



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee		Licensee Representative	
TMAC Resources		Sarah Warnock	
Licence No. / Expiry		Representative's Title	
2BB-BOS1217 / 2BB-BOS1727		Environmental Coordinator	
Land / Other Authorizations		Land / Other Authorizations	
Date of Inspection		Inspector	
10 July 2017 and 20 Aug 2017		Eva Paul	
Activities Inspected			
<input checked="" type="checkbox"/> Camp	<input checked="" 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			

Conditions:	A- Acceptable	U-Unacceptable	C-Concern	NI-Not Inspected	NA- Not applicable
PART: (all items listed are 2BB-BOS1217)		Item No. *	Condition	Observation No. *	
A: SCOPE, DEFINITIONS AND ENFORCEMENT			A		
B: GENERAL CONDITIONS			A		
C: CONDITIONS APPLYING TO WATER USE			A		
D: CONDITIONS APPLYING TO WASTE DISPOSAL			A	1	
E: CONDITIONS APPLYING FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS		6	U	1	
F: CONDITIONS APPLYING TO DRILLING OPERATIONS			C	3	
G: CONDITIONS APPLYING TO MODIFICATIONS			A		
H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING			A	4	
I: CONDITIONS APPLYING TO ABANDONMENT AND RESTORATION OR TEMPORARY CLOSING			C		
J: CONDITIONS APPLYING TO THE MONITORING PROGRAM			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): BOS-1 (intake), BOS-3 (sewage effluent at sampling port)			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					

SECTION 1	<input checked="" type="checkbox"/> Comments (s.1)	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence (s.2)	<input checked="" type="checkbox"/> Action Required (s.3)
<p>An inspection was conducted July 10 2017 at TMAC's Boston Project. I was accompanied by Sarah Warnock, TMAC's on-site Environmental Coordinator. The portal was not yet discharged.</p> <p>1. TMAC activated the RBC wastewater treatment unit for the summer and was awaiting compliant lab results to enable discharge. In the meantime, the effluent was reporting to a temporary sump built on the camp pad. Work was begun excavating the contents of the landfarm.</p> <p>2. The licence in effect at the time of the July inspection included a requirement to submit, prior to resuming exploration and commissioning of the SDF, a revised OM Manual. To the best of my knowledge, this was not submitted.</p> <p>3. At the time of the inspection there were two drills active at Boston. Water recirculation was occurring and there was very little evident impact to the tundra and virtually no cuttings visible. Cuttings were being deposited to sumps: non-saline to a depression beside the airstrip, and saline cuttings to a lined constructed sump on the ore pad. The non-saline cuttings sump is beside the airstrip and an existing sump; however, it is connected to a number of small wetlands. I do not know if they are natural wetlands or the result of historic drill holes that caused thermokarsts. I have noted from the aerial photo, (#4 below), that sediment (cuttings) may be traveling through this network of wetlands (as determined by murky water downstream of sump).</p> <p>4. The camp operator, Horizon North, were utilizing a fuel bladder, which was kept in a well-supported berm. This bladder will be removed at the end of the season.</p> <p>No verbal direction was given to TMAC at the time of the July inspection with respect to these issues.</p> <p>I also conducted a brief opportunistic visit August 20 2017 when working in the area. No further issues were noted. Several historic drill sites on the east side of the airstrip had been reclaimed (garbage and coco mat were collected). Coco mat had been placed at the STF discharge to attenuate the effluent discharge. Much waste around the site had been disposed of or consolidated for winter backhaul.</p>			
SECTION 2	<input type="checkbox"/> Comments	<input checked="" type="checkbox"/> Non-Compliance with Act or Licence	<input type="checkbox"/> Action Required
<p>2BB-BOS1217:</p> <p>E-6. The Licensee shall submit to the Board for approval in writing, sixty (60) days prior to resuming exploration and commissioning of the Sewage Disposal Facility, a revised Operation and Maintenance Manual, required in Part E, Item 5, prepared in accordance with the "Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996" and adapted for the use of a mechanical sewage treatment facility.</p>			



F-2. The Licensee shall ensure that all drill waste, including water, chips, muds and salts (CaCl2) in any quantity or concentration from land-based and on-ice drilling, shall be disposed of in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty one (31) metres from the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.

SECTION 3	<input type="checkbox"/> Comments	<input type="checkbox"/> Non-Compliance with Act or Licence	<input checked="" type="checkbox"/> Action Required
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| A. | An updated Operation and Maintenance Manual for the Boston Sewage Disposal Facility is to be provided with the Annual Report or 2 months prior to the next planned usage of the facility, whichever comes first.  |
| B. | Cuttings must be deposited to a “properly constructed sump or appropriate natural depression” where the cuttings cannot impact any adjacent water bodies, including wetlands. This location does not meet the definition of a sump. Mitigation measures are to be put in place prior to freezing. |

Licensee or Representative	Inspector's Name
	Eva Paul
Signature	Signature
	Sent electronically
Date	Date
	28 August 2017

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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CC:               Licensing Department, NWB  
                    Erik Allain, Manager of Field Operations, INAC  
                    Kitikmeot Inuit Association

PHOTO LOG

Date	Camera	Inspector	Authorization
July 10 2017	SONY DSC-HX50V	Eva Paul	2BB-BOS1217
Photo Log # 1		Location (NAD 83 DD MM SS.SS)	
Photo DSC07222		N69 39 28.9	W106 23 01.6



Description: Temporary lined sump for storage of effluent from STF.





Photo Log # 2

Photo DSC07165

Location (NAD 83 DD MM SS.SS)

N67 39 24.5      W106 22 48.4 (approximate, from the air)



Description: Work is begun excavating the old landfarm.

Photo Log # 3

Photo DSC07162

Location (NAD 83 DD MM SS.SS)

N67 39 08.9      W106 22 57.4



Description: Geotech summer drill setup. Recirculation occurring through the pools, and cuttings slung from the metal baskets to a central sump. Cuttings in the foreground are from historic drilling.





Photo Log # 4	Location (NAD 83 DD MM SS.SS)
Photo DSC07146	N67 39 10.0 W106 22 53.6
	
Description: Non-saline cuttings sump adjacent to historic cuttings sump beside the airstrip. It is difficult to know if these are natural wetlands or thermokarsts resulting from old drill holes.	

Photo Log # 5	Location (NAD 83 DD MM SS.SS)
Photo DSC07215	N67 39 27.4 W106 23 02.7
	
Description: Fuel bladder in use for the summer.	





Photo Log # 6	Location (NAD 83 DD MM SS.SS)	
Photo DSC07969	N67 39 26.4	W106 23 04.7



Description: Landfarm contents being bagged for winter backhaul to Doris.

Photo Log # 7	Location (NAD 83 DD MM SS.SS)	
Photo DSC07988	N	W (not recorded)



Description: Bagged waste at reclaimed drill site.