



June 27, 2014

Your file - Votre référence  
2AM-DOH1323

Our file - Notre référence  
IQLAUIT-# 808873

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
Gjoa Haven, NU X0E 1J0

**Re: Aboriginal Affairs and Northern Development Canada's Review of the Operational Plans  
for Doris North Project Water Licence #2AM-DOH1323**

Dear Ms. Beaulieu:

Thank you for your email of May 21, 2014, concerning the above mentioned application. A memorandum is provided for the Board's consideration. Comments and recommendations have been provided pursuant to Aboriginal Affairs and Northern Development Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4282 or email at [ian.parsons@aandc-aadnc.gc.ca](mailto:ian.parsons@aandc-aadnc.gc.ca) for further information.

Sincerely,

Ian Parsons  
Regional Coordinator  
Water Resources Division  
Resource Management Directorate  
Aboriginal Affairs and Northern Development Canada  
IQALUIT, NU X0A 0H0

Encl.

c.c.: Murray Ball, Manager of Water Resources, AANDC Nunavut  
Erik Allain, Manager of Field Operations, AANDC Nunavut

# Memorandum

To: Phyllis Beaulieu, Nunavut Water Board

From: Ian Parsons, Aboriginal Affairs and Northern Development Canada

CC: Murray Ball (AANDC), Erik Allain (AANDC), Robin Ikkutisluuk (NWB), and Megan Porter (NWB)

Date: June 26, 2014

**Re: Water Licence Renewal Application, #2AM-DOH1323**

Licensee: TMAC Resources Inc.  
Project: Doris North Project  
Region: Kitikmeot

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## Comments:

### A. Background

On May 21, 2014, the Nunavut Water Board (NWB) provided notification of submission of three updates to operational plans as well as an update to the Closure and Reclamation Plan (Closure Plan) for the Doris North Project by TMAC Resources (the "Licensee").

The plans distributed for comment are:

- i) Wastewater Treatment Management Plan
- ii) Spill Contingency Plan
- iii) Landfarm Management and Monitoring Plan
- iv) Closure and Reclamation Plan

An extension was granted and interested parties were asked to review this application and provide comments by June 29, 2014.

### B. Results of review

This memorandum provides comments on the operational plan updates, but AANDC will defer review of the Closure Plan recognizing that a licence amendment is in progress and that TMAC has indicated that further changes will be made to planned operations. AANDC would be pleased to provide comments on the Closure Plan when a version is prepared reflecting the content of the licence amendment(s).

Comments in this review are based on the existing water licence, and do not take into account the application for amendment currently before the Board.

On behalf of Aboriginal Affairs and Northern Development Canada (AANDC), the following comments and recommendations are provided:

Wastewater Treatment Management Plan:

1.	<p><b>Section 1 Introduction</b></p> <p><b>Comment</b> In reviewing Table 2 (Table of Concordance with Type A Water Licence) in section 1.2 (water licence requirements and regulations), AANDC has the following recommendations:</p> <p><b>Recommendation:</b> Section 2.3 of the Wastewater Management Plan should clearly indicate that all sewage and greywater will be collected and treated in the Wastewater Treatment Plant (as per Part G. 3. a of the Water Licence – 2AM-DOH1323).</p>
2.	<p><b>Section 2 Waste Disposal</b></p> <p><b>Comment:</b> Section 2.7.1 (Effluent Discharge) on page 15 states <i>“Currently the effluent discharge from the WTP occurs from the effluent discharge trailer through a pipeline to, preferentially, the ST-8 discharge point (UTM 432125E 7559324N), which is located on a rock outcrop, approximately 1 km northwest of the Doris Camp (Figure 5 and Figure 6). The wastewater effluent monitoring station (ST-8) is located inside the WTP on the effluent discharge line”</i>.</p> <p><b>Recommendation:</b> The paragraph mentioned above is confusing in that it seems to state that effluent discharge monitoring station ST-8 is located on a rock outcrop in one sentence, however, in another sentence it appears to indicate that effluent monitoring station ST-8 is located inside the Wastewater Treatment Plant on the discharge line itself.</p> <p>Clarification is needed in regards to exact location of effluent discharge monitoring station ST-8 (is it located on the rock outcrop or is it within the actual discharge line)</p> <p><b>Comment</b> Section 2.7.1 on page 15 also states <i>“A three-inch diameter HDPE pipeline was laid from the WTP to the tundra discharge point northwest of Quarry 2. The effluent is fed into the discharge pipeline by pumps in the effluent discharge trailer. The discharge is directed to the tundra through a diffuser which drains west towards Glenn Lake (UTM 430285E 7560303N), which is over 1 km from the discharge point”</i>. and</p> <p><i>“Occasionally, TMAC may be required to discharge to the old tundra discharge point, located next to the batch plant pad. This location requires less heat trace to thaw the pipeline for spring startup and fall shutdown activities”</i>.</p> <p><b>Recommendation</b> Further clarification is needed with regards to the tundra discharge point, which is referenced above. Is the discharge point a monitoring station/point as well? Is this station ST-9?</p> <p>Also the old discharge point, referenced above should be referenced in combination with a station identifier.</p>
3.	<p><b>Section 3 Wastewater Treatment Plant Monitoring and Reporting</b></p> <p><b>Comment</b> Section 3.2 (discharge monitoring) does not specify whether the wastewater effluent will be retained until confirmation that the effluent meets the water licence criteria.</p>

	<p><b>Recommendation:</b></p> <p>The Proponent should adopt the best practice of confirming that the effluent meets the discharge criteria prior to discharging to the receiving environment, and this should be a licence requirement.</p>
4.	<p><b>Section 3 Wastewater Treatment Plant Monitoring and Reporting</b></p> <p><b>Comment</b></p> <p>Section 3.2.1 (Off-Specification Effluent Quality) discusses various measures that will be taken in the event that the effluent does not meet discharge limit criteria; however, there is no mention of how the effluent will be managed.</p> <p><b>Recommendation</b></p> <p>The Proponent should describe how the effluent will be managed in the event that effluent does not meet discharge criteria.</p>

Spill Contingency Plan:

1.	<p><b>Section 1 Introduction</b></p> <p><b>Comment</b></p> <p>Section 1.4.1 (On-Site Resources) of the spill management plan lists the locations of spill kits. However the list does not contain any spill kits located at the wastewater treatment plant.</p> <p><b>Recommendation</b></p> <p>Spill kits should be located at the wastewater treatment plant. Spill kits should also be readily available where any other chemical product is stored.</p>
2.	<p><b>Section 3 Project Description</b></p> <p><b>Comment</b></p> <p>Section 3.6 (Potential for Spills) of the spill management plan states that “...<i>the most significant potential for spills on the site are during the three separate stages of petroleum fuel management activities. These are:</i></p> <ol style="list-style-type: none"> <li><i>1. The transfer of fuel (primarily diesel) between the transport barge and bulk storage tanks at Roberts Bay.</i></li> <li><i>2. The transfer of fuel (primarily diesel) between the bulk fuel storage tanks and fuel transport trucks.</i></li> <li><i>3. The refuelling of mobile or stationary equipment.</i></li> </ol> <p><i>To reduce the potential for spills, all fuel storage tanks, piping and transfer vehicles are inspected on a regular basis.</i></p> <p><b>Recommendation</b></p> <p>In addition to these protocols it is recommended that spill kits be moved to strategic locations during fuel transfer operations to minimize the effects of a potential spill.</p> <p>As well it is recommended that during refueling operations secondary containment should be used (i.e., drip pans or trays).</p>

3.	<p><b>Section 5 Spill Response Actions</b></p> <p><b>Comment</b> Section 5.9 (Other Chemicals) of the Spill Management Plan does not specifically address how hazardous materials will be managed in the event of a spill. In addition, Section 3.5 (Inventory of Other Chemical Storage Areas) does not list where cyanide products or ammonia nitrate are stored.</p> <p><b>Recommendation</b> The spill plan should address how all chemicals on-site will be acted upon in the event of a spill, particularly products or chemicals that are readily soluble in water (i.e cyanide products), as well as listing where and how these products are stored.</p>
4.	<p><b>Section 5 Spill Response Actions</b></p> <p><b>Comment</b> Section 5 (Spill Response Actions) does not describe how they would handle a spill “under ice”.</p> <p><b>Recommendation</b> Section 5 should be revised to contain a section describing how to handle a spill “under ice conditions”.</p>
5.	<p><b>Section 8 Spill Reporting</b></p> <p><b>Comment</b> Section 6.3 (External Spill Reporting) does not list AANDC Manager of Field Operations as a person to contact during a spill event</p> <p><b>Recommendation</b> Section 6.3 should be revised to include AANDC, Manager of Field Operations as a person to contact during a spill event.</p>

Landfarm Management and Monitoring Plan:

1.	<p><b>Landfarm Management and Monitoring Plan</b></p> <p><b>Comment</b> The plan does not speak to contingencies in the event that large quantities of contaminated soil, in the case of a large spill, have to be remediated.</p> <p><b>Recommendation</b> The plan should indicate what the contingencies are in case of a large spill, where contaminated soil quantities are greater than what can be accommodated.</p>
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Prepared by Ian Parsons