



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee		Licensee Representative	
Major Creighton North Warning System Office 455 Boulevard de la Carriere, Gatineau, Quebec, J8Y 6W6		Scott Charland – NWS A/Environmental officer - NWS Don Beattie – Raytheon Manager, Environmental, Health and Safety- Raytheon Canada	
Licence No. / Expiry		Representative's Title	
3BC-FOD0919		Acting Environmental Officer	
Land / Other Authorizations		Land / Other Authorizations	
Nil		Nil	
Date of Inspection		Inspector	
July 20, 2016		A.Keim	
Activities Inspected			
<input checked="" type="checkbox"/> Camp <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input type="checkbox"/> Reclamation <input checked="" type="checkbox"/> Fuel Storage			
<input type="checkbox"/> Roads/Hauling <input type="checkbox"/> Other: Water Discharge <input type="checkbox"/> Other: Municipal			

Conditions:		A - Acceptable		C - Concern		U - Unacceptable		NA – Not Applicable		NI – Not Inspected	
Water Use		Condition		Comment		Site Conditions		Condition		Comment	
Intake/Screen		A				Water Management Structures		NA			
Flow Measure. Device		NA				Culverts / Bridges		NA			
Source: Water Supply Lake		NA				Drainage		NA			
Water Use:		A				Erosion / Sediment		NA			
Recirculation ( y /n)		NA				Mitigation Measures		A			
						Reclamation Activities		C			
						Materials Storage		A			
Waste Disposal						Signage		A			
Waste Water		A									
Solid Waste		C				Monitoring					
Hazardous Waste		C				Sample Collection / Analysis		A			
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:				Location(s): None were collected during the period of Inspection							
<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. __)
Administration			
The Water Resources Officer (WRO) appreciates the assistance and cooperation provided by Mr. Scott Charland, Mr. Beattie who accompanied the Inspector during the inspection of the site.			
The site is an (unmanned) North Warning System radar site located at Dewar Lakes, Nunavut. The site is visited quarterly for preventive maintenance inspections and seasonal fuel transfer. The site consists of a lower section containing fuel tanks/ bulk storage and airstrip and the upper (summit) section containing the Radar complex, outbuildings, bulk fuel storage tanks and accommodation train. These are connected by a 2 inch pipeline that is used to transfer fuel between the lower bulk tanks and the summit site.			
The following report is based on observations made at the time of the inspections at the Dewar Lakes (Fox -3 ) Long Range Radar Station. A review of the terms and conditions of the water license was conducted during the site inspection. The focus of the Inspection was twofold. One was to follow-up on remedial activities associated with two uncontrolled releases of fuel at the site and the second a more general compliance inspection. There were no obvious issues that required the immediate attention of the Inspector and the site was found to be running in compliance with the issued license.			
The two specific spills in question are:			
<ul style="list-style-type: none"><li>2013-145 924 l of Jet A1</li><li>2009-341 0 L of Jet A1</li></ul>			



A review of the Nunavut Water Board FTP – Public Registry was conducted during the writing of this report. An annual report for the 2015 annum, completed by Raytheon Canada was located. This report is a requirement under the terms and conditions of the Water License. The annual report was found to include those items listed in Section 1 (a) through (g) of Part B General Conditions.

Additionally, it was noted that the report detailed that there had been no uncontrolled releases of Waste (spills) at the site in the 2015 annum. The report does go on to state that there are two outstanding sites that require remediation. The report does not specifically reference the spill number but does indicate one is at the summit and one is located along the pipeline.

It is noted that the Licensee has shipped hazardous wastes off site via Fox Main and that the Manifests were also included in the annual report. The inclusion of these records in the annual is excellent however the licensee is reminded that these records are to be available on site so they may be reviewed by an inspector.

SECTION 2	<input type="checkbox"/> Comments (s.__)	<input type="checkbox"/> Non-Compliance with Act or License (s.__)	<input type="checkbox"/> Action Required (s.__)
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Inspection Findings:

Lower site

- Inspection of the lower bulk fuel tanks was not undertaken at the time of this inspection. It was noted that site identification and remedial activities had been on-going on the lower site however this work was not covered in the annual report and unknown to the Licensee’s representatives during the period of Inspection.

Roadway

- An excavation that included the repaired pipeline, pallets to support the pipeline and approximately 30 Quatrex Bags (each about half full) of soils. It is expected that these are the PHC impacted soils removed during the remediation efforts made in 2011 and 2013 by Qikiqtani Environmental and Biogene. (It is noted that the report produced by Biogene was made available for review following the inspection. The report clearly outlines the remaining work needing to be completed although the Appendix D – Excavation logs are complete gibberish)
- The Water Supply Lake was found in good order. The licensee draws water via pump and tank as necessary.

Summit

- Water use records were found on site. No issues with Water usage were identified during the Inspection
- Waste Management on site :
  - Hazardous wastes are marshaled off site to Fox main and then shipped out of the territory from there. It is unclear what Hazardous wastes originated from this site as the transfer manifests are not available for review. This is to be addressed by the period of the next Inspection.
  - The Effluent Lagoon is to be maintained in such a manner that it does not overtop or allow the contents of the lagoon to directly flow into the environment. The Licensee is to provide confirmation that work to maintain the lagoon walls has been completed.
  - Quatrex bags of PHC soils from the 2013-145 (helo crash) remain on site. Biogene , the contractor hired to clean up this spill did write a report outlining the remaining remedial work to be completed including the marshalling of the contaminated soils collected back following the incident.

SECTION 3	<input type="checkbox"/> Comments (s.__)	<input checked="" type="checkbox"/> Non-Compliance with Act or License (s.__)	<input type="checkbox"/> Action Required (s.__)
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Non-compliance

The Nunavut Waters and Nunavut Surface Rights Tribunal Act;

12. (1) Subject to subsection (2) and except in accordance with the conditions of a license, 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.
- (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.

Based on observations and photos collected during the period of the Inspection, the Inspector believe s that the Licensee has failed to adhere to section 12 as above and is in contravention of the Act.

The failure of the operator to remediate these sites in a reasonable amount of time is of concern to the Inspector but is now academic as that operator is no longer on site. The Licensee has indicated that another contractor is being brought in to evaluate these spills and affect a cleanup including the removal of the contaminated soils. It is unclear if this work is complete at this time.

It is the recommendation of the Inspector that further enforcement action is suspended pending a report from the Licensee on the actions undertaken following the inspection to achieve compliance with the Act and the License. A follow up Inspection to validate the findings contained in the report may be required to take place next year.



Photo Log

Date	Authorization	Camera	Inspector
July 20, 2016	3BC-FOD0919	Sony Cyber shot	A. Keim

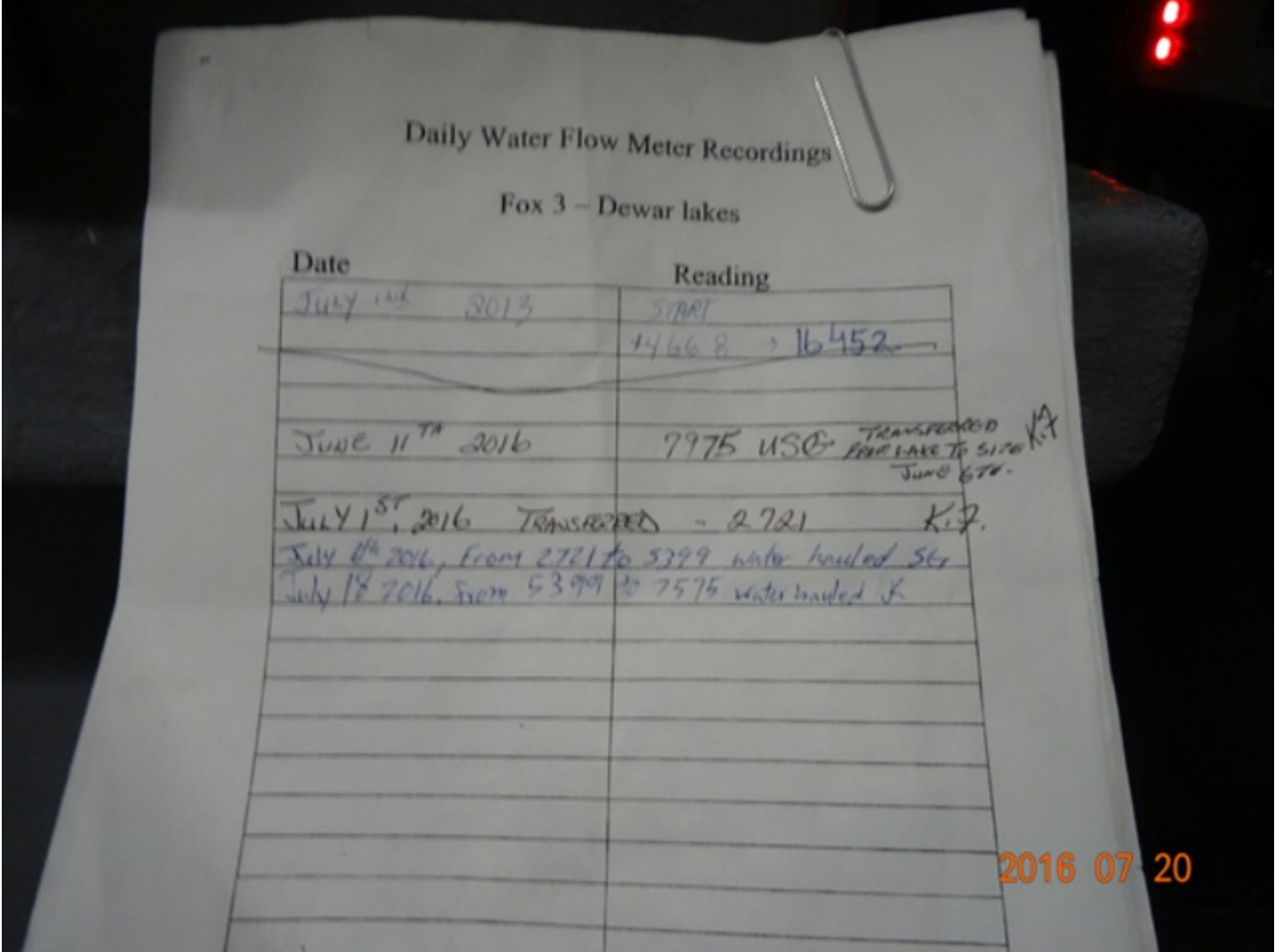


Figure 1 Water usage/ Intake log



Figure 2 Water tanks in accommodation train





Figure 3 Chemical storage



Figure 4 Site of 2013-145 Quatrex Bags of contaminated soils remain on site. Remedial work remain incomplete





Figure 5 2013-145 - PHC soils



Figure 6 2013-145 - PHC soils 2





Figure 7 Effluent lagoon - signs of over topping and erosion



Figure 8 Effluent lagoon - very black color





Figure 9 Effluent lagoon - over-topping



Figure 10 Summit bulk fuel storage





Figure 11 Garage - battery storage



Figure 12 Hazardous waste and chemical storage area





Figure 13 Haz waste marshalling and packaging area



Figure 14 2009-341 - Quatrex bags of PHC soils on pipeline





Figure 15 2009-341 - Clean up and remedial efforts on-going



Figure 16 2009-341.





Figure 17 2009-341 (2)



Figure 18 2009-341 Bags of PHC soils (2)





Licensee or Representative	Inspector's Name
	A. Keim
Signature	Signature
	On original document
Date	Date
	09/09/2016

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input type="checkbox"/> No
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