

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Arctic Bay	Bhabesh Roy
Licence No. / Expiry	Representative's Title
3BM-ARC1924	Municipal Engineer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 21, 2021	Joseph Monteith
Activities Inspected	

☐ Camp

☐ Drilling

☐ Mining

☐ Construction

☐ Reclamation

☐ Fuel Storage

☐ Roads/Hauling

☒ Other: Potable water, Sewage, and Solid Waste

☐ Other:

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	1-3
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				C	4-15
F: CONDITIONS APPLYING TO MODIFICATIONS				NA	
G: CONDITIONS APPLYING TO CONSTRUCTION				NA	
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 licence and the observation number corresponds with specific comments provided below.					
Samples taken by Inspector:		Location(s): Latitude: 73° 02’ N Longitude: 83° 05’ W (Project Extents)			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

SECTION 1

☒ Comments (s.____)

☐ Non-Compliance with Act or Licence (s.____)

☐ Action Required (s.____)

BACKGROUND

The community was issued Water Licence 3AM-ARC1924 in 2019, which is set to expire in August of 2024. They are permitted to withdraw 299 cubic metres of water per day for an annual total of 109,135 cubic metres. The way they calculate the amount of sewage waste discharged is by duplicating the water withdrawal amounts.

Inspector Statement

On July 21, 2021, a water licence inspection was conducted by Water Resource Officer(WRO) Joseph Monteith at the Hamlet of Arctic Bay, Qiqiktani Region, Nunavut to verify compliance with the terms and conditions of 3BM-ARC1924.

Water Use and Related structures

1. Water is being withdrawn from pump house at Marcil Lake(photo 1), as approved by the Water Licence. They were withdrawing water from Marcil Lake using trucks when the water pump from the pump house was broken.

2. The flow meter in the pump house isn't working(photo 2). The municipality records the amount withdrawn from trucks, and that information is recorded in a log book (photo 3).

3. At the time of the inspection the Hamlet of Arctic Bay's Water Usage Report, from January 2021, to October 2021. 22, 476 m³ withdrawn from the water source(photo 4).

Waste Water Treatment Facility

4. At the time of the inspection, the sewage lagoon was in-use and operating as intended. The walls were retaining the sewage as intended. A Sewage truck was observed at the time of inspection discharging into the sewage lagoon.

5. The berm walls surrounding the lagoon did have a pool of water on the west side of the lagoon, with minor migration of raw water from the pool into the lagoon. This could create erosion on the walls, Bhabesh Roy

actioned for some soil to be placed down to mitigate the potential for erosion.

6. The freeboard was sufficient and estimated to be between 4-6 metres.
7. Discharge is syphoned over the berm wall, and takes 2 weeks to decant. To create a seal tight fit for the decanting of the lagoon, the foreman uses farmers grease at the connection points. The hose does not have heat tracing to encourage unfreezing of the pipe.
8. The lagoon has 1 monitoring station at the lagoon titled ARC-8, 4 Thermistors, 4 Stan Pipes, and 1 overflow canal. The thermistors access box appears to be damaged.
9. The concerns of this site would be the pooling of water on the west side of the lagoon wall, and the damage to the access box for the thermistors, which were noted by Bhabesh Roy at the time of the inspection.
10. It was observed that signs of large spills, or accumulated small spills had drenched the location of the discharge. No spill reports have come out of this site to date (photo 5 & 6)

Solid Waste Facility

11. The licensee segregates their waste into Burn and Cap, Bulk Metal, Tires, and hazardous waste.
12. It was observed that a small stream flow through the existing metal storage area and then flows through the hazardous waste facility (photo 7).
13. Hazardous Waste batteries were observed throughout the metals section of the land fill. Any rain that gets in contact with the batteries has the potential to carry with it the hazardous waste into water.
14. At the time of the inspection it was observed that a lot of the hazardous waste found throughout the solid waste facility was not in secondary containment, and not encapsulated, which runs contrary to Part D: Subsection 7 which is to prevent the deposit of deleterious substances into any water. Hazardous waste exposed to the elements poses a significant risk of migration of the hazardous waste into water.
15. The burn and cap section of the solid waste facility had a pool of water in the middle of the facility (photo 8).

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:

- It was encouraged at the time of the inspection to consolidate all the hazardous waste such as batteries found throughout the bulk metal section of the Solid Waste section to segregate them to the hazardous waste sea can.
- Articulate how you calculate water usage.
- The Licensee is reminded to remain diligent to prevent wastes from entering water, and the environment.
- Stop all the water from interacting with the hazardous waste facility, and the burn and cap from migrating off site.
- Submit spill reports for all spills regardless of size and quantity, from all hamlet facilities.
- Submit a spill report for the observed spills at the Sewage Lagoon, and clean it up as per the license.

SECTION 3



Comments



Non-Compliance with Act or Licence




Action Required

Please review the subsections of the water license:

- Part D: Subsection 7:
The Licensee shall segregate and store all hazardous materials and/or hazardous waste within the Solid Waste Disposal Facility and in such a manner as to prevent the deposit of deleterious substances into any Water and until such time that proper disposal arrangements are made;
- Part B: Subsection 5:
The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of Water volumes as required under Part I, Item 3
- Part B: Subsection 11
The Licensee shall immediately report any spills of Waste, which are reported to, or observed by the Licensee, within the municipal boundaries or in the areas of the Water Supply or Waste Disposal Facilities, to the NWT/NU 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295.
*Inspector telephone number 1 867 975-1787
- Part G: Subsection 4
If, during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
a. employ the appropriate contingency measures outlined in the Spill Contingency Plan referred to in Part G, Item1;
b. report the incident immediately to the NWT/NU 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
c. for each spill occurrence, submit to the Inspector, within thirty (30) days after initially reporting the event, a detailed report that provides the necessary information on the location (including the GPS coordinates), initial response action,

remediation/clean-up, status of response (ongoing, complete), proposed disposal options for dealing with contaminated materials and any preventative measures to be implemented.

Licensee or Representative	Inspector's Name
Bhabesh Roy	Joseph Monteith
Signature	Signature
	
Date	Date
	November 10, 2021

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

PHOTO LOG

Date	Camera	Inspector	Location
July 21, 2021	Nikon Coolpix 52000738	Joseph Monteith	Arctic Bay
Photo Log # 1			
Photo 1			
			
Description: Site of water withdrawal – water meter broken.			

Photo Log

Photo 2

Location

Arctic Bay, Qikiqtani Region, Nunavut



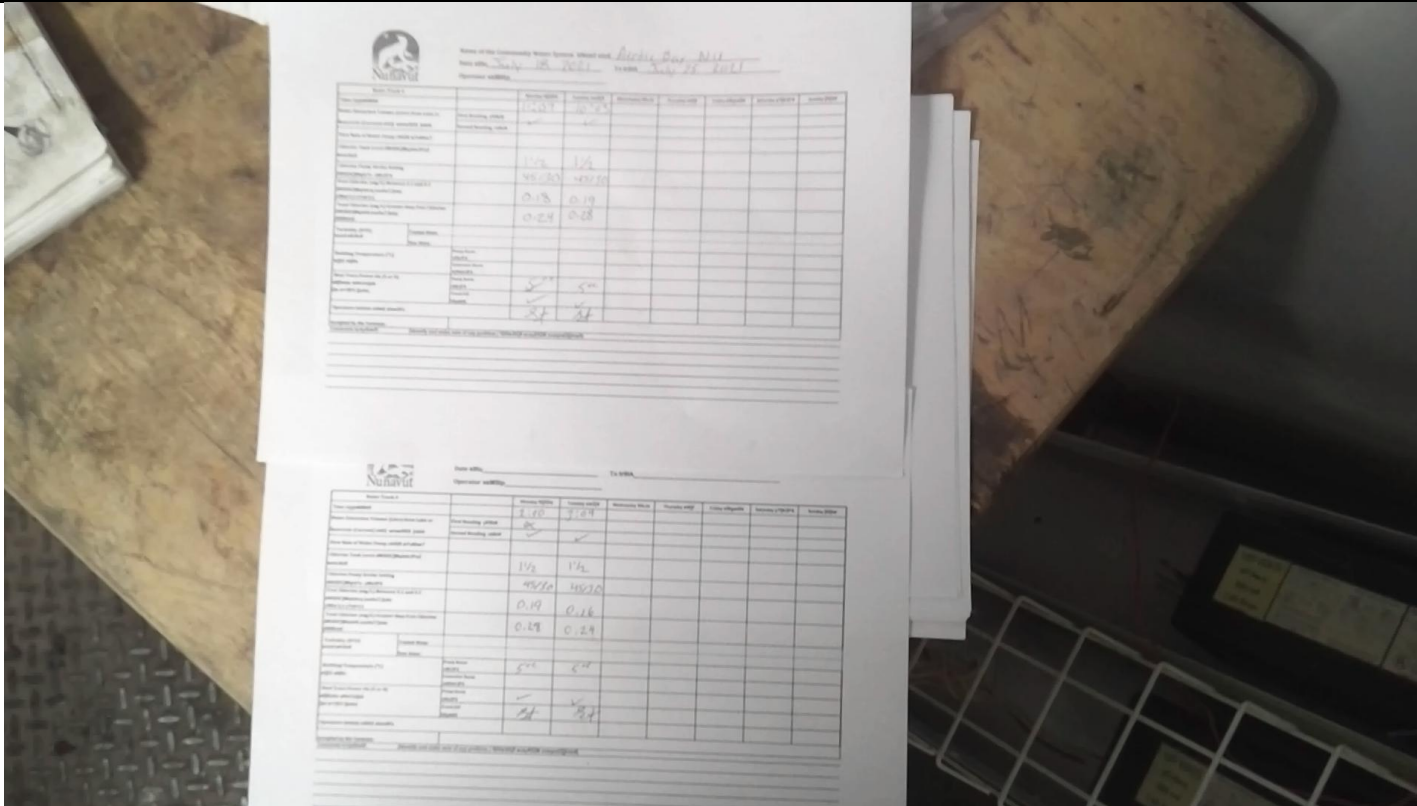
Description: Flow Gauge Accumulator. +GF+ Signet. Totals read 38983037

Photo Log

Photo 3

Location

Arctic Bay, Qikiqtani Region, Nunavut



Description: Water logs being kept. But, photo is ineligible. Bottom sheet starting reads 45130. Doesn't indicated whether in litres or m³.

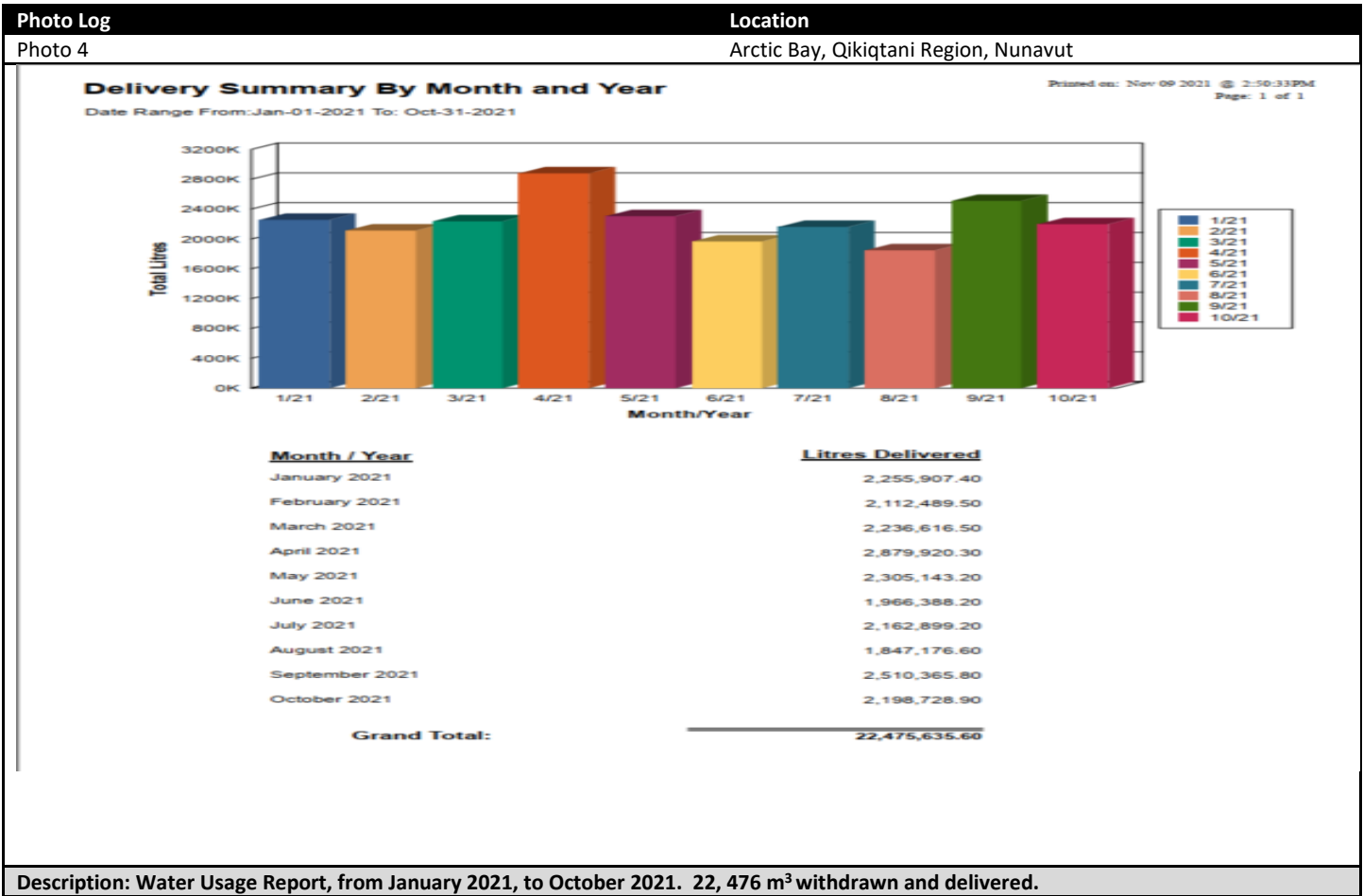


Photo Log	Location
Photo 6	Arctic Bay, Qikiqtani Region, Nunavut



Description: Sewage Truck discharging sewage into the sewage lagoon. Foreground coloration. Signs of spills

Photo Log #	Location
Photo 7	Arctic Bay, Qikiqtani Region, Nunavut



Description: Hazardous Waste exposed to the elements. Water puddles in the lower foreground of photo.



Photo Log #	Location
Photo 8	Arctic Bay, Qikiqtani Region, Nunavut
	
Description: Burn and cap section of the solid waste facility. Standing water	