

WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Kimmirut	Bhabesh Roy
Licence No. / Expiry	Representative's Title
3BM-KIM1929	Municipal Engineer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
30/06/2020	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 checked="" type="checkbox"/> Other: Potable Water Source, Waste Water Treatment, and Solid Wastes
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Fuel Storage
	<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				NA	
B: GENERAL CONDITIONS				C	
C: CONDITIONS APPLYING TO SECURITY				NI	
D: CONDITIONS APPLYING TO WATER USE				A	1-8
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				C	9-19
F: CONDITIONS APPLYING TO MODIFICATIONS				NI	
G: CONDITIONS APPLYING TO CONSTRUCTION				NI	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING				C	15
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING				NI	
J: CONDITIONS APPLYING TO MONITORING				NI	
SCHEDULES				A	
* The observation number corresponds with specific comments provided below.					
Samples taken by Inspector:			Location(s): N62° 50' 06'' and W69°52'04''		
<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. __)
<b>BACKGROUND</b> <p>The Hamlet of Kimmirut is a small community with a population of approximately 546. The Hamlet is located on the southern tip of Baffin Island in Nunavut at 62°50’06’’N and 69°52’04’’W within the Qikiqtani region of Nunavut. The Municipality utilizes Fundo Lake as a source for their fresh water supply, which is located approximately 1 km south-west of the Hamlet. Water is taken via an inclined shaft intake which is equipped with a submersible pump located below the water level in the lake, and distributed to the community by truck. The Hamlet of Kimmirut currently discharges its sewage to a ditch which drains directly to the ocean. In 2001 a new sewage lagoon was constructed 1.5 km from the community to improve the treatment of sewage. Due to public concerns, that lagoon was deemed unsafe to the fish surrounding the lakes adjacent to the new lagoon, and was decommissioned. Currently the hamlet continues to use the ditch to discharge the sewage.</p> <p>ON May 27, 2019 Richard Dwyer sent Water Resource Officer (WRO) Monteith a copy of Kimmirut’s new Water Licence 2BE-KIM1929. The new water license is a type “B” water license and authorizes them to withdrawal 35,000 cubic metres annually. This withdrawal amount is an increase from 30,000 cubic metres annually, as the license extension is for 10 years.</p> <b>Inspector Statement</b> <p>On June 30, 2020, an inspection was conducted at the Hamlet of Kimmirut, Qikiqtani Region, Nunavut.</p> <p>This inspection was conducted as per Part A: subsection 1(c) of the water licence 3BM- KIM1929, and subsection 46 of the NWNSRTA.</p> <b>General Condition</b> <p>At the time of the inspection, no annual report was submitted for 2019.</p> <b>Water Use and Related Structures</b> <p>1. Water is being withdrawn from Fundo Lake from a water pumping station (photo 1).</p>			

2. The quantity of water withdrawn from the lake is being accounted for by calculating the amount of water being delivered.
3. Water Meter is broken (photo 2).
4. Water Usage Log at the site of water withdrawal site at Fundo Lake (photo 3).
5. On June 30, 2020 The Senior Administrative Officer provided, WRO Monteith a copy of the water consumption rates for the Hamlet of Kimmirut for the Months of January 1, 2020 to June 20, 2020 with the current annual total of 6901316.37 Litres withdrawn from Fundo Lake. This falls below the amount listed in their expired water licence. The trend shows that the Hamlet of Kimmirut might not exceed the amount approved in the expired water licence (photo 19).
6. At the time of the inspection, no evidence of drawdown from water use was evident at the lake.
7. A yellow triangle sign titled KIM1 indicting the location of a monitoring station was observed at the time of the inspection (photo 4).
8. Road is washing away into Fundo Lake (photo 5).

Solid Waste Facility

9. The Hamlet deals with solid waste by burning the burnable waste, and capping the ash with gravel obtained by their gravel pit (photo 6).
10. The fencing did appear to be incomplete in its construction and without maintenance and has become damaged and should be repaired (photo 7).
11. The facility is not lined. The leachate from the Solid Waste Facility has the potential to run-off this facility at or near the discharge location of the municipal wastewater discharge location (photo 8).
12. During the inspection it was observed that the hazardous waste was located at two locations. The Solid waste facility which had the hazardous waste was exposed to the elements (Photo 9). This site is not lined and has the potential to mix with fresh water during rainfall, and during the freshet, and at the Municipal Garage. At the municipal garage Hazardous Waste is stored within sea cans behind the municipal garage. At the time of the inspection some of the hazardous waste was taken out the sea cans, so that sea-cans can be cleaned (Photo 10, 11, 12).
13. The Hamlet of Kimmirut uses a waste oil burner to heat up the municipal garage. They store waste oil to use it for their oil burner (photo 13).
14. Garbage blown from the Solid Waste Disposal Facility was observed within the drainage ditch of the Wastewater Discharge Location. Tires were deposited to the site (photo 14).
15. Signs of hazardous waste and spills within the solid waste facility (photo 16,17 & 18)

Wastewater Discharge

16. Municipal Wastewater is being discharged at a location approximately 300 metres from the ocean (photo 15). The wastewater flows over land before it enters the ocean. During a discharge the wastewater runs along the ditch and mixes with the rainfall and fresh water run-off during the freshet while migrating down to fresh water ponds and streams that runs along the base of the mountain ahead its final deposit to the ocean. Further Sampling will be conducted as to ascertain whether this discharging of wastes impacts other pieces of legislation.
17. There are two monitoring stations at the along the discharge route titled KIM 2 & 3 (photo 14). No sampling was conducted at the time of the inspection. Last sample taken on June 29, 2020
18. The estimated amount of sewage waste discharged is being recorded in the Hamlets “Water Consumption” document listed as “same”. The estimates aren’t accurate as it doesn’t take into account all water withdrawn from the water source for water uses such as dust suppression, which cannot be calculated as the same amount discharged at the discharge location for waste water.
19. Two yellow triangle signs titled KIM 2 and KIM 3 indicating the location of the monitoring stations was observed on site at the time of the inspection (photo 14).

SECTION 2	<input type="checkbox"/> Comments	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
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Non-Compliance related to the water license

- Part B: (B). The Licensee shall file an Annual report on the Appurtenant Undertaking with the Board no later than March 31<sup>st</sup> of the year following the calendar year being reported, containing the following information:
- a. tabular summaries of all data generated under the “Monitoring Program”;
  - b. summary of modifications to the “Monitoring Program” in accordance with Part H, Item 13;
  - c. the daily, monthly and annual quantities in cubic metres of freshwater obtained from all sources;
  - d. the daily, monthly and annual quantities in cubic metres of each and all Waste discharged; including the hazardous and non-hazardous Waste accepted at the Solid Waste Facilities;
  - e. a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated structures and facilities;
  - f. a list of unauthorized discharges and summary of follow-up action taken;
  - g. a summary of any abandonment and restoration work completed during the year and an outline of any work

anticipated for the next year;

h. a summary of any studies, reports and plans (e.g., Operation and Maintenance, Abandonment and Restoration, QA/QC) requested by the Board that relate to waste disposal, water use or reclamation, and a brief description of any future studies planned;

i. An update on the Compliance Plan and progress made on specific requirements therein; and

j. any other details on water use or waste disposal requested by the Board by November 1st of the year being reported.

Part B: (7). The Licensee shall immediately report to the 24-Hour Spill Report Line at (867) 920-8130, 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.

Part C (6): The Licensee shall not cause erosion to the banks of any water body and shall provide necessary controls to prevent such erosion.

Part C (7): Sediment and erosion control measures shall be implemented prior to and maintained as required during Hamlet operations, to prevent entry of sediment into Water.

Part D (4). The Licensee shall provide at least ten (10) days notification to an Inspector, prior to initiating any decant of the sewage lagoon.

Part D (6). The Licensee shall deposit of and permanently contain all Solid Wastes at the Solid Waste Disposal Facility or as otherwise approved by the Board in writing.

Part D (7). The Licensee shall implement measures to control wind-blown litter at the Solid Waste Disposal Facility.

**Non-Compliance with the Act**

Nunavut Waters and Nunavut Surface Rights Tribunal Act

Use of Waters

11. (1) Subject to subsection (2), no person shall use, or permit the use of, waters in Nunavut except in accordance with the conditions of a licence.

(2) Subsection (1) does not apply in respect of

(a) any unlicensed use of waters that is authorized by the regulations.

(b) the use of waters

(i) for a domestic purpose, or

(ii) for the purpose of extinguishing a fire or, on an emergency basis, controlling or preventing a flood; or

(c) The use of waters in a national park.

(3) Where a person diverts waters for a purpose referred to in subparagraph (2)(b)(ii), the person shall, when the need for the diversion has ceased, discontinue the diversion and, in so far as possible, restore the waters to their original channel.

Deposit of Waste

12. (1) Subject to subsection (2) and except in accordance with the conditions of a licence, no person shall deposit or permit the deposit of waste

(a) in waters in Nunavut; or

(b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut.

(2) Subsection (1) does not apply in respect of

(a) any unlicensed deposit of waste that is authorized by the regulations; or

(b) The deposit of waste in a national park.

SECTION 2	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
Bring the non-compliance issues identified in the inspection into compliance by: -maintain and complete the construction of fencing to contain all wastes permanently in the Solid Waste Facility -stop and mitigate the migration of hazardous waste from the Solid Waste Facility -stop the entry of water into the solid waste facility and its interaction with hazardous waste. -install signage to notify the public that there are dangerous hazardous wastes on site. -report all spills as per Part B (7) of the water licence. -consider an amendment to the water license to have all hazardous waste stored at the Municipal Garage. -build a berm to limit the amount of water entering in the hazardous waste facility, and taking the hazardous waste with it.			

-Install Spill Kits next to the hazardous waste facility to properly clean up spills.

Licensee or Representative	Inspector's Name
Bhabesh Roy	Joseph Monteith
Signature	Signature
Date	Date
	June 20, 2020

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

PHOTO LOG

Date	Camera	Inspector	
June 30, 2020	Nikon Coolpix	Joseph Monteith	
Photo Log #	Location		
Photo 1	Kimmirut, NU		
			
Description: KIM 1 monitoring site at potable water source			

Photo Log

Location

Photo 2

Kimmirut

Description: Water Meter – Accum-u-flo Signet – Broken no count of water withdrawal.

Photo Log #1

Location

Photo 3

Kimmirut

Description: no log on amount of water usage.



Photo Log #1	Location
Photo 4	Kimmirut
	
Description: KIM 2, and KIM3 posted signs down the drainage ditch of the Sewage discharge location. Wind Blown Garbage from Solid Waste Facility.	

Photo Log	Location
Photo 5	Kimmirut
	
Description: Road appears to be washing out into the water source at Fundo Lake.	



Photo Log	Location
Photo 6	Kimmirut
	
Description: Burn and cap of domestic garbage. No fencing around this section of the solid waste facility. Wind blown garbage blown across site of sewage discharge. Community complaint of wind blown garbage at Fundo Lake.	

Photo Log	Location
Photo 7	Kimmirut
	
Description: Fencing requires maintenance. Also, this is the only section that has been fenced for the solid waste facility. The fencing doesn't cover the burn and cap section of the solid waste facility.	



Photo Log	Location
Photo 8	Kimmirut
	
Description: Hazardous waste exposed to the elements at the Solid Waste Facility	

Photo Log	Location
Photo 9	Kimmirut
	
Description: A trench was dug from the hazardous waste site, to the sewage discharge location.	



Photo Log	Location
Photo 10	Kimmirut
	
Description: Movement of hazardous waste in the sea cans,	

Photo Log	Location
Photo 11	Kimmirut
	
Description: some hazardous waste stored outside, exposed the outside elements. Used to fuel the oil burner in the municipal garage. Wall doesn't appear to be able to contain any liquid wastes	



Photo Log	Location
Photo 12	Kimmirut
	
Description: some hazardous waste batteries stored outside, partially exposed the outside elements.	

Photo Log	Location
Photo 13	Kimmirut
	
Description: Waste Oil Burner in municipal garage. Out of commission requires request maintenance to operate.	



Photo Log	Location
Photo 14	Kimmirut
	
Description: Monitoring Stations “KIM 2 & KIM 3”, wind blown garbage carpet the sewage drainage ditch.	

Photo Log	Location
Photo 15	Kimmirut
	
Description: Sewage Discharge Location. Hamlet employees discharge sewage into drainage ditch.	



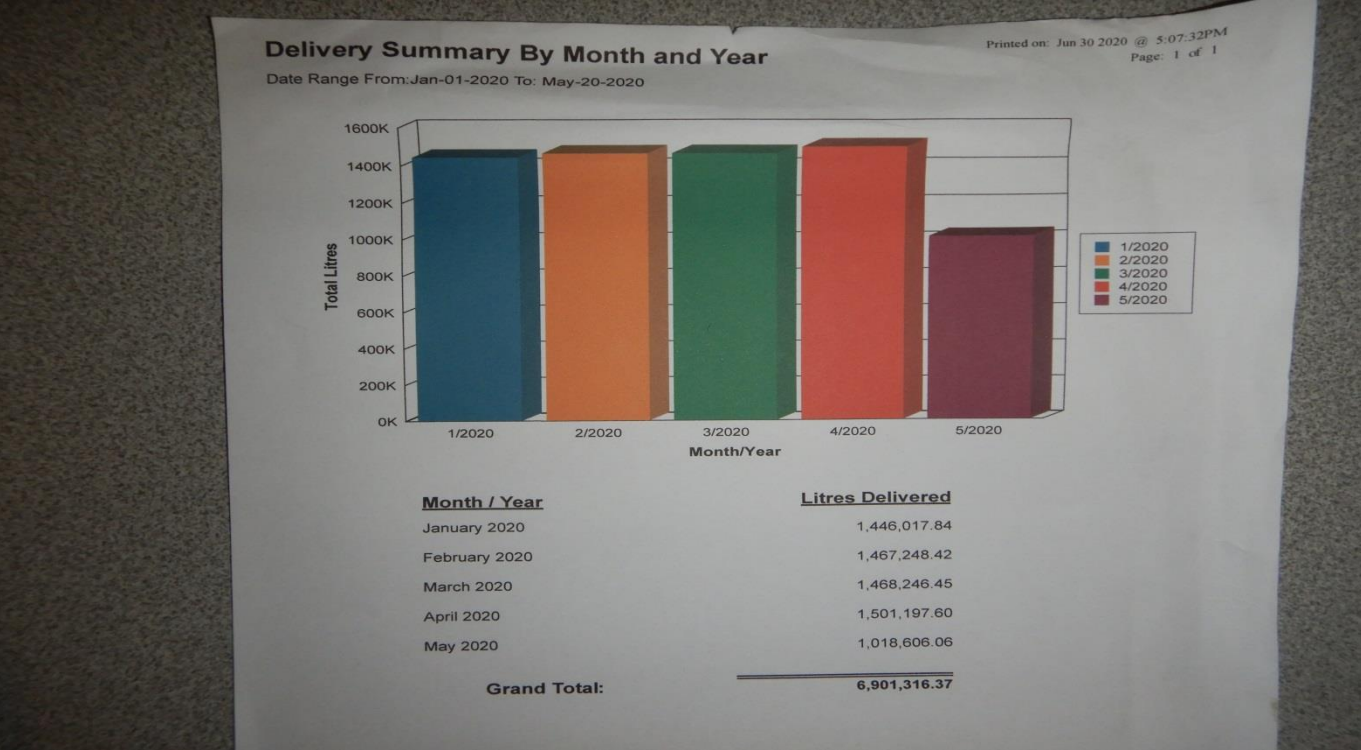
Photo Log	Location
Photo 16	Kimmirut
	
Description: Unreported spill at the solid waste facility	

Photo Log	Location
Photo 17	Kimmirut
	
Description: oil staining on ground from drum of waste oil. Walls of gravel don't appear to be able to contain any liquids. Water course next to leaking drum of waste oil.	





Description: Municipal Garage; oil staining on ground from drum of waste oil. Walls of gravel don't appear to be able to contain any liquids. Water course next to leaking drum of waste oil.



Description: Delivery Summary By Month and Year – Date range from Jan. 1, 2020 to May 20, 2020. Grand total 6901316.37 Litres withdrawn and delivered to Municipal clients.