

WATER LICENCE INSPECTION FORM

Original Follow-Up Report

Licensee			Licensee Represer	itative	
Hamlet of Sanikil	uaq		Bhabesh Roy	/	
Licence No. / Expiry			Representative's	litle little	
3BM-SAN1520			Municipal Er	ngineer & Senior Adn	ninistrative Officer
Land / Other Authorizations		Land / Other Authorizations			
Date of Inspection			Inspector		
September 11, 20)18		Joseph Mon	teith	
Activities Inspected					
☐ Camp	Drilling	☐ Mining	Constructi	on Reclamation	☐ Fuel Storage
☐ Roads/Hauling		nent Facility, Solid Waste	Other:		
	Facility, and Waste Wat	er Treatment Facility			
Conditions:	A- Acceptable	U-Unacceptable	C-Concern	NI-Not Inspected	NA- Not applicable
PART:				Condition	Observation No.*
A: SCOPE, DEFINITIO	NS AND ENFORCEME	NT		А	
B: GENERAL CONDIT	ONS			С	

conditions. A Acceptable	o onacceptable — c concern	iti itot inspected	itir itot applicable
PART:		Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT	NT	A	
B: GENERAL CONDITIONS		С	
C: CONDITIONS APPLYING TO SECURITY	NI		
D: CONDITIONS APPLYING TO WATER USE		А	1-7
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT		А	8-20
F: CONDITIONS APPLYING TO MODIFICATIONS		NA	
G: CONDITIONS APPLYING TO CONSTRUCTION		NA	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY		А	
PLANNING			
I: CONDITIONS APPLYING TO ABANDONM	ENT, RECLAMATION AND	NA	
CLOSURE PLANNING			
J: CONDITIONS APPLYING TO MONITORING		A	
SCHEDULES		A	
*The observati	on number corresponds with specific	comments provided belo	W.
Samples taken by Inspector: Location(s): Located at 56° 32' N lat		titude and 79° 14′ W long	itude
☐ Yes ⊠ No			

*The observation number corresponds with specific comments provided below.		
Samples taken by Inspector:	Location(s): Located at 56° 32′ N latitude and 79° 14′ W longitude	
☐ Yes ⊠ No		

SECTION 1	Comments (s)
DACKCDOLIND	

Non-Compliance with Act or Licence (s.__)

BACKGROUND

The Hamlet of Sanikiluag is located on the North end of Flaherty Island, a large central island of The Belcher Islands in Hudson Bay. Located at 56° 32' N latitude and 79° 14' W longitude, it is the southernmost community in Nunavut, about 150 kilometres off the west coast of Nunavik, Quebec, in the Baffin Region of Nunavut. It has an estimated population of 856 people (2014).

Relevant infrastructure includes:

- The Water Supply Facility which draws freshwater from Sanikiluaq Lake situated near the edge of the Community. Water is treated and then transferred to municipal trucks that distribute the Water to the Community;
- The Sewage Disposal Facility which consists of a natural ditch (serving as Sewage Lagoon) located 2.9 km west of the Hamlet with an approximate capacity of 21,600 m3. The sewage effluent is discharged from the lagoon to a wetland and then it migrates to the marine environment; and
- The Solid Waste Disposal Facility which includes a generic Landfill Area, a Bulky Metals Disposal Area, and a Hazardous Waste Storage Area.

Inspector Statement

On September 11, 2018 a Water Licence was conducted on the Hamlet of Sanikiluaq, Qiqiktani Region, Nunavut, to verify compliance with the Water Licence 3BM-SAN1520.

General Condition

On July 12, 2018, Richard Dwyer, Nunavut Water Board, Manager of Licencing, sent an email to Water Resource Officer (WRO) Monteith with a PDF attachment for the Sanikiluaq Annual Report Technical Review. Satisfying Part B: Item 1 of the Water Licence. In the review, it was found that additional information is necessary to meet the following requirements of the licence.

Water Treatment Facility (See photo 1)





- 1. The Water Treatment Facility withdrawals water from Sanikiluaq Lake as approved by the licence.
- 2. Water Treatment plant contains:
 - Broken flow metre (Photo 2);
 - Four water filter housing units(Photo 3);
 - Three Chlorine mixing tub(Photo 4);
 - Sump Pit (Photo 5).
- 3. Signs of water leak in filter housing #1 (Photo 6).
- 4. Fencing requires maintenance as it appears to be in a state of disrepair (Photo 7).
- 5. The withdrawal of water from Sanikiluaq Lake is being measured using meters installed on the water trucks. This method of measurement does not capture all water used from Sanikiluaq Lake by the Hamlet.
- 6. Activities such as dust suppression, truck cleaning, and any discharges from the truck not used for portable water deliveries are not reported or recorded.
- 7. The Licensee has identified Windy Lake as a potential secondary raw water source

Waste Water Treatment Facility (See photo 8)

- 8. The non-engineered Sewage Lagoon operates by passive exfiltration and overflow of the berm wall. The waste when discharging from the lagoon passes through approximately 1km of marshland before depositing into the ocean.
- 9. The intended design of the facility maintaining the 1.0 metre of freeboard does not appear to be feasible (See Photo 9).
- 10. A Yellow Triangle Sign was observed at the far side of the Sewage Lagoon, indicating a monitoring site. The labelling of the monitoring site was not observed. But, was observed in previous inspection reports.
- 11. The location where the trucks would discharge waste into the lagoon isn't in a fixed location. The trucks appear to be discharging at different locations at the Waste Water Truck Pad (Photos 10 and 11).
- 12. Numerous amounts of wind blow garbage were observed at the sewage lagoon (Photos 12).

Solid Waste Facility (See photo 13)

- 13. The majority of the Solid Waste Facility was segregated from each other in a fenced area into Bulk Metal, Burn and Cap, Bulk Woods, and tires. The Hazardous Waste section was outside of the fenced area.
- 14. The fencing was in a state of disrepair (Photo 14 and 15).

Comments

Comments

- 15. Gaps built into the fencing on the north side of the Solid Waste Facility allow for windblown garbage to exit the fenced area, and mixes with the leachate exiting the fenced area (Photo 16).
- 16. Geese were observed in the leachate streams exiting through the gaps in the fence (Photo 16).
- 17. The Burn and Cap area is a fenced structure with a fenced ceiling and a concrete foundation. The walls appear to be breaking apart (Photo 17).
- 18. Hazardous Waste Section is exposed to the elements with no berm to limit any migration of leaks. Multiple pools of water surround the Hazardous Waste Area (See photo 18). Contrary to Part D: Item 10, and Part D: Item 9.
- 19. Multiple signs of leaks and spills that appear to be migrating down slope (Photo 19 and 20).
- 20. There were numerous observations of hazardous waste such as batteries, and waste oil drums throughout the Bulk Metal section (Photo 21, 22, and 23).

Water Consumption Reports

SECTION 2

SECTION 3

On October 25, 2018, William Toonoo, Municipal Technical Clerk, GN-CGS, emailed WRO Monteith a copy of the Hamlet of Sanikiluaq Water Consumption from January to June, 2018 and showed a total consumption of 31174.73 m³. The Hamlet is authorized for 40,000 m³ per annum. The tread shows they might be exceeding their authorized amount, but are currently below (Photo 24).

Non-Compliance with Act or Licence

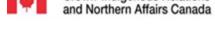
The following information is a summary of the Actions Required by the licensee to promote and ensure compliance.
Please provide a response to the following Actions Required within 30 days of receiving this report proposing timelines
to address the concerns noted:
• It is recommended that a flow meter be installed at the water intake to ensure compliance with Part B Item 1(b) of the Water License
 The Licensee is under conditions from the water licence to allow at least 1.0 metre of freeboard
 Maintain the fencing surrounding the Solid Waste Facility and the Water Treatment Facility as per Part C: Item 4, and Part D: Item 5.
Contain all leachate exiting the Solid Waste Facility
 Consolidate all hazardous Waste in the Solid Waste Disposal Facility, and deposit into the Hazardous Waste Section



Non-Compliance with Act or Licence

X Action Required

Action Required



Due to the body of water within the Solid Waste Disposal Facility, and its migration outside of the fenced area, please review Part D: Item 10 of the Water Licence.

Part D: Item 10

The licensee shall implement measures to ensure Hazardous Waste and or leachate from the Solid Waste Disposal Facility does not enter Water.

Due to the Hazardous Waste within the Bulk Metal Storage area, please review below Part D: Item 9.

Part D: Item 9

The Licensee shall segregate and store all hazardous materials and/or Hazardous Waste within the Solid Waste Disposal Facility in such a manner as to prevent the deposit of deleterious substances into any Water, until such a time that the materials have been removed for proper disposal at an approved facility.

Licensee or Representative	Inspector's Name
Bhabesh Roy	Joseph Monteith
Signature	Signature
	Augh Martill.
Date	Date
	November 27, 2018

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

PHOTO LOG



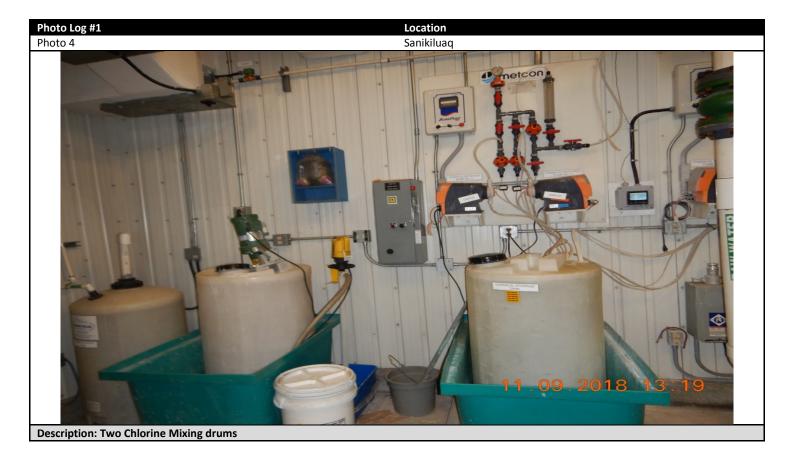


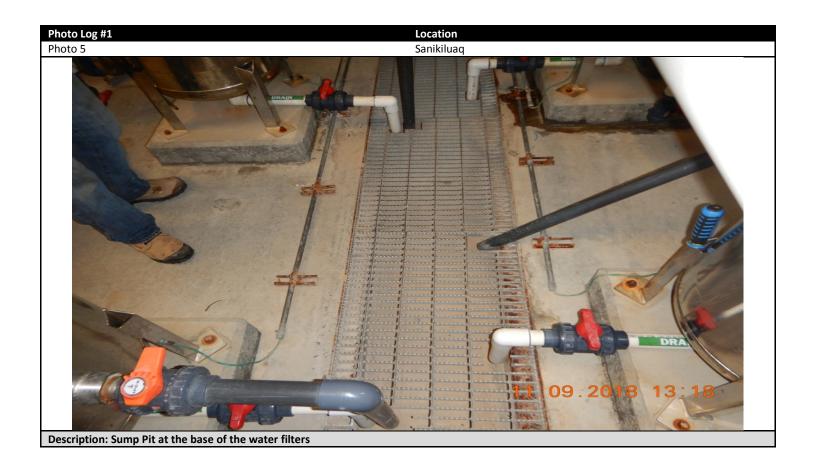










































Description: Fencing has fallen off its posts, right side of entrance to Solid Waste Facility







Description: Gap in fencing on the North Side of Solid Waste Facility has leachate draining out of facility, wind blow garbage on both sides of the fencing. Geese along the path of the leachate. Migration path appears to be less than 500 metres





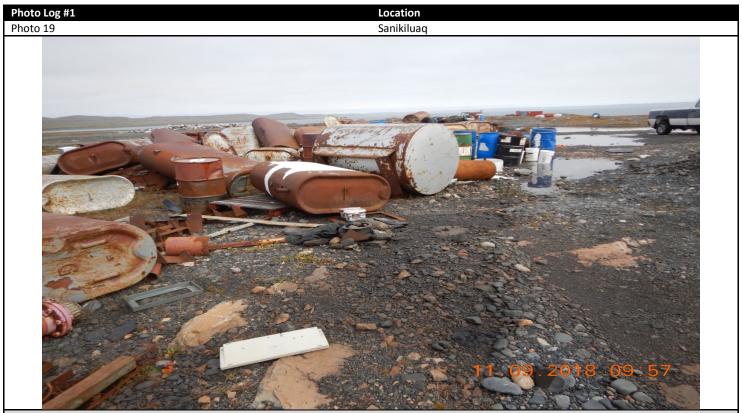


Description: Most of the fencing on the wall has fallen off. Ceiling appears to be slumping downwards









Description: Three Pools of water in the mid ground and background on the right hand side of the hazardous waste. Signs of spills in the foreground













Photo Log #1LocationPhoto 23Sanikiluaq

Water Consumption from January to June 2018

YEAR BEING REPORTED: 2018

The following information is compiled pursuant to the requirements of Part B, Item 1 of Water License #------ issued to the Hamlet of Kimmirut Nunavut.

 ii) - iii) tabular summaries of all data generated under the "Monitoring Program"; monthly and annual quantities in cubic metres of freshwater obtained from all sources; monthly and annual quantities in cubic metres of each and all wastes discharged;

Attached are quantities of water used as reported in our On Tap Water Delivery System and the estimated discharge of sewage waste based on quantities used.

Month Reported	Quantity of Water Obtained from all sources (litres)	Quantity of Sewage Waste Discharged (Estimated)
January	3,705,174.60	Same
February	3,239,472.60	Same
March	3,878,476.50	Same
April	3,493,502.30	Same
May	3,701,670.30	Same
June	3,378,545.00	Same
July	3,067,163.20	Same
August	3,447,200.10	Same
September	3,263,535.10	Same
October	0.00	Same
November	0.00	Same
December	0.00	Same
Annual Total	31,174,739.70	Same

Note: The average consumption volume is considered equal to the discharge volume in each month because there is no meter in the intake or discharge pipe.

Description: 2018 Water Consumption Report for Sanikiluaq between January to June 2018 shows a total consumption of 31174739.70 Litres consumed.

