

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Department of National Defence	William Wyman
Licence No. / Expiry	Representative's Title
3BC-BAF1929	Environmental Officer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
September 7, 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 checked="" type="checkbox"/> Other: Potable Water Source, Hazardous Waste Facility, Sewage Disposal Facility, incinerator.</div><div><input type="checkbox"/> Other: remediation site, bulk metal</div></div>	

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	1-9		
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT		A	10-17		
F: CONDITIONS APPLYING TO MODIFICATIONS		NA			
G: CONDITIONS APPLYING TO CONSTRUCTION		NA			
H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING		A	18-21		
I: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE PLANNING		NI			
J: CONDITIONS APPLYING TO MONITORING		A			
SCHEDULES		A			
<i>*The item number corresponds with specific conditions within the licence and the observation number corresponds with specific comments provided below.</i>					
Samples taken by Inspector:		Location(s): Latitude: 63° 20' 23"N Longitude: 64° 08' 45"W			
<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 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.</p> <p>On April 2, 2019, The Nunavut Water Board distributed the water license renewal for 8BC-BAF1929 to the Department of National Defence (DND), authorizing the use of water and deposit of waste. This license authorizes the DND to withdraw 1750m³per annum and less than 300 m³ per day.</p> <p>Relevant on-site facilities include a land farm for the remediation of a fuel spill that occurred in 2007, site buildings, a freshwater source, two (2) 854,000 litre water tanks, fuel storage area, an incinerator 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.</p> Inspector Statement <p>On September 7, 2021, a Water Licence inspection was conducted at the North Warning Sites’ BAF-3 Long Range Station on Brevoort Island, Qikiqtani Region, Nunavut to verify compliance with Water Licence 8BC-BAF1929.</p> Compliance with General Conditions of the Licence <p>On March 22, 2021 a submission of the 2020 annual report was uploaded to the Nunavut Water Board ftp website, satisfying the General Requirement. The annual report can be reviewed using the hyperlink below.</p> <p>ftp://ftp.nwb-oen.ca/registry/8%20MISCELLANEOUS/8B/8BC%20-%20Camp/8BC-BAF1929%20(BAF-3)/3%20TECH/1%20GENERAL%20(B)/2%20ANNUAL%20RPT/</p>			

Water Use and Related Structures

Fresh Water Lake

1.

The licensee is authorized to withdraw1750 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 (photo 3).
5.

Intake pipe to Pump house (see photo 4).
6.

Piping from pump house to 2 x storage tanks (see photo 5).
7.

The 2020 annual report state that no water was withdrawn in from water supply lake in 2020. A total of 312.9 m³ was consumed from raw water holding tanks.

Water Storage Building

8.

The Water Storage Building has two 854,000 m³ Water Storage Tanks (see photo 6 & 7).
9.

A Water Meter was observed on site, but didn't show the amount of water in the tanks.

Sewage Disposal Facility

10.

The Sewage system consists of a septic tank, and an outfall pipe that drops its waste into a sump.
11.

No observations were made of the septic tank during the inspection.
12.

The outfall pipe end was above the sewage waste water table in the sump (See photo 8).
13.

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 8).
14.

Pacto Incinerator toilet (photo 14).

Incinerator

15.

An incinerator was observed at the time of the inspection. Active and operating as intended (photo 13).

Bulk Metal

16.

A box which contains the sites bulk metal waste. All bulk metal is transported south on sealift.

Hazardous Waste

17.

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 9, 10, 11).

Spill Reports

- The BAF-3 site has a total of 26 spills reported since 2015. Of the 26 spill reports, 3 are being brought up as they contained the largest spills between 2015 and today. Those that do not meet the threshold will be closed as minor spills not exceeding the threshold as per the NT/NU Spills line for spill reportable quantities. Those that go over the threshold will require follow up, and provide an update as per Part H: 5, C.
18.


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.
19.

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.
20.

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.
21.

At the time of the inspection signs of remediation were present (photo 15). No sampling was conducted during the inspection. A review of the Summary Analysis in 2020 showed that not all criteria were met in the Nunavut Water Board Licence to properly close the file.

SECTION 2	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
<div>• Provide an update for the above noted spill reports.</div>			
SECTION 3	<input checked="" type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
A review of all spill reports will be conducted, and closed if satisfied, if the spills were cleaned up, and disposed of in a proper manner.			

Licensee or Representative	Inspector's Name
William Wyman	Joseph Monteith
Signature	Signature
	
Date	Date
	November 29, 2021

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

PHOTO LOG



Date	Camera	Inspector
September 7, 2021	Nikon Coolpix	Joseph Monteith
Photo Log #1		Location
Photo 1		Brevoort Island, NU
		
Description: 2019 photo of BAF-3, North Warning Site, Brevoort Island, NU		

Photo Log	Location
Photo 2	Brevoort Island, NU
	
Description: Pump house recharges pipes which transfers water to the BAF-3 facility.	




Photo Log	Location
Photo 3	Brevoort Island, NU



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	Brevoort Island, NU



Description: intake pipe to pump house.



Photo Log	Location
Photo 5	Brevoort Island, NU
	
Description: Two water pumps in pump house at potable Fresh Water Lake	



Photo Log	Location
Photo 6	Brevoort Island, NU
	
Description: Water Storage Tank South. Capacity 854,000 L	




Photo Log	Location
Photo 7	Brevoort Island, NU



Description: Water Storage Tank South. Capacity 854,000 L

Photo Log	Location
Photo 8	Brevoort Island, NU



Description: Outfall pipe for sewage



Photo Log
Photo 9

Location
Brevoort Island, NU



Description: Hazardous Materials, and waste storage and transfer station. Material is stored in secondary containment, and with hydrocarbon booms to capture any small spills.

Photo Log
Photo 10

Location
Brevoort Island, NU



Description: Old oil filters and empty grease cans inside of hazardous waste drums. Used to store and transport hazardous waste.



Photo Log	Location
Photo 11	Brevoort Island



Description: Contaminated soil from spill. Secondary containment is filled with water.

Photo Log	Location
Photo 12	Brevoort Island, NU



Description: Box of Scrap Metal – Bulk metal waste is transported out on sealift.



Photo Log	Location
Photo 13	Brevoort Island, NU



Description: Incinerator

Photo Log	Location
Photo 14	Brevoort Island, NU



Description: Pacto Incinerator toilet – “Pacto Incineroilet”



Photo Log

Photo 15

Location

Brevoort Island, NU



Description: Site of remediation. Spill Report will be in long term monitoring. Most captured fuel was being treated.