WATER LICENCE INSPECTION FORM

☒ Original
☐ Follow-Up Report

Licensee	Licensee Representative
Department of National Defence	Don Beattie
Licence No. / Expiry	**Representative's Title**
3BC-BAFA0919	Environmental Officer
Land / Other Authorizations	**Land / Other Authorizations**
Date of Inspection	**Inspector**
September 3, 2018	Joseph Monteith

Activities Inspected

☐ Camp ☐ Drilling ☐ Mining ☐ Construction ☐ Reclamation ☐ Fuel Storage
☐ Roads/Hauling ☒ Other: Potable Water Source, Solid Waste Facility, Sewage Disposal Facility ☐ Other:

Conditions: **A- Acceptable** **U-Unacceptable** **C-Concern** **NI-Not Inspected** **NA- Not applicable**

PART:	Item No.*	Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT		A	
B: GENERAL CONDITIONS		A	
C: CONDITIONS APPLYING TO SECURITY		NI	
D: CONDITIONS APPLYING TO WATER USE		A	1-8
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT		A	9-13
F: CONDITIONS APPLYING TO MODIFICATIONS		NA	
G: CONDITIONS APPLYING TO CONSTRUCTION		NA	
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		A	
SCHEDULES		A	

**The item number corresponds with specific conditions within the licence and the observation number corresponds with specific comments provided below.*

Samples taken by Inspector:	Location(s): Latitude: 63° 20' 23"N Longitude: 64° 08' 45"W
☐ Yes ☒ No	

SECTION 1 ☒ **Comments** (s.__) ☐ **Non-Compliance with Act or Licence** (s.__) ☐ **Action Required** (s.__)

BACKGROUND

The BAF-3 Long Range Radar Station (BAF-3) is located at an elevation of 366 m above sea level on the southern end of Brevoort Island. (See photo 1). Brevoort Island is 40-km long and 10-km wide. It is found off the east coast of Baffin Island, approximately 250 km Northeast of Iqaluit.

Relevant on-site facilities include a land farm for the remediation of a fuel spill that occurred in 2007, site buildings, a freshwater intake, two (2) 854,000 litre water tanks, fuel storage area, and one incinerating toilet. The site also has a sewage disposal facility consisting of a septic tank and outfall pipe, which discharges to the land.

Inspector Statement

On September 3, 2018, a Water Licence was conducted at the North Warning Sites' BAF-3 Long Range Station on Breevort Island, Qikiqtani Region, Nunavut to verify compliance with Water Licence 3BC-BAF0919.

Compliance with General Conditions of the Licence

On March 28, 2018 a submission of an annual report was uploaded to the Nunavut Water Board ftp website, satisfying the General Requirement.

Water Use and Related Structures

Fresh Water Lake

1. The licensee is authorized to withdrawal 1750 m³ per year
2. All water is withdrawn from Fresh Water Lake (see photo 2).
3. Floating dock with milk crate for fish mesh screen (see photo 3).
4. Intake pipe has a milk crate for a fish mesh screen (see photo 4).
5. Intake pipe to Pump house (see photo 5).
6. Pump house with two water pumps and internal piping (see photo 6).

Water Storage Building

7. The Water Storage Building has two 984 m³ Water Storage Tanks (see photo 7 and 8).
8. A Water Meter was observed on site, and read 91271.2 Gallons (see photo 9).

Sewage Disposal Facility

9. The Sewage system consists of a septic tank, and an outfall pipe that drops its waste into a sump.
10. No observations were made of the septic tank during the inspection.
11. The outfall pipe end was below the sewage waste water table in the sump. (See photo 10).
12. The Sump pit appeared to be full, and was built up on one side of the wall with rocks. Seepage appears to have leaked through the rocks (See photo 11).

Hazardous Waste

13. Hazardous Waste was observed on site. BAF-3 stores hazardous waste from surrounding sites at BAF-3 before shipping it to a proper hazardous waste disposal facility in Quebec (See photo 12).

Spill Reports

The BAF-3 site has a total of 15 spills reported since 2015. Of the 15 spill reports, 3 are being brought up as they contained the largest spills between 2015 and today.

14. On December 5, 2017, a Spill Report 2017-438 was issued to BAF-3 for a release of 1600 Litres of waste water from a fitting leak.
15. On July 30, 2015, A Spill Report 2015-321 was issued to BAF-3 for a release of 856 Litres of Petroleum from a truck.
16. ON March 19, 2015, a Spill Report 2015-104 was issued to BAF-3 for a release of 50,000 Litres of Petroleum from a storage tank. This spill has a remediation activity that was observable at the time of the inspection. A summary report was submitted to WRO Monteith on July 13, 2018.
17. At the time of the inspection signs of remediation were present (See photo 13, 14, and 15). No sampling was conducted during the inspection. A review of the Summary Analysis results shows that not all criteria were met in the Nunavut Water Board Licence to properly close the file.

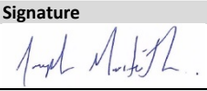
SECTION 2	☐ Comments	☐ Non-Compliance with Act or Licence	☒ Action Required

The following information is a summary of the Actions required by the licensee to promote and ensure compliance:

- The Licensee is reminded to remain diligent to prevent wastes from entering water, the environment, and to adhere to the discharge requirements listed in this licence.

SECTION 3	☐ Comments	☐ Non-Compliance with Act or Licence	☐ Action Required

Click here to enter text.

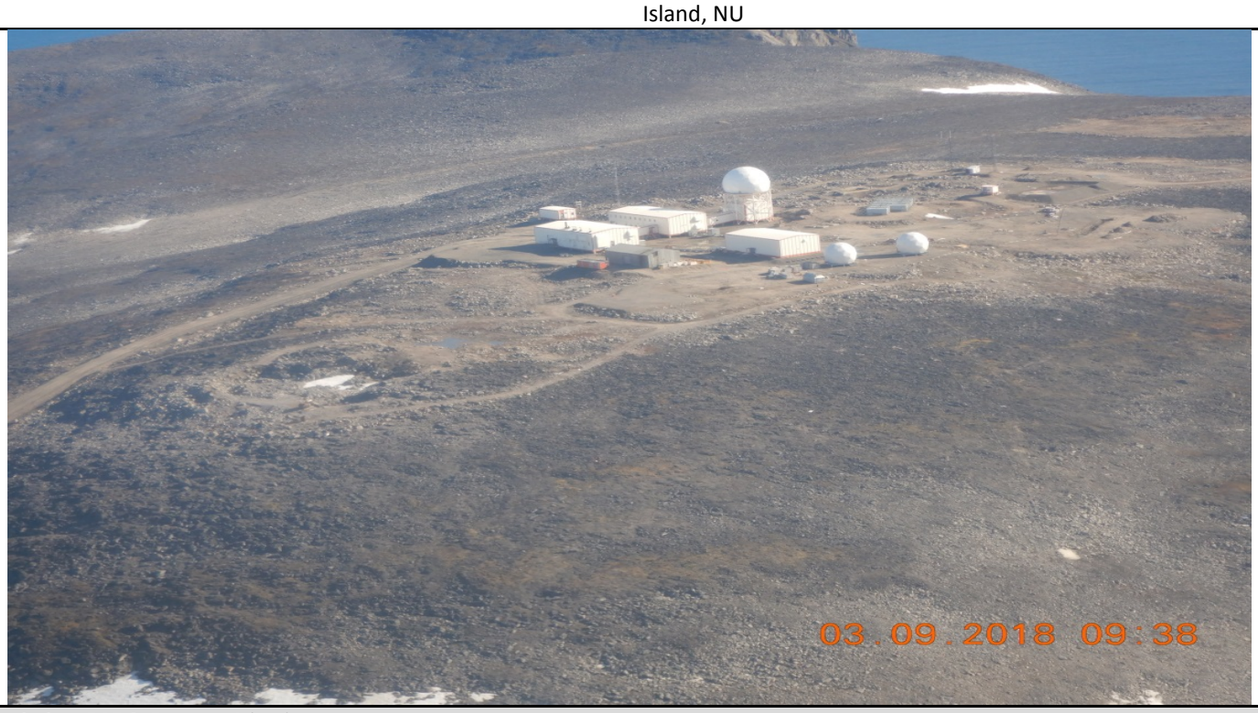
Licensee or Representative	Inspector's Name
Don Beattie	Joseph Monteith
Signature	**Signature**
	
Date	**Date**
	November 29, 2018

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

PHOTO LOG

Date	Camera	Inspector
September 3, 2018	Nikon Coolpix	Joseph Monteith

Photo Log #1	Location
Photo 1	Breevort Island, NU



Description: BAF-3, Breevort Island

Photo Log	Location
Photo 2	Breevort Island

Description: Pump house recharges pipes which transfers water to the BAF-3 facility.

Photo Log	Location
Photo 3	Igloolik

Description: Floating dock with milk carton installed to act as a fish mesh screen when withdrawing from the freshwater source.

Photo Log	Location	
Photo 4	N69° 21.248'	W81° 50.439'

Description: Inside milk crate on floating dock.

Photo Log	Location	
Photo 5	N69° 21.248',	W81° 50.439'

Description: intake pipe to pump house.

Photo Log	Location	
Photo 6	N69° 21.248'	W81° 50.439'

Description: Two water pumps in pump house at potable Fresh Water Lake

Photo Log	Location
Photo 7	Igloolik

Description: Water Storage Tank South. Capacity 984,000

Photo Log	Location
Photo 8	Igloolik

Description: Water Storage Tank South. Capacity 984,000

Photo Log	Location
Photo 9	Igloolik

Description: Water Storage Tank South. Capacity 984,000

Photo Log	Location
Photo 10	Igloolik

Description: Outtake pipe for sewage

Photo Log	Location
Photo 11	

Description: Old Water Treatment Facility

Photo Log	Location
Photo 12	Breevort Island

Description: A hydro carbon puffer, creates a negative pressure room, and sucks the hydro carbons out of the soil.

Photo Log	Location
Photo 13	Breevort Island

Description: Site of remediation from on top of the storage tank responsible for the spill source.

Photo Log #	Location
Photo 14	Breevort Island

Description: A hydro carbon puffer, creates a negative pressure room, and sucks the hydro carbons out of the soil.

Photo Log #	Location
Photo 15	Breevort Island

Description: Migration of spill also went north east of the storage tank. The water in the photo is a result of the creation of a trench to capture fuel spill and stop the migration.