

WATER LICENCE INSPECTION FORM

☒ Original

☐ Follow-Up Report

Licensee	Licensee Representative
Department of National Defence	Don Beattie
Licence No. / Expiry	Representative's Title
3BC-FOH0919	Environmental Officer
Land / Other Authorizations	Land / Other Authorizations
Date of Inspection	Inspector
July 11, 2018	Joseph Monteith & Jonathan Mesher
Activities Inspected	
<input type="checkbox"/> Camp	<input type="checkbox"/> Drilling
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Mining
	<input checked="" type="checkbox"/> Other: Potable Water Source, Solid Waste Facility, Sewage Disposal Facility
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Fuel Storage
	<input type="checkbox"/> Other:

Conditions:	A- Acceptable	U-Unacceptable	C-Concern	NI-Not Inspected	NA- Not applicable
PART:				Condition	Observation No.*
A: SCOPE, DEFINITIONS AND ENFORCEMENT				A	
B: GENERAL CONDITIONS				A	1
C: CONDITIONS APPLYING TO SECURITY				NI	
D: CONDITIONS APPLYING TO WATER USE				A	2-5
E: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT				A	6-10
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: 68° 45’ 35”N Longitude: 81° 11’ 41”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. __)
<b>BACKGROUND</b>			
<p>Water Licence 3BC-FOH0919 issued to the Government of Canada, Department of National Defence for the use of water from a man-made reservoir owned and operated by the Hamlet of Hall Beach, however, the Nunavut Water Board still requires, for record keeping purposes, that the Licensee monitor its water intake from the reservoir in accordance with the Monitoring Program. Non-hazardous solid waste is disposed of at the Hall Beach landfill. Hazardous waste is back hauled outside of Nunavut. Sewage is treated on site, and discharged to the environment.</p> <p>Relevant on site facilities include a shared water storage reservoir with a capacity of 60,000m³ with the hamlet of Hall Beach, a shared pump house with the Hamlet of Hall Beach. Also bio-reactor, sodium hydroxide injection system, 4 x filter membranes, Aqua Flo Ultra Violet Lamps, processing pumps, and activated carbon absorber to treat and recycle waste water for urinals, toilets and discharge to the receiving environment.</p>			
<b>Inspector Statement</b>			
<p>On July 11, 2018 A water licence inspection was conducted on was conducted at 3BC-FOH0919, also known as the North Warning Site (NWS) FOX-M in Hall Beach, Qikiqtani Region, Nunavut.</p>			
<b>Compliance with General Conditions of the Licence</b>			
<p>1. On March 28, 2018 The Nunavut Water Board uploaded 3BC-FOH0919 2017 Annual Report for FOX-M to the NWB ftp site, satisfying the general requirement to submit an annual report annually.</p>			
<b>Water Use and Related Structures</b>			
<p>2. Water withdrawal is conducted from South Lake (photo 1) to the Water Storage Reservoir. The Water from South Lake is recharged by opening up a gate on a dyke which is also a man-made reservoir. The lined Storage Reservoir has a capacity of 60,000m³ (See photo 2).</p>			
<p>3. The pump house was operating at the time of the inspection. Logs showed that both trucked and pump house</p>			



meter were used to calculate water usage at the time of the inspection (see photo 3).

4. During the inspection their logs showed total of 35m³ withdrawn from both trucked service, and through the pump house water meter (see photo 4).
5. Fox-M treats water through granular carbon filter, a multimedia filter and two UV filter lamps (see photo 5).

Solid Waste

6. Solid waste is disposed of at the Hamlet of Hall Beach’s Land Fill.
7. Hazardous Waste is disposed of by palleting the waste, store them in a warehouse to backhaul them to an approved hazardous waste Disposal Facility (see photo 6).
8. Copies of Hazardous Waste Manifest observed on site(See photo 7 )

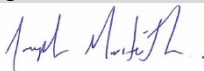
Sewage Disposal Facility

9. Sewage Waste is treated on site using a bio-reactor, sodium hydroxide injection system, membranes, and processing pumps, and activated carbon absorbers to remove color. This is all to recycle water for use in toilets and urinals (see photo 8 & 9).
10. After the waste water is treated it is used as toilet water. The excess treated water due to the input of showers, kitchens, wash basins, toilets and urinals, is discharged to the receiving environment (see photo 10).

Spill Reports

2018-222 originally labelled GN- EED lead agency was changed to reflect CIRNAC Lead agency. On June 13, 2018, Spill Report 2018-222 was submitted to report a 1 litre spill of hydraulic fluid from a failed O-Ring on the hydraulic line of a Loader. On July 11, 2018 an inspection was conducted on the spill site, and no observations of hydraulic fluid were present. It is my belief that the spill was cleaned up as reported, and I am satisfied with the measures taken to clean up the spill. This spill can be closed.

SECTION 2	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
No actions required.			
SECTION 3	<input type="checkbox"/> Comments	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
No non-compliance issues noted			


Licensee or Representative	Inspector's Name
Don Beattie	Joseph Monteith
Signature	Signature
	
Date	Date
	January 30, 2019

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



PHOTO LOG

Date	Camera	Inspector
July 11, 2018	Nikon Coolpix	Joseph Monteith
Photo Log #1		Location
Photo 1		Hall Beach - North Warning Site FOX-M



Description: South Lake in the background, with the pump house in the mid ground, and piping in the foreground

Photo Log #	Location
Photo 2	FOX-M



Description: Pump house recharges Trucks with the fresh water from South Lake.



Photo Log #

Location

Photo 3

FOX-M



Description: Water meter reads 3387299.9

Photo Log #

Location

Photo 4

FOX-M

4. Place a new sheet for the following month next to the water tank.

NOTE: At FOX-M on the 15<sup>th</sup> of every month, record the meter reading then re-set the meter to zero.

Site: LSS-FOX

Day of the month	Measurement Methods		WITHOUT METER Quantity pumped (in Litres via tank dip)	Number of people overnighting	Initials
	WITH METER Flow meter daily reading (in Litres)	Water truck daily quantity (in Litres)			
1	3500	7000			K
2					
3	5000				X
4	5000				
5	5000				
6	5000	5000			FW
7	5000	5000			FW
8					
9	5000				X
10	5000				X
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Date (Month, Year): July 2018

ARRIVAL ON SITE OR FIRST DAY OF THE MONTH				
Estimate of Water in Storage Tanks				
Date	LOCID	Tank ID # (or Mod #)	Quantity (m3)	Initials

DEPARTURE OR LAST DAY OF THE MONTH				
Estimate of Water in Storage Tanks				
Date	LOCID	Tank ID # (or Mod #)	Quantity (m3)	Initials

11.07.2018 14:07

Description: July water usage log – 35,000 Litres withdrawn in July. 12,000 Litres of trucked withdraw, and 23,000 litres withdrawn from the pump house.





Photo Log #	Location
Photo 5	FOX-M



Description: 4 x water filters, 2 x Aqua Flo Ultra Violet Lamps

Photo Log #	Location
Photo 6	FOX-M

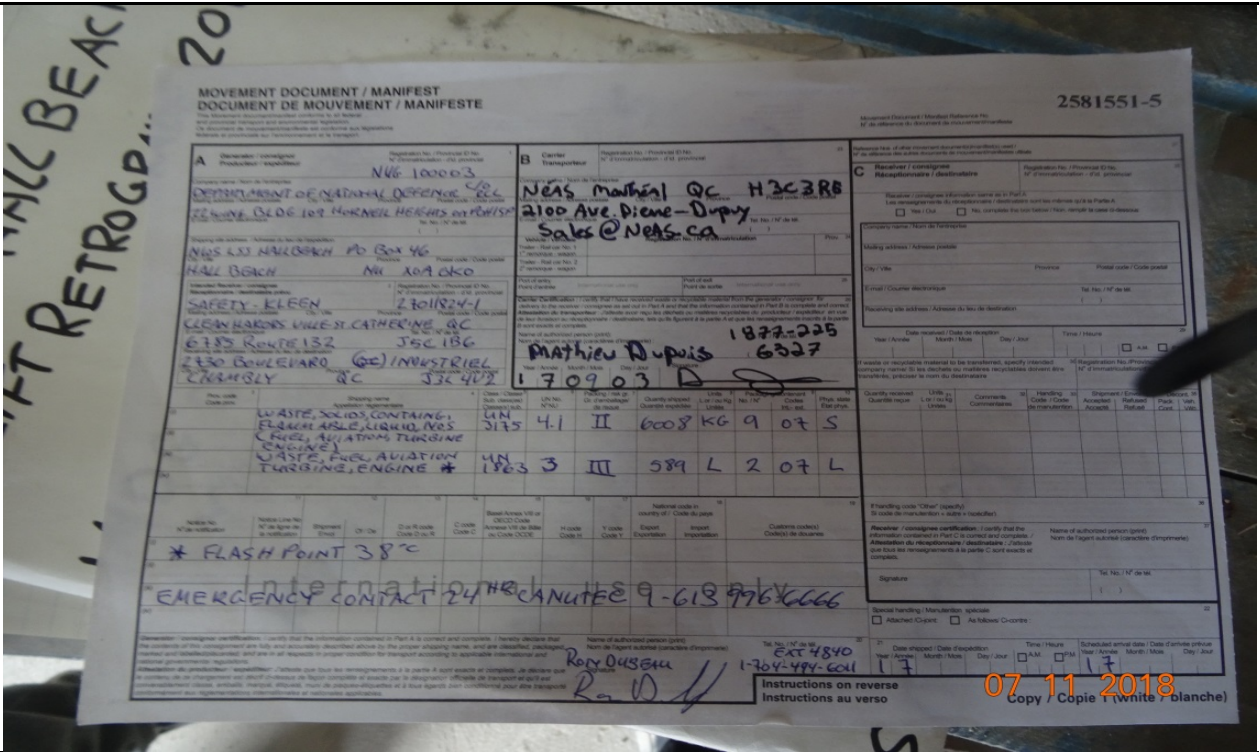


Description: Hazardous Waste, in drums awaiting to be palletted and shipped out to an approved waste disposal site.



Photo Log #  
Photo 7

Location  
FOX-M



Description: Movement Document/ Manifest – Hazardous Waste Manifest

Photo Log #  
Photo 8

Location  
FOX-M



Description: Bio Reactor






Photo Log #	Location
Photo 9	FOX-M
	
Description: Cycle-Let Sump contain for excess treated waste water	

Photo Log #	Location
Photo 10	FOX-M
	
Description: Discharge point of treated waste water excess	