

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Arctic Bay	Gord Marinic
Licence No. / Expiry	Representative's Title
3BM-ARC1924	Regional Engineer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 9, 2022	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 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: Potable water, Sewage, and Solid Waste</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	1-3
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				C	4-18
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): N 73° 1'59.65",W 85° 9'51.63"			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					

SECTION 1	<input checked="" type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
BACKGROUND <p>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.</p>			
Inspector Statement <p>On July 9, 2022, a water licence inspection was conducted by Water Resource Officer(WRO) Joseph Monteith at the Hamlet of Arctic Bay, Qikiqtani Region, Nunavut to verify compliance with the terms and conditions of 3BM-ARC1924.</p>			
Water Use and Related structures <ol style="list-style-type: none">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.The flow meter in the pump house reads 38985538m³ (photo 2). The municipality records the amount withdrawn from trucks, and that information is recorded in a log book (photo 3).On October 12, 2022 Sam Willie, Foreman, emailed the Hamlet of Arctic Bay’s Water Usage Report, from January 2022, to August, 2022. 18,373 m³ withdrawn from the water source and delivered(photo 4).			
Waste Water Treatment Facility <ol style="list-style-type: none">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.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.			

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. A notification to decant was emailed to WRO Monteith on September 1, 2022.

9. 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.

10. 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.

11. 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

12. The licensee segregates their waste into Burn and Cap, Bulk Metal, Tires, and hazardous waste.

13. It was observed that a small stream flow through the existing metal storage area and then flows through the hazardous waste facility (photo 7).

14. 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.

15. 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.

16. The burn and cap section of the solid waste (photo 8). 3 piles of contaminated waste was deposited on plastic sheets, and covered with plastic sheets, and weighted down (photo 9).

17. Hazardous Waste Drums were observed at the Municipal Garage within municipal boundaries. Numerous signs of spills were observed behind the garage (photo 10, 11, 12).

Sedimentation

18. It was observed that the road was washing out between the community and the tank farm (photo 13). Silt fencing should be installed to mitigate the spread of the sediments into the ocean.

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 municipal garage. Move the Hazardous Waste Drums to the Solid Waste Facility as per the terms and conditions of your water license Part D: Item 7, and clean the spills.

• Install silt fencing to the areas where surface run off typically washes out the roads.
- SECTION 3

☐ Comments


☒ Non-Compliance with Act or Licence

☐ Action Required
- Please review the subsections of the water license:

• Part D: Item 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;

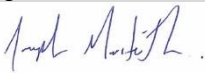
• Part B: Subsection 5:
The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of Water volumes as required under Part I, Item 3

• 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) 975-4289.
*Inspector telephone number 1 867 975-1787

• Part G: Subsection 4
- 
- Report #Click here to enter text.
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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
Gord Marinic	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 9, 2022	Galaxy S9	Joseph Monteith	Arctic Bay
Photo Log			
Photo 1			
			
Description: Site of water withdrawal – water meter broken.			

Photo Log

Location

Photo 2

Arctic Bay, Qikiqtani Region, Nunavut




Description: Flow Gauge Accumulator. +GF+ Signet. Totals read 38985538m³.

Photo Log

Location

Photo 3

Arctic Bay, Qikiqtani Region, Nunavut



Name of the Community Water System kNos2 xtz5

Date s9lu July 4 - 2022

Operator xsM5tp

To tr9IA

July 10 - 2022

		Monday N Z0/s	Tuesday xw2 X	Wednesday WzJx	Thursday et6 f	Friday s9 gw8N	Saturday y7 b3F4	Sunday JN ta
Water Truck #								
Time c jx8 9 A S			11:25am	1:43pm	11:29am			
Water Extraction Volume (Litre) from Lake or Reservoir (Current) cktQ wmw 6XS Job 4	First Reading yK9o6							
	Second Reading ra9o6							
Flow Rate of Water Pump cktQ5 w7u6hw7								
Chlorine Tank Level dW3DC Mq stc3Fs2 wmc3 z5			2/3	2/3	2/3			
Chlorine Pump Stroke Setting dW3DC Mq s7u u9 x3F4			25/40	25/40	25/40			
Free Chlorine (mg/L) Between 0.2 and 0.5 dW3DC Mq stc uoAx7 Job x 8 zi 0.2 x7ml 0.5			0.28	0.27	0.28			
Total Chlorine (mg/L) Greater than Free Chlorine dW3DC Mq st5 (uoAx7 Job dt8 6ns l)			0.30	0.26	0.33			
Turbidity (NTU) wus2 wh3 z5	Treated Water							
	Raw Water							
Building Temperature (°C) w j 2 s8 f z	Pump Room u9 x3F4		20°C	20°C	20°C			
	Generator Room ssMatc3F4							
Heat Trace Power On (Y or N) s8 f nstz wfm1m zb (w s=7 t) x4v)	Pump Room u9 x3F4							
	Truck Fill kh ystk5							
Operators Initials xdt52 xtos3Fz								
Accepted by the Foreman:								
Comments scsy4 nw6:	(Identify and make note of any problem / N Nw3 Q5 scsyE Q8 xvsqosD) tnw6							

Description: Water logs being kept. But, records of water withdrawal volumes not recorded.

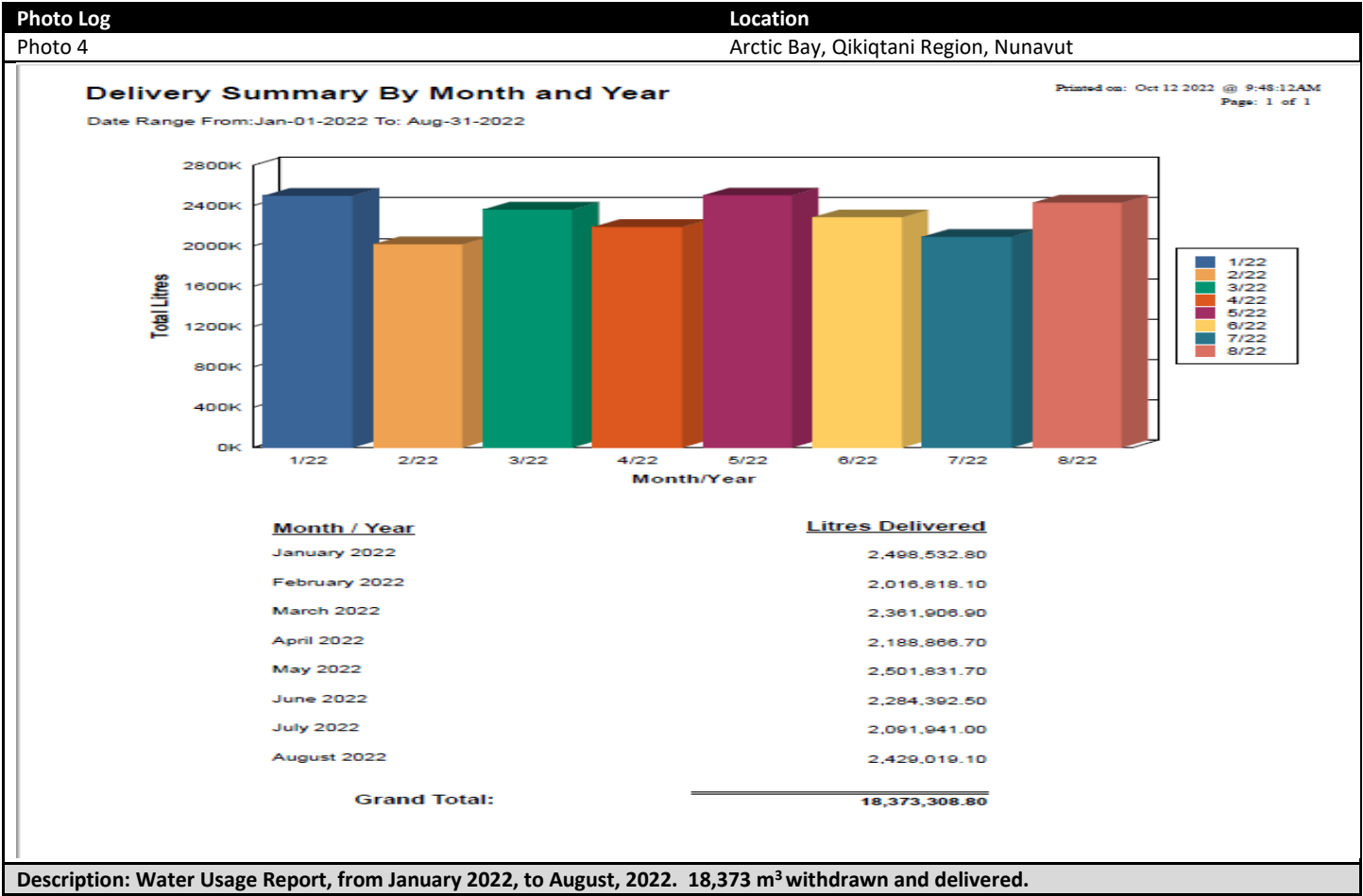


Photo Log	Location
Photo 6	Arctic Bay, Qikiqtani Region, Nunavut



Description: West side of Waste Water Treatment Lagoon. Surface Water Run off drains into the lagoon.

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



Description: Hazardous Waste exposed to the elements. Numerous spills observed.

Photo Log #	Location
Photo 8	Arctic Bay, Qikiqtani Region, Nunavut



Description: Burn and cap section of the solid waste facility.

Photo Log #	Location
Photo 9	Arctic Bay, Qikiqtani Region, Nunavut



Description: Contaminated Soil, placed at the entrance to the burn and cap section of the Solid Waste Facility.

Photo Log #	Location
Photo 10	Arctic Bay, Qikiqtani Region, Nunavut



Description: Contaminated Soil, placed at the entrance to the burn and cap section of the Solid Waste Facility.

Photo Log #	Location
Photo 11	Arctic Bay, Qikiqtani Region, Nunavut



Description: Hazardous Waste Drums, spilling its product to the receiving environment. Spill migrates to culvert that diverts surface run-off.




Photo Log #	Location
Photo 12	Arctic Bay, Qikiqtani Region, Nunavut
	
Description: Hazardous Waste Drums observed behind 2 nd Municipal garage. Spills observed.	

Photo Log #	Location
Photo 13	Arctic Bay, Qikiqtani Region, Nunavut
	
Description: Road washing out, gravel from road migrating to the ocean. Silt fencing required.	