



WATER LICENCE INSPECTION FORM

☒ Original  
☐ Follow-Up Report

Licensee	Licensee Representative
TMAC Resources Inc.	Sarah WARNOCK
Licence No. / Expiry	Representative's Title
2AM-DOH1323	Environmental Supervisor
Date of Inspection	Inspector
11 October 2018	Jeremy FRASER
Activities Inspected	
<input checked="" type="checkbox"/> Camp	<input checked="" type="checkbox"/> Drilling
<input checked="" type="checkbox"/> Roads/Hauling	<input checked="" type="checkbox"/> Mining
	<input type="checkbox"/> Construction
	<input type="checkbox"/> Reclamation
	<input checked="" type="checkbox"/> Fuel Storage
	<input type="checkbox"/> Other:

SECTION 1	<input checked="" type="checkbox"/> Comments (s. __)	<input type="checkbox"/> Non-Compliance with Act or Licence (s. __)	<input type="checkbox"/> Action Required (s. __)
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**Background:**

This Licence authorizes TMAC Resources Inc. to use water and dispose of waste associated with the Mining and Milling undertakings at the Doris North Project as outlined in the Water Licence Application, submitted to the Board throughout the regulatory process. TMAC is approved to use 480,000 cubic metres annually and the discharge of waste related to the undertaking of the project.

TMAC may conduct mining, milling and associated activities at the Doris North Project in the Kitikmeot Region of Nunavut, (68° 09' N, 106° 40' W) including, in general, as follows:

The use of water from Doris Lake for mining, milling, domestic purposes, quarrying, development, construction and operations of related mining undertakings, management and disposal of waste, storage of petroleum products, depositions of tailings to the Tailings Impoundment Area, controlled discharge of effluent, and progressive reclamation of onsite facilities.

**Inspector's Statements:**

On October 11, 2018 a Water Licence Inspection was conducted at the TMAC Doris camp (2AM-DOH1323) by inspectors Jeremy FRASER, Justin HACK and Candice PEDERSEN accompanied by Sarah WARNOCK. Facilities inspected include but not limited to Roberts Bay facilities, Doris Main Camp and mining activities associated with the water licence. Other areas include the Waste Management Area, the Bulk Fuel Storage Areas including the Three Tank Farm and the Single Tank Farm, the Jetty, the aircraft de-icing pad, Windy Lake raw water intake pump house, Doris Lake raw water intake, Windy road bridges and large diameter culvert, Doris Camp Pad, Doris Camp Diversion Ditch north of camp, fuel storage and refueling station, waste rock pile, sedimentation pond, pollution prevention control pond, the tailings line, catchment basins east and west, re-agent storage facility, North and South Dams, tailings discharge line, Tailings Impoundment Area (TIA) and underground mine.

In the course of this inspection on October 11th 2018 the following was noted:

**Roberts Bay Facilities**

- Waste Management Area:** During the inspection it was noted that waste is being segregated and disposed of as required by the water licence.
- Three Tank Farm:** No concerns were noted and the facility appears to be clear of debris and operating as intended. Fuel tank have been filled during the past open water season. No leaks have been identified during the course of this inspection.
- Single Tank Farm:** The inspector noted the grading on the southeast side of the containment berm is not to the satisfaction to the inspector, it was observed that the slope was not consistent with the issued for construction drawings titled "Q1TF-01 to 04" provided to the inspector by TMAC Resources. Keeping the grade uniform with the rest of the berm will help the inspectors identify potential areas of concern with water management structures and containment facilities. As per Water license 2AM-DOH1323 Part I Item 4 "the Licensee shall perform regular inspections of Fuel Storage and Containment Facilities, Sumps, Emergency Dump Catch Basins, other fuel tanks and connectors for leaks and movement and shall keep a written log of inspections to be made available to an Inspector upon request. More frequent inspections may be required at the request of an Inspector".

**Doris Camp Facilities**

- Diversion Berm:** During inspection of the diversion berm separating contact and non-contact water of the mine site north of the Doris Camp Pad, it was noted that some waste rock from the waste rock pile appears to have been pushed past the buffer piles on top of the waste rock pile and encroaching onto



the diversion berm. It is recommended that TMAC remove waste rock from the berm to ensure contact water remain on the inside of the berm as per water license 2AM-DOH1323 Part D Item 24 and Item 27 (see figure #1).

- **Fuel Storage & Refueling Station:** No concerns were noted with this facility, the containment berms appear to be operating as intended and grade of the berms appear to be sufficient to capture and contain any residual leaks.
- **Raw Water Intake:** It was noted that intake flow meters have now been installed and photos have been received by the inspector as requested. Currently TMAC is operating within their authorizations, and have used 16952m<sup>3</sup> of water to date.
- **West Emergency Dump Catch Basin:** It was noted during this inspection that the east side of the west catchment basin has major slumping (see figure #2,3). Concerns with the facility have been addressed during a phone call with the TMAC and SRK consulting. The inspector has received a written letter from SRK consulting regarding the issues with the facility and TMAC has committed to completely rebuilding this Emergency Catchment Basin.
- **Re-Agent Facility:** This facility is used to store and manage re-agents such as cyanide used in the milling process of mining to separate the metals from the other minerals excavated. No concerns were noted.
- **North and South Dams:** These dams contain the tailings within the TIA. The dams are continually monitored via sensors installed within the dams and also visually inspected for permafrost changes to ensure structural integrity. No concerns were noted.

The following information is a summary of the Actions Required by the licensee to promote and ensure compliance:

- Maintenance of the berm of the Single Tank Farm at Robert’s Bay
- Maintenance of the Diversion Ditch at Doris North Camp to ensure proper management of contact water

Licensee or Representative	Inspector’s Name
	Jeremy Fraser
Signature	Signature
Date	Date
	Nov 30 2018

Office Use Only:	Follow-up report to be issued by Inspector	<input type="checkbox"/> Yes <input type="checkbox"/> No
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CC:               Licensing Department, NWB  
                    Justin Hack, Manager of Field Operations, CIRNAC



PHOTO LOG

Date	Camera	Inspector	Authorization
11 Oct 2018	Sony Cyber-shot	Jeremy FRASER	2AM-DOH1323
Photo Log #	Location (NAD 83 DD MM SS.SS)		
	N	W	



Description: Waste rock pile pushed over the edge clearly marked with a large white sign.. Covered in snow during this inspection

Photo Log #	Location (NAD 83 DD MM SS.SS)		
Photo	N	W	



Description: east catchment basin closer to the vent raise. Slumping can be seen through the snow cover.



Photo Log #	Location (NAD 83 DD MM SS.SS)	
Photo	N	W
		
	Description: slumping as seen in this photo goes right through the west side of the catchment basin.	