

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee		Licensee Representative	
Hamlet of Pangnirtung		Bhabesh Roy, P.Eng.	
Licence No. / Expiry		Representative's Title	
3BM-PAN1417		Regional Municipal Engineer	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
October 2, 2017		Jonathan Mesher	
Activities Inspected			
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Other: Water Discharge	<input type="checkbox"/> Reclamation	<input checked="" type="checkbox"/> Fuel Storage
<input checked="" type="checkbox"/> Other: Municipal			

Conditions:		A - Acceptable		C - Concern		U - Unacceptable		NA – Not Applicable		NI – Not Inspected	
Water Use		Condition	Comment	Site Conditions		Condition	Comment	Haz/Mat Management		Condition	Comment
Intake/Screen		A		Water Management Structures		C		Storage		A	
Flow Measure. Device		C		Culverts / Bridges		A		Spills		A	
Source:		A		Drainage		NA		Spill Plan		A	
Water Use:		A		Erosion / Sediment		A					
Recirculation ( y /n)		Y		Mitigation Measures		A		Administrative			
				Reclamation Activities		NA		Records			
				Materials Storage		C		Reports		NI	
Waste Disposal				Signage		A		Plans		NI	
Waste Water		A						Notifications		NI	
Solid Waste		A		Monitoring				Other			
Hazardous Waste		A		Sample Collection / Analysis		NI		Inspection report compliance		A	
								Compliance with issued Direction		A	
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:				Location(s):							
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No											

SECTION 1	<input checked="" type="checkbox"/> Comments (s.1-2)	<input type="checkbox"/> Non-Compliance with Act or Licence (s.3)	<input type="checkbox"/> Action Required (s.4)
<b>Inspectors Statement</b>			
On October 2, 2017, a water licence inspection was conducted at the Hamlet of Pangnirtung, Oikiqtani Region, Nunavut. Sites inspected included the Waste Water Treatment Plant, the Solid Waste Disposal Facility, the Metal Storage Facility Berms, and the Water Distribution Facility.			
<b>Background</b>			
The Hamlet of Pangnirtung has an expired licence for the use of 299 cubic meters of water per day and is permitted to dispose of waste under conditions in which the waste may enter water at the Waste Water Treatment Plant, Solid Waste Disposal Facilities and Metal Disposal Facility.			
<b>Inspection</b>			
<b>Water Use and related structures:</b>			
<div>1. Water is being withdrawn from the Duval River as approved in the expired Water Licence.</div> <div>2. The water usage records were up to date and made available to the inspector at the time of the inspection.</div> <div>3. In 2016 the berm wall around the reservoir had a depression near the northeast corner, this issues has been resolved.</div> <div>4. The Inspector is requesting that the licensee accounts for its water usage at the point where it is withdrawn from Duval River and pumped into the reservoir for storage. This will provide the Nunavut Water Board and the Inspector with An accurate reading of water usage.</div>			
<b>Waste Water Treatment Plant</b>			
<div>5. Treated effluent is discharged approximately 30 feet from the shoreline and the main receiving environment is the ocean. The effluent does not appear to affect inland waters.</div> <div>6. Records were kept up to date and made available to the inspector.</div>			



**Solid Waste Disposal Facility (SWDF):**

- 7. As outlined on Page ix of the Licence, the Nunavut Water Board understands that a small amount of leachate can leave the site and enter the surrounding environment. The receiving environment of the landfill is the ocean. Under INAC, discharges of wastes to the ocean are regulated by the Arctic Waters Pollution Prevention Act.
- 8. In *Figure 1* you can see ice where the flow leaves the facility. This Location is listed in the licensee’s Monitoring Program Stations as PAN-5 and is required to be tested 3 times per year.
- 9. Swales around the domestic landfill appear to be good condition and appear to be effectively diverting water around the facility at the time of inspection.

**Metal Storage Area:**

- 10. The community is segregating and storing metals, vehicles, batteries, and electronic waste within the Metal Storage Area.
- 11. This location has issues with changing drainage patterns coming off of the mountains behind the metal disposal area, the non-engineered berm walls surrounding this facility had been breached in the past which led to water flowing through the facility in three separate locations.
- 12. The Hamlet has attempted to fix the breached sections of the berm with hardened cement and soil. However, water is accumulating behind low-lying sections and is slowing infiltrating the Metal Storage Area. See *Figure 2*.
- 13. INAC has expressed concern related to this structure in past reports because of its inability to properly divert water around the metal storage area.
- 14. The space required for the metal storage remains an issue for Pangnirtung, Practical short-term solutions do not appear feasible. The community along with the Government of Nunavut is currently working towards a new waste management facility.

**PHOTO LOG**

Date	Camera	Inspector	Authorization
03/10/2017	SONY DSC-HX50V	Jonathan Mesher	3BM-PAN1417



Figure 1: PAN-5 monitoring location.





Figure 2: Water infiltration of the metal storage area.

Licensee or Representative	Inspector's Name
	Jonathan Mesher
Signature	Signature
	Signature on original document
Date	Date
	October 2, 2017

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input type="checkbox"/> No
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