04	56.9	162.24	57.3				
126	✓	162.24	57.3	163.44	57.7				
127	✓	163.44	57.7	164.64	58.1				
128	✓	164.64	58.1	165.84	58.5				
129	✓	165.84	58.5	167.04	58.9				
130	✓	167.04	58.9	168.24	59.3				
131	✓	168.24	59.3	169.44	59.7				
132	✓	169.44	59.7	170.64	60.1				
133	✓	170.64	60.1	171.84	60.5				
134	✓	171.84	60.5	173.04	60.9				
135	✓	173.04	60.9	174.24	61.3				
136	✓	174.24	61.3	175.44	61.7				
137	✓	175.44	61.7	176.64	62.1				
138	✓	176.64	62.1	177.84	62.5				
139	✓	177.84	62.5	179.04	62.9				
140	✓	179.04	62.9	180.24	63.3				
141	✓	180.24	63.3	181.44	63.7				
142	✓	181.44	63.7	182.64	64.1				
143	✓	182.64	64.1	183.84	64.5				
144	✓	183.84	64.5	185.04	64.9				
145	✓	185.04	64.9	186.24	65.3				
146	✓	186.24	65.3	187.44	65.7				
147	✓	187.44	65.7	188.64	66.1				
148	✓	188.64	66.1	189.84	66.5				
149	✓	189.84	66.5	191.04	66.9				
150	✓	191.04	66.9	192.24	67.3				
151	✓	192.24	67.3	193.44	67.7				
152	✓	193.44	67.7	194.64	68.1				
153	✓	194.64	68.1	195.84	68.5				
154	✓	195.84	68.5	197.04	68.9				
155	✓	197.04	68.9	198.24	69.3				
156	✓	198.24	69.3	199.44	69.7				
157	✓	199.44	69.7	200.2					

242663979



Photo Log #1	Location
Photo 4	Resolute Bay
	
Description: New water meter reads 16.54 Litres per second. Total 243423510 Litres withdrawn. Water metre and log book numbers don't match, but readings for July 20,2021 hasn't been recorded yet.	

Photo Log #1	Location
Photo 5	Resolute Bay
	
Description: Water Treatment Plant – Water Storage Reservoir – Capacity 12,500 Cubic Metres. Blue hose used for discharging water from Water Treatment Plant.	



Photo Log #1	Location
Photo 6	Macerator Building, Resolute Bay, NU



Description: Macerator in Old Trailer Building – Solids extracted from Macerator, and deposited into a waste bin.

Photo Log #1	Location
Photo 8	Resolute Bay



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

Photo Log #1

Location

Photo 8

Resolute Bay

ANNUAL REPORT
FOR THE HAMLET OF RESOLUTE BAY, 2021

YEAR BEING REPORTED: 2021 TRUCK

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water license #3BM issued to the Hamlet of Resolute Bay, NU.

i) - iii) tabular summeries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic meters of each and all waste discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (Estimated)
January	327,774	SAME
February	395,465	SAME
March	697,372	SAME
April	504,617	SAME
May	566,899	SAME
June	458,247	SAME
July	-	SAME
August	-	SAME
September	-	SAME
October	63,136	SAME
November	-	SAME
December	-	SAME
ANNUAL TOTAL	3,013,509	SAME

Note: The average consumption volume is considered equal to the discharge volume in each month because there is no meter in the intake or discharge pipe.

Plant by passed
Plant by passed
Plant by passed
Plant by passed

Description: 2021 Water Consumption Report Total for Truck service 3,013,509 Litres withdrawn.

Photo Log #1

Location

Photo 9

Resolute Bay



ANNUAL REPORT

FOR THE HAMLET OF RESOLUTE BAY, 2021

YEAR BEING REPORTED: 2021 Utilidor

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water license #3BM issued to the Hamlet of Resolute Bay, NU.

i) - iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic meters of each and all waste discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (Estimated)
January	25,867,018	SAME
February	19,227,812	SAME
March	19,642,439	SAME
April	19,985,251	SAME
May	21,058,458	SAME
June	20,381,589	SAME
July	3,335,414	SAME
August	0	29,296,282
September	0	32,140,977
October	0	46,014,708
November	36,314,865	SAME
December	0	SAME
ANNUAL TOTAL	165,812,847	SAME

Note: The average consumption volume is considered equal to the discharge volume in each month because there is no meter in the intake or discharge pipe.

Description: 2021 Utilidor Water withdraw amount listed as 165,812,847 Litres withdrawn.