

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Hamlet of Clyde River	Bhabesh Roy
Licence No. / Expiry	Representative's Title
3BM-CLY1924	Regionals Engineer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
October 12, 2021	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 type="checkbox"/> Other: Potable Source, Waste Disposal Facility, Solid Waste Facility, General Conditions ,</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				NA	
B: GENERAL CONDITIONS				A	1,2
C: CONDITIONS APPLYING TO SECURITY				NI	
D: CONDITIONS APPLYING TO WATER USE				C	3-7
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				A	8-16
F: CONDITIONS APPLYING TO MODIFICATIONS				NI	
G: CONDITIONS APPLYING TO CONSTRUCTION				NI	
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING				C	
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING				NI	
J: CONDITIONS APPLYING TO MONITORING				A	
SCHEDULES				A	
*T he observation number corresponds with specific comments provided below.					
Samples taken by Inspector:		Location(s): 3BM-CLY1419 Renewal coordinates: N70° 27', W68° 33' is incorrect as the coordinate is in the old town part of Clyde River apart of 1BR-CLY1828			
<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>On August 20, 2019 The Nunavut Water Board issued the Hamlet of Clyde River a renewal Water License titled 3BM-CLY1924. The hamlet is authorized to withdraw 53,600m³ water per annum or up to 299m³ per day.</p> <p>Relevant infrastructure include:</p> <p>A Water Supply Facilities which draws water from Water Source Lake. Water is treated in the truck-fill station and stored for trucked water to holding tanks in each building;</p> <p>- A Sewage Disposal/Treatment Facilities (Two Lagoon Cells) which receives trucked sewage collected from holding tanks in every building, with a wetland area between the lagoon and the ocean; and</p> <p>- A Solid Waste Disposal/Management Facility, which includes a bulky metals disposal area, and hazardous waste/used oil storage area. Segregation of waste needs to be approved.</p> Inspector Statement <p>On October 12,2021 Water Resource Officer (WRO) Joseph Monteith conducted an inspection on water licences 3BM-CLY1419 to verify compliance with the act and the Water license.</p> General Conditions <ol style="list-style-type: none">On October 12, 2021 WRO Monteith inspected the required documents, and observed the licence posted up at the Hamlet.On November 10, 2021 Bhabesh Roy emailed WRO Monteith a copy of the 2019, and 2020 Annual Reports. Water Use and Related Structures			

3. Water is withdrawn from Water Source Lake. GPS Coordinates: Lat: N70° 28' 59.339" Long: W68° 36' 48.744 (photo 1).

4. The condition of the piping is questionable. The pipe may have slumped over time, any attempt to withdrawal the internal pump may cause damage to the pipes, and pump. The design and equipment is the same as Pond Inlet and may encounter the same emergency situation. The length approximately 47 metres. Diameter 8 inches, with a 4 inch internal pump housed within the intake pipe. The pipe has a fish mesh screen (photo 2).

5. The pump house has a flow meter, and it measured less than 010537572 at the time of the inspection (photo 3).

6. WRO Monteith also photographed the Pump Meter Readings log for August 2020 with 3 entries for the day starting on August 1, 2020 - 933996m³ starting reading and on August 3, 2020 end reading 934343 m³ (photo 4). The date of the inspection and the dates of withdrawal recordings provides questions in record keeping, and difficult to verify total water usage for the year.

7. Water Consumption Rates for the Months of January to August, 2021. 16,038 cubic metres withdrawal and delivered (Photo 10).

Waste Water Treatment Facility

8. At the time of the inspection, the sewage lagoon was in-use. The walls were operating as intended, no signs of leakage, but some slumping or erosion were observed on the west side of the lagoon walls (photo 5).

9. The lagoon has two cells; the first is the original lagoon with a capacity of 11,600 cubic metres, the other cell forms as an extension from the original lagoon, with no listing for the amount of sewage it can store. No issues were observed during the course of the inspection.

Solid Waste Facility

10. Burnable solid waste is deposited in the fenced Open Pit Burning area of the solid waste facility. They burn the burnable garbage and push it into a pit, then cover the ash and burnt garbage with gravel.

11. The fencing approximately 1.5 metres high is damaged on some parts of the north side of the fire pit. The fencing only covers a portion of the fire pit which may have been incomplete in its construction and should have more fencing put in to mitigate any garbage from blowing across the environment (photo 5).

12. The metal dump, one pile a mix of vehicles, white waste, empty oil drums, boats, building material and engines has some hazardous waste paint cans, within that section. No observations of batteries, or waste oil barrels in the metal dump (photo 7).

13. There is no berm to contain any leachate coming from the hazardous waste facility, and the bulk metal section of the land farm. Contaminants may interact with external environmental elements, and migrate downslope and eventually the receiving marine environment. (photo 8).

Hazardous Waste Facility

14. Hazardous Waste section contains a few sea cans(full), a bermed area full of waste oil drums, some packaged ready for delivery, other waste oil drums litter the inside and outside of the berm, multiple signs of leaked contents on the ground and the surrounding the area. Some of the sea cans with various forms of hazardous waste are left open to the environment.

15. More hazardous waste was were observed by the hamlet garage. Also, numerous sea cans were by the hamlet garage, and some with signs of leak migrating towards the creek behind the garage (photo)

16. Between the bulk metal and the hazardous waste facility a puddle pooled with signs of hazardous waste. The puddle lays on the side of the road in the bulk metal section downgrade of the hazarded waste facility. It was discussed that one of the monitoring station should be moved to this site as it appears to be the natural migration of any liquids following the path of least resistance (photo 8).

Section 2	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
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The following information is a summary of the Actions required by the licensee to promote and ensure compliance.

-The Open Pit Burning Area has some damage to the fencing that could be fixed with maintenance. The fencing only covers a portion of the open pit burning, and could use some more fencing to ensure wind does not displace any loose garbage and deposit them onto the environment, any water bodies, and other parts to the Hamlet land farm.

-Make a plan to send out Hazardous Waste to approved Hazardous Waste Facility to make room for any future hazardous waste in the bermed section of the Hazardous Waste Facility.

-The bulk metals portion is not bermed, and has the potential of releasing hazardous waste directly onto the environment. Rain has the potential washing away any hazardous waste onto the environment, which may migrate to any water bodies.

-Limit the amount of water withdrawal to the authorized amount listed in the water licence, or apply to the Water Board for an amendment to increase water withdrawal amount.

-Record your Annual Reports and books and records in Metres Cubed as per the Nunavut Water Regulations.

- Make a plan to move or create a new monitoring station to the area observed between the Bulk Metal Facility, and the Hazardous Waste Facility.
- Submit to the spill line Spill Reports for any spills regardless of size within all the Hamlet services outlined as “Relevant Structures” in the background of this report.

SECTION 3

☐ Comments

☒ Non-Compliance with Act or Licence

☐ Action Required

Part B: General Conditions

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

A Freeboard limit of at least 1.0 metre, or as recommended by a qualified Geotechnical Engineer and as approved by the Board in writing, shall be maintained at all dams, dykes, or structures intended to contain, withhold, divert or retain water or wastes.


Nunavut Water Regulations - Books and Records

Section 13 (a) Books and Records

A licensee must

(a) maintain accurate and detailed books and record of

(i) the quantity of water, in cubic metres, used each day.

Licensee or Representative	Inspector's Name
	Joseph Monteith
Signature	Signature
	
Date	Date
	October 9, 2021

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

Photo Log

Date	Camera	Inspector	Authorization
October 12, 2021	Nikon Coolpix	Joseph Monteith	3BM-CLY1924
Photo Log #1		Location	
Photo 1		Clyde River, NU	
			
Description: Water Source Lake. Water Extraction pipe. Similar in design as the Pond Inlet Water Pump House			

Photo Log #1

Photo 2

Location

Clyde River, NU



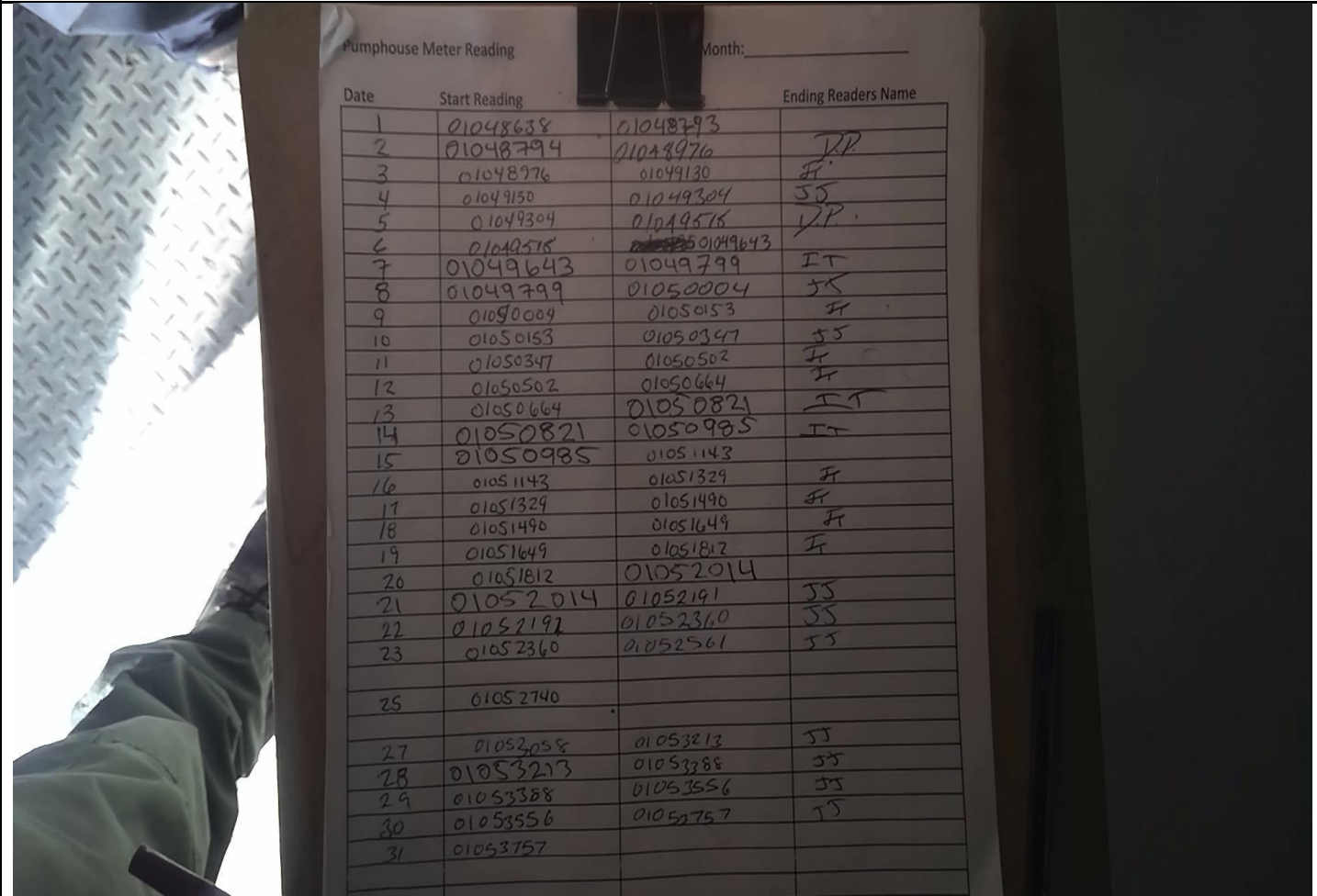
Description: Working Water Meter – 01053752 Litres withdrawn from potable water source

Photo Log #1

Photo 3

Location

Clyde River, NU



Description: Water Usage Logs –Last reading on August 31, 2020 01053757. Matches Meter reading.

Photo Log #1	Location
Photo 4	Clyde River, NU



Description: The signs of slumping on base of sewage lagoon wall observed in previous years seems to have gotten deeper and wider.

Photo Log #1	Location
Photo 5	Clyde River, NU



Description: a non reported spill observed on the walls of the sewage lagoon.

Photo 6

Clyde River, NU



Description: Hazardous Waste Disposal Facility. Berm is overfilled with waste oil drums. Waste oil drums deposited outside of bermed area.

Photo Log #1

Location

Photo 7

Clyde River, NU



Description: the outer extent of bulk metal section of land farm, no berm to mitigate any interaction with external environmental elements, and migration of wastes outside the facilities. A monitoring station is observed in left hand side midground.

Photo Log #1

Location

Photo 8

Clyde River, NU



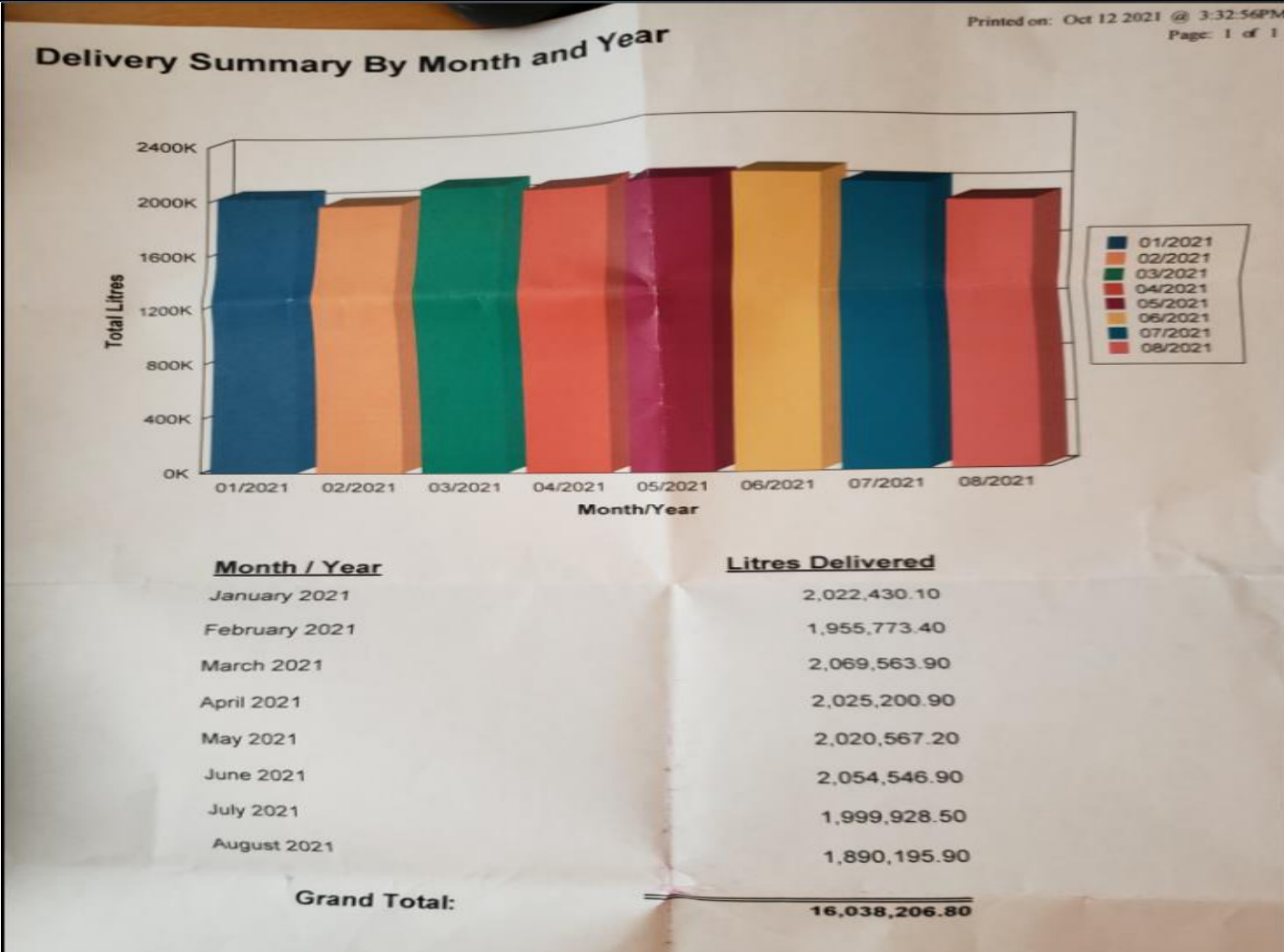
Description: What was observed as a puddle along the side of the road between the Bulk Metal and the Hazardous Waste Facility has turned into a seasonal surface water creek that takes water from the Hazardous Waste Facility to through the Bulk Metal section of the Solid Waste Facility.

Photo Log #1

Location

Photo 9

Clyde River, NU



Description: Water Consumption Rates for the Months of January to August, 2021. 16,038 cubic metres withdrawal and delivered.