



WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Arctic Bay	Bhabesh Roy
Licence No. / Expiry	Representative's Title
3BM-ARC1419/Renewal expires August 28, 2019	Municipal Engineer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 26, 2018	Joseph Monteith
Activities Inspected	
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Mining
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Fuel Storage
	<input checked="" type="checkbox"/> Other: Potable water, Sewage, and Solid Waste
	<input type="checkbox"/> 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	4-13			
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	<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 Hamlet of Arctic Bay is located on Borden Peninsula, Baffin Island, Nunavut. The community is surrounded by steep hills and sits mostly on a low gravel beach on the shore of Arctic Bay, off of Adams Sound. Approximately 766 (2013) people reside in Arctic Bay; the hamlet is responsible for supplying the potable water required and managing waste generated by the community. Potable water required, solid waste and sewage generated by the community are transported by truck to/and or from the community to the respective treatment/management facility.</p> <p>The community has a valid Water Licence, which is set to expire in August of 2019. They are permitted to withdraw 299 cubic metres of water per day for an annual total of 109,135 cubic metres. That translates to 109,135,000 Litres annually. The way they calculate the amount of sewage waste discharged is by duplicating the water withdrawal amounts. The submission date of their annual report is March 31, 2018 with the reporting dates from January 1, 2018 to December 31, 2018.</p>			
Inspector Statement			
<p>On July 26, 2018, a water licence inspection was conducted at the Hamlet of Arctic Bay, Qiqiktani Region, Nunavut</p>			
Water Use and Related structures			
<ol style="list-style-type: none">Water is being withdrawn from pump house at Marcil Lake, 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 isn't working. The municipality records the amount withdrawn from trucks, and that information is recorded in a log book.At the time of the inspection they recorded 8,971m³ of water withdrawn from Marcil Lake between the months of January 2018 to June 2018(see photo 1). The amount delivered logged between the months of January 2018, and July 2018 is 11,232m³ (see photo 2). In photo #2, it shows a record of delivery for July of 2018 of 550m³, with a difference of 1,710m³ of unaccounted water use. The municipality adds twenty percent to their water use quantity to account for uses such as dust suppression and other unaccounted water uses.			



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.
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 a small stream flow through the existing metal storage area and then flows into a sump downstream of the domestic waste facility. The sump is located near a stream. That site has a monitoring station listed as ARC-6.
11.

Although samples were not taken in this field season, samples will be taken at the monitoring sites in the 2019 season.
12.

No records of sludge have been provided.

Solid Waste Facility

13.

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

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:

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It was encourage 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.

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Send out Hazardous Waste to an approved Hazardous Waste Disposal Facility, to make room for any future deposits of hazardous waste.

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Articulate how you calculate water usage.

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The Licensee is reminded to remain diligent to prevent wastes from entering water, and the environment.

SECTION 3

☐ Comments

☒ Non-Compliance with Act or Licence

☐ Action Required

Please review the subsections of the water licence:

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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.

Licensee or Representative	Inspector's Name
Bhabesh Roy	Joseph Monteith
Signature	Signature
Date	Date
	December 6, 2018

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

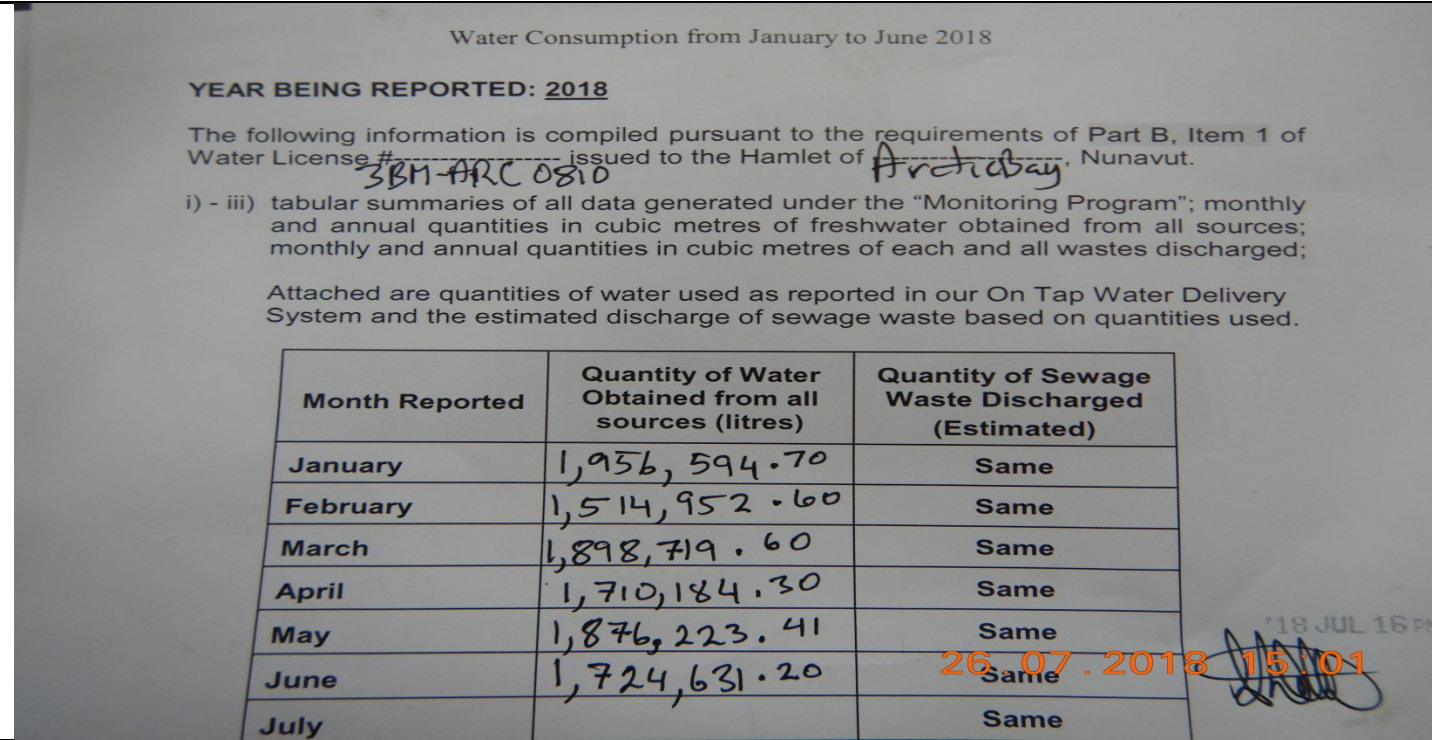


PHOTO LOG

Date	Camera	Inspector	Location
July 26, 2018	Nikon Coolpix 52000738	Joseph Monteith	Arctic Bay

Photo Log # 1

Photo 1



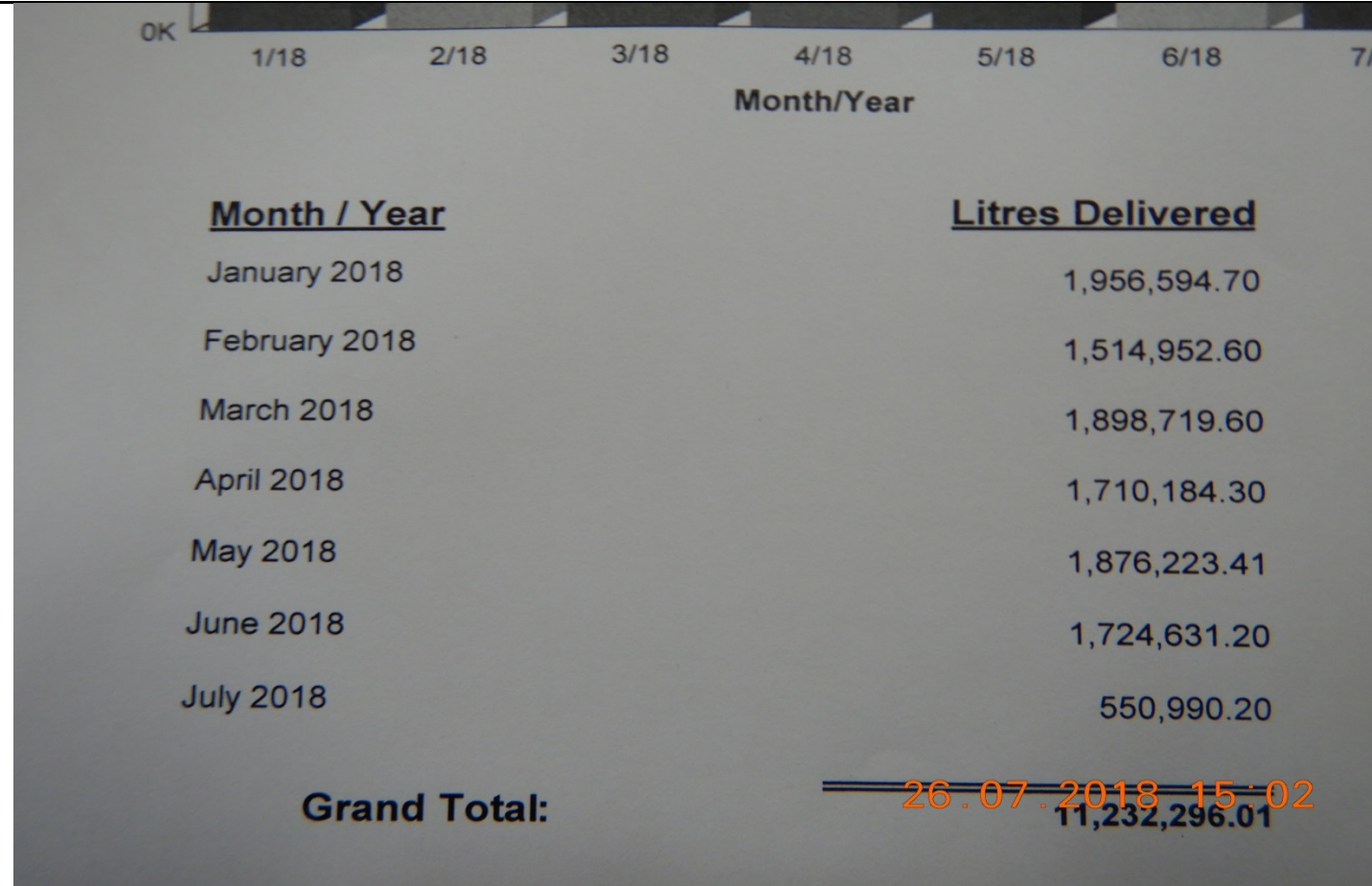
Description: Water consumption from January to June 2018

Photo Log

Photo 2

Location

Arctic Bay



Description: Water Delivered from January to July 2018



Photo Log

Photo 3

Location

Arctic Bay



Description: pool of water ontop of lagoon wall

Photo Log

Photo 4

Location

Arctic Bay



Description: Water Delivered from January to July 2018



Photo Log #

Photo 5

Location

Arctic Bay



Description: Hazardous Waste exposed to the elements

Photo Log #

Photo 6

Location

Arctic Bay



Description: Battery exposed to the elements in the bulk metal section of the Solid Waste Facility



Photo Log #

Photo 7

Location

Arctic Bay



Description: Battery exposed to the elements in the bulk metal section of the Solid Waste Facility

Photo Log #

Photo 7

Location

Arctic Bay



Description: Battery exposed to the elements in the bulk metal section of the Solid Waste Facility