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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: 2BB-BOS1217

November 15, 2013

Mr. Gordon Morrison, President

Ms. Léa-Marie Bowes-Lyon

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**Subject: Licence 2BB-BOS1217 - TMAC Resources Inc.
Hope Bay Project Boston Camp Revised Interim Closure Plan**

Dear Mr. Morrison and Ms. Bowes-Lyon:

The Nunavut Water Board (“NWB” or “Board”) received from Hope Bay Mining Ltd. (HBML) the submission entitled “Hope Bay Project Boston Camp Revised Interim Closure Plan” (Closure Plan) on July 13, 2012 as a requirement of Part I, Item 1 of water licence 2BB-BOS1217. The Plan was distributed for a thirty (30) day comment period on August 8, 2012, which was followed by a thirty (30) day extension to the comment period as requested by Environment Canada (EC). Comments were received¹ from Aboriginal Affairs and Northern Development Canada (AANDC) and Kitikmeot Inuit Association (KIA). HBML provided responses to comments on February 14, 2013.

In addition to the above referenced Plan, the NWB received the following documents from HBML under separate submissions:

- On January 14, 2013, HBML submitted an update by SRK Consulting (Canada) Inc. (SRK) Hope Bay Project Closure and Reclamation Cost Estimate, dated December 31, 2012. This document contained an updated Reclamation Cost Summary for the Boston Area that was different from the Cost Estimate provided within the Plan.
- On February 12, 2013 the Board received an application to assign the Licence 2BB-BOS1217 from HBML to TMAC Resources Inc. pursuant to Section 44 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (“Act”). On June 14, 2013, the Board assigned the Licence 2BB-BOS1217 to TMAC Resources Inc.

¹ Aboriginal Affairs and Northern Development Canada (AANDC), October 7, 2012; Kitikmeot Inuit Association (KIA), October 16, 2012.

Closure Plan

Given that an Assignment application was before the Board at that time, the Board did not follow up with the HBML responses to parties' comments. However, the Assignment letter included a requirement to submit **to the Board for review, within sixty (60) days following issuance of the assignment**, an updated Abandonment and Restoration Plan. The Licensee was requested to **address the change in the Licence holder, review/revise and confirm the included Closure Cost Estimate** provided by HBML in January, 2014.

Although being generally satisfied with the responses provided by HBML with respect to the Closure Plan, the NWB requires however that the following clarifications or information be included in the updates to the plan in addition to the Items identified in the Assignment letter:

1. The AANDC identified that the Plan does not reference the need to identify and remediate metal contaminated soils. In its submissions, KIA indicated that all rock materials derived from exploration or mining activities should be tested for acid generation and metals leaching potential, and that detail design of long-term ore stockpile disposal should be based on the acid generating potential of the stockpile along with monitoring of seepage.

In its response the HBML referred to the Boston Water and Ore/Waste Rock Management Plan for details on the chemical characteristics of the rock stored at Boston.

- Section 2.5 Geochemical Characteristics of Ore and Waste Rock of referred document identifies that *ore stockpiles and waste rocks seepage monitoring indicates that concentrations of Arsenic, and to a lesser extent, Nickel and Selenium may be somewhat elevated in comparison to CCME guidelines for aquatic life. Section 4 Closure Plans states if Arsenic concentrations increase the ore used as surfacing material on the airstrip results in seepage concentrations that are similar in character to those currently discharging from the ore stockpiles, there is some potential for impacts to East Bay. Therefore, closure measures planned for this site should incorporate features that would reduce the amount of arsenic loadings from the site.*

Therefore this should be clarified in the updated Closure Plan with an inclusion of Remediation/relocation of potentially metal contaminated soils/waste rocks.

2. As stated by AANDC, Section 3.10 of the submitted plan provides the remedial alternatives that HBML intend to implement on hydrocarbon impacted soils that exceed the Government of Nunavut's Environmental Guideline for Contaminated Site Remediation Tier 1 criteria-based approach for industrial land use and coarse grained soils, which will either be remediated in the existing land farm, relocated to an off-site facility, or remediated in situ. KIA stated that extensive soil testing should be done of berm soils using wild land criteria for all COPC. Material exceeding, wild land criteria should be removed from site for disposal at a licensed facility.

In its response HBML referred to the EBA Phase III Environmental Site Assessment (ESA) report, included with this submission, for details on planned in-situ bioremediation methods. Specifically, see sections 5 and 6.

- From the NWB understanding, planned in-situ bioremediation methods would be used that is also reflected in the Cost Estimate Summary as well. **This section should include details of in-situ bioremediation of hydrocarbon impacted soils.** The Licensee is also advised that prior to using an alternative disposal of contaminated soils (encapsulating in place) the Board's written approval shall be obtained.
- 3. With respect to Decommissioning of Mine Workings, KIA stated that the material should be geochemically stable and not result in the development of acidic drainage or leaching of metals into the environment.

HBML stated that material will be used to backfill the portal will come from available waste rock material on site as described in section 3.5.1 of the closure plan. Details of the waste rock geochemistry can be found in the Water and Ore/Waste Rock Management Plan.

- **This section should provide details on the material proposed for the use of backfilling the portal making sure that no potentially acid generating and metal contaminated material will be used.**

The Licensee is also reminded that the NWB requested with the Assignment of the Licence, to submit to the Board for review within sixty (60) days following issuance of this assignment, an updated Spill Contingency Plan that addresses the change in Licence holder and comments received during the review.

Should you have any questions, please contact the undersigned at (867) 360-6338 or k.kharatyan@nunavutwaterboard.org, at your earliest convenience.

Yours truly,

Original Signed By:

Karén Kharatyan
Technical Advisor

cc: Distribution List – Kitikmeot