

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Resolute Bay	Bhabesh Roy, Angela Idlout
Licence No. / Expiry	Representative's Title
3BM-RUT1520	Municipal Engineer, Senior Administrative Officer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
August 14, 2020	Joseph Monteith, & Jeremy Fraser
Activities Inspected	
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Mining
	<input type="checkbox"/> Construction
	<input checked="" type="checkbox"/> Other: Water Treatment Facility, Waste Water Utilidor Hazardous Waste Facility
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Fuel Storage

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	10-15
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>The Hamlet of Resolute Bay is located on the south coast of Cornwallis Island on the Perry Channel. The community is approximately 1550 km northwest of Iqaluit. 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-YRB0308) and solid waste management facility (Licence No. 3BM-RES9699), the Board decided to process the Renewal Application for the Utilidor System independently.</p> <p>The community is serviced by a Utilidor 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 before exiting into Resolute Bay. The outfall pipe is located on the shore of the Bay at the high tide water mark.</p> <p>The Utilidor System was built in the 1970’s without a water Licence. At the time of the initial Water Licence application, a rehabilitation and expansion of the system was scheduled for completion in 2007. This did not occur, and under the current Application the rehabilitation and expansion of the system was scheduled for completion in 2016. Current status is unknown. On June 20, 2018, Bhabesh Roy, GN-CGS, Municipal Engineer emailed Water Resource Officer (WRO) Monteith with photographs and an attached letter from Dr. Kim Baker, MD, CFP, MPH, FRCP(C), addressed to Atul Deshmukh, GN-CGS, Baffin Facility Manager, dated June 19, 2018, acknowledging receipt and approving of an application to install an emergency by pass at another location at the char lake pump house to exclude odors that occur annually.</p> <p>On January 29, 2021 The Minister of Indigenous Relations and Northern Affairs Canada signed an upgraded water license to a class “A” Water License 3AM-RUT2035. This inspection was conducted under water license 3BM-RUT1520, and all observations were made under the conditions of 3BM-RUT1520.</p>			



Inspector Statement

On August 14, 2020, A Water Licence Inspection was conducted on the Hamlet of Resolute Bay, Qikiqtani Region, Nunavut, for water licence 3BM-RUT1520.

General Condition

No submission of an Annual Report for 2019 and 2020.

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.
2. New pipes for new pump house is already installed, new building constructed at the time of the inspection (photo 1). Boom installed in Char Lake to mitigate sedimentation, and any potential spills (photo 3).
3. Water withdrawal has returned to withdrawing from the water well (photo 2).
4. Water meter observed on site 3295467 (photo 4).
5. From the Pump house, freshwater is piped to the Water Treatment Plant to be piped to the Water Treatment Centre.

Water Treatment Plant(See photo 6)

6. The Water Treatment Plant contains sump pits, pumps, a chlorine mix pot, a 12,300 cubic metre water storage tank, and pipes the treated water to the residents by gravity using underground pipes.
7. Under construction at the time of inspection (photo 7) .
8. New filter and flange compartment replaces the unreported spill occurrence observed within the facility in 2019(photo 8).
9. Carlon Water meter reads 0988839300 U.S. Gallons (photo 9).

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. Macerator building locked at the time of inspection (photo 10).

Water Consumption Reports

11. The licence authorized the use of 1,260,230 cubic metres per year, or a maximum of 345 cubic metres per day.
12. No Flow metre at the site of discharge. On October 22, 2020 Bhabesh Roy, Government of Nunavut(GN), Community Government and Services(CGS) emailed WRO Monteith a excel spreadsheet copy of the Water Consumption Report for the months of January 2020, to September 2020, listing Resolute Utilidor consumption numbers total of 192940 cubic metres consumed.

Arctic Waters Pollution Prevention Act

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

SECTION 2

☐ Comments

☐ Non-Compliance with Act or Licence

☒ Action Required

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*.
- Submit the Operation and Maintenance Manual for the Water Supply Facilities, Utilidor, and Sewage Disposal Facility.
- 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

☐ Comments

☒ Non-Compliance with Act or Licence

☐ Action Required

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, 2019

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

PHOTO LOG


Date	Camera	Inspector	
August 5, 2020	Nikon Cool Pix	Joseph Monteith	
Photo Log #	Location		
Photo 1	Resolute Bay		
			
Description: Char Lake Water Source, Pump House. New pump house being constructed.			



Photo Log #
Photo 2

Location
Resolute Bay



Description: Water well, site of water withdrawal.

Photo Log #1
Photo 3

Location
Resolute Bay



Description: Boom installed in Char lake to mitigate any leaks, or sedimentation.



Photo Log #1

Location

Photo 4

Resolute Bay



Description: Gauge # 3 reads 3295467 Gallons.

Photo Log #1

Location

Photo 5

Resolute Bay



Description: Pump house. Water well. PVC hosed used to withdrawal water.



Photo Log #1

Location

Photo 6

Resolute Bay



Description: Water Treatment Plant – Water Storage Reservoir – Capacity 12,500 Cubic Metres . Discharging water from Water Treatment Plant.

Photo Log #1

Location

Photo 7

Resolute Bay



Description: Damaged Flanges in the water filter is replaced. Chlorine Mixing Vat observed in renovated Water Treatment Plant.



Photo Log #1

Location

Photo 8

Resolute Bay



Description: Broken Flange in filter press observed in 2019, no repaired.

Photo Log #1

Location

Photo 9

Resolute Bay



Description: Carlon Water meter reads 0988839300 U.S. Gallons



Photo Log #1

Location

Photo 10

Resolute Bay



Description: Macerator building. Locked at the time of inspection.

Photo Log #1

Location

Photo 11

Resolute Bay



Description: Discharge Pipe for Utilidor sewage. Discharge pipe is within 31 metres of the high water mark.