



## WATER USE INSPECTION REPORT

Date: 27 July 2013	Licensee Rep. (Name/Title): Kim Kalen, National Defence, Barb Thompson, Nasittuq, Dale McDonald, Nasittuq.
Licensee: National Defence	Licence No: 3BC-FOH0919 – Fox Main

Comments: The Inspector would like to thank Mr. Kalen, Ms. Thompson and Mr. Dale McDonald for taking the time to facilitate and assist with the Inspection of these facilities. The Last inspection was completed in 2010.

The site was constructed in the 1950's as part of the DEW Line, which provided radar surveillance of the northern approaches to North America. In March 1985, Canada and the United States agreed to close the DEW line sites by the early 1990's, and build the North Warning System (NWS).

Between 1989 and 2007 the site was remediated by Defence Construction Canada under the authority of Water Licenses 1BR-HAL0308 and 1BR-HAL0815 issued by the Nunavut Water Board (NWB). The remediation activities for this site were completed in 2007 and largely involved the redistribution of materials in the landfill and the shoring up of berms and cover materials. The current license for these remediation activities is now for monitoring which is conducted according the schedule contained within that license.

The current 10 year license has been issued by the NWB to allow for the disposal of waste during operation and maintenance of the FOX-M Long Range Radar Station and Logistics Support Site. This site is one of the few stations that is maintained and habituated throughout the year. Water is pumped from a man-made reservoir that is owned and operated by the Hamlet of Hall Beach. As no water is drawn directly from a natural source by the Licensee, the NWB has removed the maximum water use limit unusually placed within the license however still requires that the licensee record the usage of water within the facility and provide that information to the Board. Both Sewage and Greywater are treated on-site using a Cycle-let® tertiary wastewater treatment system. Non-hazardous solid waste is disposed of at the Hall Beach landfill while Hazardous waste is backhauled outside of Nunavut. These records are kept and provided in the required annual report and to the Inspector during regular inspections of the facilities.

### WATER SUPPLY

Source(s): Reservoir	Quantity used: 71 377 L use to date
Owner:/Operator: Municipality of Hall Beach	

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Intake Facilities: A	Storage Structure: A	Treatment Sys: A	Chemical Storage: U
Flow Meas. Device: A	Conveyance Lines: A	Pumping Stations: A	Screen : NI

Comments: Water is pumped from a man-made reservoir that is owned and operated by the Hamlet of Hall Beach. Water for use within the facility is transferred by pipeline into holding tanks within the accommodation trains. Prior to use within the facility the water is filtered and undergoes UV treatment. There are two systems (redundant) on site that treat water. Tanks were labeled and had confined entry warnings posted for cleaning. Both tanks had been cleaned within the previous year.

### WASTE DISPOSAL

Sewage: Cycle-let® tertiary wastewater treatment system Treatment :( Prim./Sec/Ter.) Tertiary

Natural Water Body: NA	Continuous Discharge (land or water): NA	
Seasonal Discharge: NA	Wetlands Treatment: NA	Trench: NA



Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Discharge Quality: NI	Decant Structure: NA	Erosion: NA
Discharge Meas. Device: NA	Dyke Inspection: NA	Seepages: NA
Dams, Dykes: NA	Freeboard: NA	Spills:
Construction: NI	O&M Plan: A	A&R Plan: A
Periods of Discharge: cont.	Effluent Discharge Rate: Unknown.	

Comments: Waste water (black and grey) from each accommodation train is pumped to the Sewage Treatment System in Train A where it undergoes a combination of an activated sludge process, a membrane filtration process and a final UV disinfection before discharge to the environment outside the facility at the final discharge point. Records were reviewed on site and all was found to be working. It was noted that there had been previously a foam discharge through the vent pipe to the exterior of the building. This was subsequently cleaned up and packaged for disposal.

**SOLID WASTE MANAGEMENT AREAS:**

Landfill: None	Burn & Landfill: None	Other: Transported off site
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Comments: It was noted and confirmed during the period of the Inspection that non-hazardous, noncombustible waste is disposed of in the Municipality of Hall Beach landfill. It was also noted that the Municipality's Water License has expired. The proponent is reminded of the condition under Part D, item 5 which requires that the Licensee provide to the Board documented authorization from all communities receiving wastes from the project prior to any backhauling of wastes to those communities. A review of the Nunavut Water Board FTP site noted a copy of a letter authorizing the disposal of waste to the Municipal Land Fill.

Hazardous wastes were found to be in the process of being packaged for retrograde south to a Facility licensed to treat this waste. Logs and records from 2012 were available for review during the Inspection of the facility.

Storage of hazardous materials on site requires sufficient spill containment and clean up materials including some form of neutralizing agent for Battery Acid (H<sub>2</sub>SO<sub>4</sub>) – including SODIUM BICARBONATE, SODA ASH, LIME. Keeping batteries sequestered from any form of oxidizer is also highly recommended.

Waste Oil Storage: Found on site awaiting transport south to a licensed facility.

FUEL STORAGE: Camp tanks, Beach tanks, Hanger      Owner/Operator: National Defence/ Nasittuq

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected

Berms & Liners: A	Water within Berms: A	Evidence of Leaks: None
Drainage Pipes: A	Pump Station & Catchments Berm: A	
Pipeline Condition: A	Condition of Tanks: A	

Comments: Very little water was found within the Fuel Storage berms at the Camp Tank farm during the time of the Inspection. The build up was attributed to recent rain events and was expected to evaporate off within the next week.

The use of Drip-trays at the Hanger and other fuel distribution points was noted during the inspection. Secondary containment is highly encouraged wherever fuel is stored or transferred to prevent accidental releases. This is also a requirement of the water license Part G item 4 and is to be addressed before the period of the next inspection.

Inspections conducted at all of the of fuel containment areas did not find notable issues.



Spill Files/ Reports inspected and can be closed:

2010309	2010-07-26	BAF	-	Hall Beach, FOX-M	Jet A1	0 L	Nasittuq Corporation
2010375	2010-09-14	BAF	-	Hall Beach, FOX-M	Jet A1/water mixture	70 L	Nasittuq Corporation
2010390	2010-09-21	BAF	-	Hal Beach, FOX-M	Jet A1	40 L	Nasittuq Corporation
2011280	2011-07-15	BAF	-	Hall Beach, FOX-M	Jet A1	1 L	Nasittuq Corporation
2011341	2011-08-23	BAF	-	Hall Beach, FOX-M	Diesel	1 L	Nasittuq Corporation
2012061	2012-03-02	BAF	-	Hall Beach, FOX-M	Automatic Transmission Fluid	38 L	Nasittuq Corporation
2012104	2012-04-02	BAF	-	Hall Beach, FOX-M	Jet A1 Fuel	1 L	Nasittuq Corporation

Spill files : On-going:

2013-221    2013-06-24    BAF    Hall Beach, FOX-M    Jet A1 Fuel    up to 1000L    Nasittuq Corporation

The spill was discovered on June 22<sup>nd</sup> and reported to the Spill Line on June 26<sup>th</sup> 2013. Spill Number 2013-221 was issued by the Spill line. The estimate noted in this report is based on conversations had on site with Nasittuq and DND personnel and is based on the amount of fuel that could have been held in the pipe given the diameter and length. This is not the amount of fuel spilled but rather the maximum amount that could have been in the pipe.

Nasittuq has hired a contractor to effect the clean up and work was on-going during the period of the Inspection. One summary report was filed and notifications concerning the discharge of treated water have been received by the Inspector. A report on the on-going and planned activities related to the clean up for next year is still pending.

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected		Owner /Operator: As required. Results to be provided	
None		AANDC	
Signs Posted	SNP: Posted		Warning: As required
Records & Reporting: As required			
Geotechnical Inspection:			

NON-COMPLIANCE OF ACT OR LICENCE:

No obvious or serious issues of Non-compliance were noted during the period of Inspection. The Licensee is reminded that secondary containment, signage and segregation of hazardous materials are all constituent elements of the Water License. Diligence in the application of all aspects of the license is required to maintain compliance. The Licensee is commended for making such improvements that have been noted in the above report and for works noted during the Inspection of these facilities.

It is the recommendation that baring an incident that requires the attendance of the inspector at a date sooner, that a further inspection be done within 4 years at this facility.



Andrew Keim

Inspector's Name

Sent by E-mail (Original signed and on file)

Inspector's Signature

Cc:

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