

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
August 19, 2019	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	1-5
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				C	6-15
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				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. __)
BACKGROUND <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 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. A new sewage lagoon will be constructed in 2020, and a new solid waste storage facility sometime in the future.</p> <p>The Hamlet of Kimmirut was without a water licence since January 2011. On August 12, 2013 an application for a renewal was submitted. On May 31, 2016 a renewal and amendment application for a Type “B” water licence for water use and/or waste disposal was submitted to the Nunavut Water Board (NWB). The previous licence authorized the withdrawal of 30,000 cubic metres annually.</p> <p>On May 27, 2019 Richard Dwyer sent Water Resource Officer (WRO) Monteith a copy of Kimmirut’s new Water Licence 2BE-KIM1929. To expire May 27, 2029.</p> Inspector Statement <p>On August, 2019, an inspection was conducted at the Hamlet of Kimmirut, Qikiqtani Region, Nunavut. This inspection was conducted as per the water licence 3BM- KIM1929 WRO Monteith was accompanied by Bhabesh Roy, Municipal Engineer for the Government of Nunavut Community Government Services, throughout the inspection which concluded at approximately 2:50pm on August 19, 2019.</p> General Condition <p>On November 3, 2018 Bhabesh Roy sent WRO Monteith the Annual Reports for 2015, 2016, and 2017.</p> Water Use and Related Structures <ol style="list-style-type: none">Water is being withdrawn from Fundo Lake from a water pumping station (photo 1).The quantity of water withdrawn from the lake is being accounted for by calculating the amount of water			



being delivered.

3. On October 22, 2019 William Koonoo, Municipal Technical Clerk, Government of Nunavut (GN), Community & Government Services (CGS) sent WRO Monteith a copy of the water consumption rates for the Hamlet of Kimmirut for the Months of January 2019, to September 2019 with the current annual total of 13,641,977.48 litres (13641 m³) 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 10).
4. At the time of the inspection, no evidence of drawdown from water use was evident at the lake.
5. A yellow triangle sign titled KIM1 indicting the location of a monitoring station was observed at the time of the inspection.

Solid Waste Disposal Facility

6. The Hamlet manages solid waste by segregation of bulk metals, bulk wood, burn, and capping waste with gravel obtained by the hamlet gravel pit. Some of the hazardous waste exposed to the outside elements is mixed with wood and bulk metals. The level of segregation appears to have been compromised with a pile of bulk metal, woods, and hazardous waste.
7. During the inspection an engineer from Stantec was providing training to the staff in regards to managing the Solid Waste Disposal Facility.
8. The fencing did appear to be without maintenance and has become damaged and should be repaired.
9. The facility isn't lined. The leachate from the Solid Waste Facility has the potential to run-off this facility at or near the discharge location of the hamlet waste water discharge location. A ditch was created to divert any leachate accumulating in the solid waste facility to the drainage ditch used to discharge sewage (see photos 5, & 9). Contrary to Part D: Item 6 Part D: Item 8, and Part D: Item 9.

Hazardous Waste

10. Hazardous waste is located at two locations. The Solid waste facility which had the hazardous waste was exposed to the elements (Photo 4). 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 7). Some hazardous waste such as waste batteries were partially stored in the outside elements (see photo 8).
11. 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 6). Some drums of waste oil was stored outside for use by the waste oil burner. The drums were stored next to fresh water next to the hamlet garage (see photo 7 and 8).

Waste Water Discharge

12. Municipal Waste Water is being discharged at a location approximately 300 metres from the ocean. The waste water flows over land before it enters the ocean. During a discharge the waste water 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 receiving marine environment. (Photo 2). This will activity will cease in the summer of 2020, when a new waste water facility is constructed.
13. There are two monitoring stations at the along the discharge route titled KIM 2 & 3 (photo 3). No sampling was conducted at the time of the inspection. A sample will be conducted in the spring of 2020.
14. No records of waste discharged was observed or provided during the inspection. No notification of any discharges at the site.
15. Windblown litter has been accumulating in the waste water discharge location, and further downgrade. Truck tires have been observed in the waste water discharge location as well. This runs contrary to Part D: Item 7.

SECTION 2



Comments



Non-Compliance with Act or Licence



Action Required

Non Compliance related to the water licence

Part D: Item 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 Item 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: Item 7 The Licensee shall implement measures to control wind-blown litter at the Solid Waste Disposal Facility and Enhanced Solid Waste Disposal Facility once constructed.

Part D: Item 8.

The Licensee shall berm the Solid Waste Disposal Facility and implement other measures to prevent hazardous materials

and/or leachate from entering water.

Part D: Item 9 The Licensee shall segregate and store all hazardous materials and/or hazardous waste, including waste oil, within the Solid Waste Disposal Facility in a manner as to prevent the deposit of deleterious substances into any water until such a time as proper disposal arrangements are made.

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 as per the water licence 2BE-KIM1929:

- backfill the ditch used to divert water away from the Solid Waste Facility
- Repair the damage to the fencing in the Solid Waste Facility, implement measures to control wind-blown litter at the solid waste disposal facility.
- Implement measures to control wind-blown litter at the Solid Waste Disposal Facility.
- Segregate and store Hazardous Waste including waste oil, within the Solid Waste Disposal Facility in a manner as to prevent the deposit of deleterious substances into any water until such a time as proper disposal arrangements are made
- Provide the inspector 10 days’ notice of any decants of sewage to the discharge location as per Part D: Item 4.

Licensee or Representative	Inspector’s Name
Bhabesh Roy	Joseph Monteith
Signature	Signature
Date	Date
	October 25, 2019

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

PHOTO LOG

Date	Camera	Inspector	
August 19, 2019	Nikon Coolpix	Joseph Monteith	
Photo Log #	Location		
Photo 1	Kimmirut		
			
Description: KIM 1 monitoring site at potable water source. Chlorine Mixing tank in building. No water meter in the building.			



Photo Log	Location
Photo 2	Kimmirut
	
Description: Sewage Discharge Location – New tires migrated to the discharge point.	

Photo Log #1	Location
Photo 3	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 4

Kimmirut



Description: Hazardous waste exposed to the elements at the Solid Waste Facility



Photo Log

Photo 5

Location

Kimmirut



Description: foreground: burn and cap, left mid ground: hazard waste, and wood. Midground centre: trench was dug from the hazardous waste site, to the sewage discharge location.

Photo Log

Photo 6

Location

Kimmirut



Description: Movement of hazardous waste in the sea cans behind municipal garage.



Photo Log	Location
Photo 7	Kimmirut
	
Description: Hazardous waste and fuel in drums stored, exposed the outside elements. Used to fuel the oil burner in the municipal garage.	

Photo Log	Location
Photo 8	Kimmirut
	
Description: some hazardous waste batteries stored outside, partially exposed the outside elements.	



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

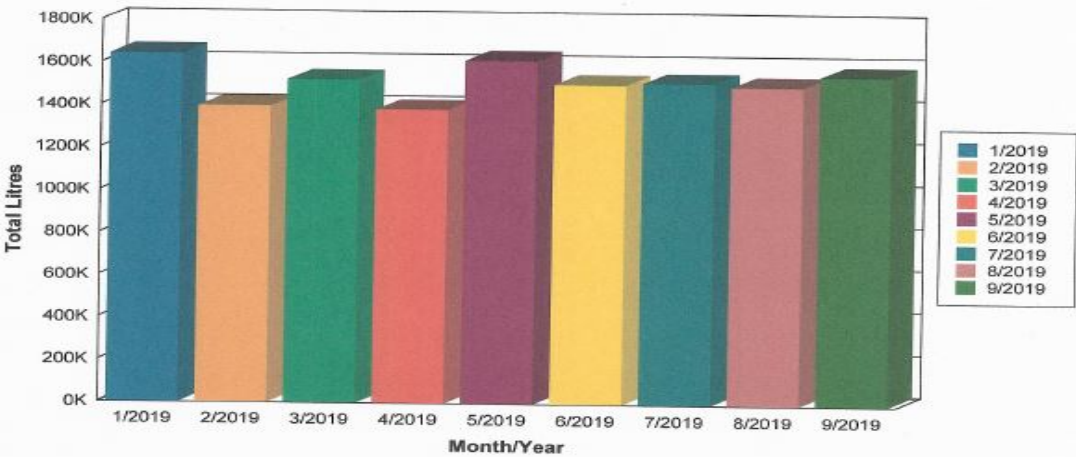
Photo Log	Location
Photo 10	Kimmirut



Delivery Summary By Month and Year

Date Range From:Jan-01-2019 To: Sep-30-2019

Printed on: Oct 22 2019 @ 11:03:00AM
Page: 1 of 1



Month / Year	Litres Delivered
January 2019	1,642,273.00
February 2019	1,396,423.50
March 2019	1,523,243.80
April 2019	1,382,739.70
May 2019	1,619,212.75
June 2019	1,507,643.70
July 2019	1,516,690.70
August 2019	1,501,185.95
September 2019	1,552,564.38
Grand Total:	13,641,977.48

Description: Delivery Summary By Month and Year. Shows 13,641,977.48 Litres were withdrawn. 13641 m³