



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee		Licensee Representative	
Department of National Defense - CFS Alert		Andrew Tam	
Licence No. / Expiry		Representative's Title	
3BC-ALT1015		Environmental Supervisor	
Date of Inspection		Inspector	
July 10 2019		Jeremy FRASER	
Activities Inspected			
<input checked="" type="checkbox"/> Camp	<input type="checkbox"/> Drilling	<input type="checkbox"/> Mining	<input type="checkbox"/> Construction
<input type="checkbox"/> Roads/Hauling	<input type="checkbox"/> Other:	<input type="checkbox"/> Other:	<input checked="" type="checkbox"/> Reclamation
<input checked="" type="checkbox"/> Fuel Storage			

SECTION 1	<input type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
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On July 10<sup>th</sup> 2019 a Water Licence inspection was conducted at the Department of National Defense (DND) - CFS Alert Station. This inspection was conducted to ensure compliance with the Water Licence and Acts and Regulations in Nunavut. Crown Indigenous Relations and Northern Affairs Canada (CIRNAC) Inspector Jeremy FRASER was accompanied by Joseph MONTEITH CIRNAC Inspector, Erik ALLAIN CIRNAC Director of Lands, Michelle BLADE CIRNAC Waters Regional Coordinator, Andrew TAM 8 Wing Environmental Supervisor and Nathan KOUTROULIDES with 8 Wing Environment.

The CFS Alert station is currently operating with an expired Water License 3BC-ALT1015 this is in contravention of the Nunavut Water and Nunavut Surface Rights Tribunal Act Section 11 & 12. Though the operation is ongoing, DND is obligated to adhere to the terms of the Water Licence as required by the Act. *Section 46 the expiry or cancellation of a licence does not relieve the holder of any obligations imposed by the licence.*

**Observations**

During the course of this inspection the following Waste and Water Management Structures were assessed for compliance.

- ALT-1 (Raw Water Intake)
- ALT-6 (Millionaires Dump)
- ALT-7 (Dump 3)
- ALT-4 (Main Station Landfill)
- ALT-8 (Airfield Fuel Tank Farm)
- ALT-11 (Landfarm)
- ALT-9 (Upper Fuel Tank Farm)
- ALT-10 (Day Tank Farm)
- ALT-10.1 (Contaminated Soil)
- ALT-5 (Battery Dump)
- ALT-3 (Sewage Terrace)

**Raw Water Intake**

During the inspection, the raw water intake facility was noted to be in good order and operating as intended. DND CFS Alert has used 57,404m<sup>3</sup> to date, 19,489m<sup>3</sup> used for domestic purposes and 37,915m<sup>3</sup> returned for freeze protection. The pipe line capacity is approximately 16m<sup>3</sup> as reported by Environmental staff; Currently DND CFS Alert is below the authorized annual usage with total consumption to date being 57,420m<sup>3</sup> . No concerns were noted regarding this facility.

**Millionaire's Dump**

During the inspection of the CFS Alert Station Millionaires Dump, it was noted that the Department of National Defense is no longer using this facility and has begun capping the waste deposited (*see photo 1*). Through discussions with Andrew TAM, it was noted that DND has planned for the capping of this facility to be completed by the end of September 2019. No other concerns were identified regarding this facility.

**Dump 3**

Through the course of inspecting this facility, it was noted that historic waste is protruding through the material used to cap this facility in the years past. The inspector was notified that all run off from this facility ends up in Parr Inlet located downstream from the facility, approximately 400 meters away. The historic Waste dates back to the early 1970's. Due to the location and the nature of the environment in this area, it is normally too dry to take water samples, however the Inspector requested samples be taken during times of high water flow or when there is pooling water in the area (*see photo 2*). No other concerns identified regarding this facility.

**Main Station Landfill**

The ALT-4 Main Station Landfill is captured under the 3BC-ALT1015 Water Licence (*see photo 3*). This authorizes the deposit of waste including ash from the burn pan (*see photo 4*) located within this facility. CFS Alert is authorized to burn all untreated wood, cardboard and acceptable food waste in the incinerator including (*see photo 5*) burning waste oil in a waste oil burner onsite. DND CFS Alert actively monitors water runoff from this site as a requirement of the Water Licence *Part J Item 6* at the sampling station ALT-4 (*see photo 6*). During inspection of this facility there were no concerns noted regarding the deposit of waste or management of the Landfill.



**Airfield Fuel Tank Farm**

This authorization permits DND to hold fuel onsite for various uses. DND holds, on this site ALT-8, 6 fuel tanks within an unlined berm. 2 white fuel storage tanks approximately 455,000L each and 4 orange fuel storage tanks approximately 236,000L each. During the inspection of this facility it was noted that water is contained within the berms (*see photo 7*). During the inspection of this facility it was noted that signs of historic overflows are apparent with slumping throughout the berm walls. CFS Alert staff informed the inspector that in years past and in previous reports water from this facility has vanished. This leads to the inspector to believe that this facility is not operating as intended and potential unauthorized discharges have occurred with no quality control of potentially contaminated water. This is in contravention of the Act (*Nunavut Waters and Nunavut Surface Rights Tribunal Act*) NWNSRTA Section 12(1), (2) & (3). The inspector believes that water from this facility percolated through the berm wall to the east of the fuel storage facility downhill towards the contaminated soil facility and through to the far east side of the facility filling it beyond capacity and breaching the northeast corner of the contaminated soil facility and releasing into the environment (*see photos 8, 9, 10, 11*). The inspector noted a drum style spill kit located in the vicinity of the fuel tank farm that has been damaged and its contents appear to be removed. (*see photo 12*) It is important to keep emergency response equipment up to date in the event of an emergency. The inspector is requesting a new spill response kit to be replaced along with its appropriate contents to ensure proper mitigation measures are in place in the event of an emergency.

**Contaminated Soil Landfarm**

During inspection of this facility it was noted that the facility appeared to be at full capacity. It was also noted that the northeast corner of the berm containing the contaminated soil has washed out due to water levels being too high for the berm wall to contain (*see photo 10, 11*). This is an unauthorized discharge of contaminated water and in contravention of the Act NWNSRTA Section 12(1), (2) & (3) The inspector is request CFS Alert to repair the damaged berm prior to further deposition of contaminated soil into this facility. This event also fails to satisfy *Part D Item 11* of the licence which states “*Effluent discharged from the Fuel Storage Facilities and the Landfarm at monitoring program stations ALT-8, 9, 10 and 11 shall not exceed the following Effluent quality limits*”. With the release of material from this facility a contaminated soil farm the inspector believes that the substance fails to meet criteria in *Part D Item 11* of the licence. The substance can be classified as a hazardous substance and must be disposed of off-site. Failure to adhere to this request will result in further enforcement action by CIRNAC to ensure compliance.

**Upper Fuel Tank Farm**

When the inspector arrived at this facility it appeared to be operating as intended. The grade and material used appear to be in stable condition with no slumping or apparent signs of seepage or leaks (*see photo 13*). No concerns were identified regarding this facility.

**Day Tank Farm**

The day tank farm is located adjacent to the contaminated soil ALT-10.1 along the road to the CFS Alert airport runway. This facility appears to be in good order with no signs of leaks. The inspector noted tracks leading up onto and through the berm surrounding the Day Tank (*see photo 14*). DND is reminded that this activity compromises the structural integrity of the berm walls and could lead to an unauthorized release of fluid from this facility. No concerns other concerns regarding this facility.

**Contaminated Soil Adjacent to the Day Tank Farm**

This facility appears to be in an unusable condition. The liner beneath the berm intended for contaminated soil is no longer an impermeable layer separating the contaminated soils from the environment (*see photo 15*). The Inspector was notified that contractors unknowingly damaged this facility. The inspector was also notified that the facility was not in commission during this time. DND was advised not to use this facility as a contaminated soil facility until such time as a new liner be installed to prevent contamination. No other concerns noted regarding this facility.

**Battery Dump**

This Facility appears to be capped and in good order. DND does sampling at this location as it is required by the Water Licence 3BC-ALT1015. No concerns with this facility

**Sewage Terrace**

As a result of below freezing temperatures for long periods of time DND is continually running water to ensure the piping on site does not freeze. The outfall to the sewage terrace system is unsatisfactory to the Inspector. Sewage is freely flowing around the terrace system with little to no obstacles in its path (*see photo 16*). This is not an acceptable form of waste disposal as the facility is not operating as designed. DND is required by the licence to ensure controlled deposition is in order in *Part D Item 8*. DND shall mitigate this deposition to ensure controlled release of sewage is in place. The Licensee reports that all criteria set regarding the release of the sewage are met with the exception of TSS due to the nature of the building material used during construction. All criteria from the licence must be met. DND is to seek approval from the Nunavut Water Board granting the deposition of the high TSS into Parr Inlet. Any request to modify discharge criteria, including TSS, shall be done through the NWB

**Water Fording**

During the course of this inspection, we visited the site where a bridge was washed out and no longer usable. Andrew TAM and Nathan KOUTROULIDES have informed us that DND has been installing multiple antenna. At this site the inspector observed evidence of water fording which is not authorized under this water licence and the inspector under the impression that DND is water fording multiple times daily. The exact location is N 82 27' 30.32" W 62 24' 57.23" (*see photo 17*). DND was unsure of this water body being fish bearing and is actively neglecting the bridge going around it and fording water to get to the site of construction. (*See photo 18, 19, 20*). Water Fording is not an approved activity in the Water Licence held by DND and is in contravention of the Water Licence *Part C Item 6 & 7*. DND is to cease the fording of water immediately or until such time as DND is able to cross water in a way that does not alter the sides or the bottom of the water body.. DND is reminded that other legislation both territorial and federal likely apply to this use of water and should ensure compliance with all relevant regulations.



SECTION 2

☐ Comments

☒ Non-Compliance with Act or Licence

☒ Action Required

DND must adhere to the provisions and prohibitions with in the Water Licence and though the Water Licence is expired the licensee is still obligated to follow the terms and condition set out by the Nunavut Water Board.

Acts of non- compliance

The Department of National Defense is currently using water and depositing waste without authorization from a valid Water Licence this is in contravention of the Act NWNSRTA section 11 & 12. In order for DND CFS Alert to be authorized for their current activities they must hold a valid Water Licence from the Nunavut Water Board.

**Airfield Fuel Tank Farm, Landfarm parallel to the Airfield Tank Farm and Sewage Terrace System** – prior to discharge Water with in the facilities DND must sample to verify compliance with the criteria within the Water Licence. The release of the water weather or not this was intentional, is in contravention of the *Act NWNSRTA Section 12*.

*12 (1) Subject to subsection (2) and except in accordance with the conditions of a licence, no person shall deposit or permit the deposit of waste*  
*(a) in waters in Nunavut; or*  
*(b) in any other place in Nunavut under conditions in which the waste, or any other waste that results from the deposit of that waste, may enter waters in Nunavut.*

Exceptions

**(2)** *Subsection (1) does not apply in respect of*  
**(a)** *any unlicensed deposit of waste that is authorized by the regulations; or*  
**(b)** *the deposit of waste in a national park.*

Duty to report deposits

**(3)** *Where waste is deposited in contravention of this section, every person who owns or has the charge, management or control of the waste, or who caused or contributed to the deposit, shall, subject to the regulations, without delay report the deposit to an inspector.*

Fording of Water - N 82 27’ 30.32” W 62 24’ 57.23”

It is evident that DND is fording water and in doing so multiple times daily is altering the bed and the banks of the water body. This is in contravention of the Water Licence *Part C Item 6 & 7*

**3BC-ALT1015 Part C Item 6**

*The licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.*

**3BC-Alt1015 Part C Item 7**

*Sediment and erosion control measures shall be implemented prior to and maintained during the operation to prevent entry of sediment to water.*

Licensee or Representative	Inspector’s Name
	Jeremy FRASER
Signature	Signature
Date	Date
	Sept 11 2019

Office Use Only: Follow-up report to be issued by Inspector

☐ Yes ☒ No

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





PHOTO LOG

Date	Camera	Inspector	Authorization
July 10 2019	Sony Cyber-shot	Jeremy FRASER	3BC-ALT1015
Photo Log # 1		Location (NAD 83 DD MM SS.SS)	
Photo #1		N	W
			
Description: Capping of ALT-6 Millionaire's Dump			

Photo Log # 2	Location (NAD 83 DD MM SS.SS)
Photo #2	N W
	
Description: ALT-7 Dump 3 appears to be capped, as see in the photo the ground is composed of rocky material. Location of sample requested during times of high water flow.	





Photo Log # 3

Location (NAD 83 DD MM SS.SS)

Photo #3

N

W



Description: Main Station Landfill waste deposit

Photo Log # 4

Location (NAD 83 DD MM SS.SS)

Photo #4

N

W



Description: Main Station Burn Pan located within the Main Station Landfill facility





Photo Log # 5

Location (NAD 83 DD MM SS.SS)

Photo #5

N

W



Description: Signage indicates acceptable material to be deposited within the Landfill ALT-4

Photo Log #6

Location (NAD 83 DD MM SS.SS)

Photo #6

N

W



Description: Main Station Landfill water runoff sample location





Photo Log # 7

Location (NAD 83 DD MM SS.SS)

Photo #7

N

W



Description: lower airfield fuel tank farm - Water contained within the unlined berm housing fuel tanks

Photo Log # 8

Location (NAD 83 DD MM SS.SS)

Photo #8

N

W



Description: Fuel Tank Farm on the right side of the photo and the contaminated soil landfarm on the left downhill from the fuel storage facility.





Photo Log # 9	Location (NAD 83 DD MM SS.SS)	
Photo #9	N	W
		
Description: photo of the contaminated soil Landfarm facility from the Fuel Tank Storage facility – the Landfarm is downhill from the fuel tank farm		

Photo Log # 10	Location (NAD 83 DD MM SS.SS)	
Photo #10	N	W
		
Description: contaminated soil Landfarm facility Northeast corner of the berm breached		





Photo Log # 11

Location (NAD 83 DD MM SS.SS)

Photo #11

N

W



**Description:** contaminated soil Landfarm facility Northeast corner of the berm breached – outside wall of the breached area washed out

Photo Log # 12

Location (NAD 83 DD MM SS.SS)

Photo #12

N

W



**Description:** Damaged Spill Response Kit – contents removed. Located between the tank farm and the parking area.





Photo Log # 13

Location (NAD 83 DD MM SS.SS)

Photo #13

N

W



Description: Upper Fuel Tank Farm appears to be operating as intended

Photo Log # 14

Location (NAD 83 DD MM SS.SS)

Photo #14

N

W



Description: CFS Alert Day Tank Fuel Storage Berm. Vehicle tracks can be seen going through the facility





Photo Log # 15

Location (NAD 83 DD MM SS.SS)

Photo #15

N

W



Description: ALT-10.1 Contaminated soil adjacent to the Day Tank Farm. Pieces of liner can be seen in this photo.

Photo Log # 16

Location (NAD 83 DD MM SS.SS)

Photo #16

N

W



Description: Sewage flowing past the terrace system and freely flowing towards Parr Inlet





Photo Log # 17

Location (NAD 83 DD MM SS.SS)

Photo #17

N

W



Description: Bridge to construction site in disrepair and tapped off

Photo Log # 18

Location (NAD 83 DD MM SS.SS)

Photo #18

N

W



Description: Vehicle tracks can be seen in this photo leading to the water crossing.





Photo Log # 19

Location (NAD 83 DD MM SS.SS)

Photo #19

N

W



Description: Tracked Vehicle tracks can be seen in this photo leading in to the water in the background.

Photo Log # 20

Location (NAD 83 DD MM SS.SS)

Photo #20

N

W



Description: Vehicle tracks can be seen coming out of the other side of the stream in this photo.