



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee		Licensee Representative	
Department of Indigenous and Northern Affairs Canada (INAC) Box 100 Iqaluit, Nunavut X0AOHO		Jessie Hoyt – Environmental Engineer- PWGSC Allen MacGarvie –Stantec Brandon MacKay- Englobe Kimberly Krug- Stantec	
Licence No. / Expiry		Representative's Title	
1BR-NIR1419		Environmental Engineer	
Land / Other Authorizations		Land / Other Authorizations	
N2013U0015		Nil	
Date of Inspection		Inspector	
June 22,2016		A.Keim	
Activities Inspected			
<input type="checkbox"/> Camp <input type="checkbox"/> Drilling <input type="checkbox"/> Mining <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Reclamation <input 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	Haz/Mat Management		Condition	Comment
Intake/Screen	NA	A		Water Management Structures	NA	A		Storage	A	A	
Flow Measure. Device	NA	A		Culverts / Bridges	NA	NA		Spills	A	A	
Source:	NA	A		Drainage	NA	A		Spill Plan	A	A	
Water Use:	NA	A		Erosion / Sediment	NA	C					
Recirculation ( y /n)	NA	NA		Mitigation Measures	NA	A		Administrative			
				Reclamation Activities	NA	A		Records	A	A	
				Materials Storage	NA	A		Reports	A	A	
Waste Disposal				Signage		A		Plans	A	C	
Waste Water	NA	C						Notifications	NA	NA	
Solid Waste	A	A		Monitoring		Other					
Hazardous Waste	A	A		Sample Collection / Analysis	A	A					
*The number in the comments field will correspond with specific comments provided below.											
Samples taken by Inspector:			Location(s): NA								
<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.__)
<p>The Nottingham Island Site is located approximately 40 kilometers south of Cape Dorset, Nunavut at approximately 63o 06’ 43” N latitude and 77o 56’ 19” W longitude within the Qikiqtaaluk Region of Nunavut. The site operated as a weather station and radio transmitter station from 1927 to 1970.</p> <p>The site consisted of a number of buildings including bunk houses, generator buildings, cook and camp facilities , two empty above-ground storage tanks, a number of antennae and a large amount of scattered debris. Off-site features include debris piles, a roadway, a communication tower and nearby lakes/surface water features. These facilities and infrastructure are now being remediated by the Department of Indigenous and Northern Affairs.</p> <p>Site mobilization was not completed the first year of the project which resulted in a significant delay. Site was occupied in 2015 and remedial work was initiated during that field season. At the time of the Inspection (June 22, 2016) work was still on-going but was expected to wrap up and the site to be demobilized in 2016.</p> <p>On-going activities on site were identified as the following;</p> <ul style="list-style-type: none"><li>• Camp operation</li><li>• Hazardous and Non-Hazardous material removal, handling, storage on site packaging for transportation</li><li>• Temporary storage on site for hazardous materials, equipment and fuels</li><li>• Building and infrastructure demolition ( two buildings remain standing)</li><li>• Debris consolidation and disposal ( on-site burning of wood wastes)</li><li>• Excavation of PHC contaminated soils to the Land farm cell</li><li>• Excavation and storage of co-contaminated soils that cannot be treated in Land farming operations</li><li>• Quarrying activities</li><li>• Site grading and regrading to minimize water accumulation, ponding and erosion/ sedimentation in locations where PHC soils have been removed to the Land farm.</li></ul> <p>Upon completion of activities the site contractor will then undertake demobilization of equipment, materials/wastes and personnel.</p>			



SECTION 2

☒ Comments (s.\_\_)

☐ Non-Compliance with Act or Licence (s.\_\_)

☐ Action Required (s.\_\_)

During the period of Inspection the Inspector noted the following areas of concern and requested information on mitigation plans to address these moving forward;

1. Contact water treatment from the barrel crushing process. Water used to wash drums prior to crushing operations will be stored and then treated prior to discharge. The information available on site with respect to the process and the amount and type of filtration was not available during the Inspection. The inspector has asked that the license provide this information prior to initiating the treatment of the contact water.
2. Licensee had not yet sampled the lagoon by the period of the inspection. It is unclear what, if any, further treatment may be required to meet discharge criteria in the issued License (Part D item 21) prior to closure. The Licensee was asked to sample the lagoon and determine treatment options if required prior to camp closure.

On July 18<sup>th</sup>, 2016, Dele Morakino of the Contaminated sites program passed on Englobes comments and response to the questions raised during the Inspection. The response provided by the contactor is submitted to the Nunavut Water Board as an attachment to this Inspection Report for your reference. The Information contained was found adequate. The Licensee however will be required to provide information on the following in their annual report:

- The license was asked to provide the formula used to calculate the breakthrough estimate for the contact water used when decontaminating the barrels. This information is necessary to determine the amount of activated carbon necessary to ensure adequate treatment on site.
- What treatment options were incorporated prior to the discharge of effluent from the lagoon prior to demobilization of the camp.
- Sampling results from the discharge that provides evidence that the effluent met criteria prior to discharge

One other issue identified by the PWGS representative as well as by the Stantec representative to the Inspector during the Inspection was the issue over mitigations put in place to address possible erosion and sedimentation down gradient from the Hydrocarbon contamination clean up location above the sea-lift beach area. .

1. From the main camp location down gradient to the beach head impacted soils have been removed. The area has been back filled and regraded however there remains concern over the possibility that surface flow may carry fine cover material down grade and this may in turn affect the stability of the excavation and sediment buildup on the beach. Measures to reduce the flow and to slow run off have been put in place by the Licensee and are to be monitored to ensure their effectiveness.

The Inspector notes that the monitoring of erosion/ sedimentation or surface water management is not included within the Water Management plan for the site or as a specific condition of the license. It is recommended that monitoring of the mitigations form part of the long term monitoring program/ license for the site so as to identify and avoid the deposit of materials beyond the beach head and into the Marine environment.

It is recommended that the Licensee monitor next year’s Freshet to monitor the success of the measures put in place.

Photo Log

Date	Authorization	Camera	Inspector
June 22, 2016	1BR-NIR1419	Sony Cyber shot	A. Keim



Figure 1- Small spill of hydraulic fluid on site



Figure 2 One of the two bulk fuel storage tanks on site





Figure 3- Building on site, to be dismantled



Figure 4 Burn bin for clean wood





Figure 5 From site of main camp looking back to shoreline. water accumulation from freshet



Figure 6 Beach head and on site erosion control measures





Figure 7 Old residence for cleaners/cooks



Figure 8 Scrap metal and debris to be cur and bagged





Figure 9 Drum fuel storage area



Figure 10 drum fuel storage





Figure 11 Sand filters and UV water treatment



Figure 12 Lagoon





Figure 13 wastewater collection point for discharge to lagoon.

Licensee or Representative	Inspector's Name
	A. Keim
Signature	Signature
	On original document
Date	Date
	27/6/2016

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