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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2AM-DOH1335 / TR / F12/F15

March 25, 2019

Oliver Curran
TMAC Resources Inc.
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Toronto, ON M5J 2N7

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Subject: Update to Hope Bay Project, Waste Rock, Ore and Mine Backfill Management Plan for implementation under 2AM-DOH1335, 2AM-BOS1835, and 2BB-MAE1727; Type "A" Water Licence 2AM-DOH1335; Hope Bay Phase 2 Project, TMAC Resources Inc.

Dear Mr. Curran

The Nunavut Water Board (NWB or Board) received from TMAC Resources Inc. (TMAC or Licensee) on January 17, 2019 a Update to Hope Bay Project, Waste Rock, Ore and Mine Backfill Management Plan for implementation under 2AM-DOH1335, 2AM-BOS1835, and 2BB-MAE1727, dated January 2019 (Management Plan or Plan), for Board approval as required under Part F, Item 12 and Item 15 of the Water Licence 2AM-DOH1335 (Licence) that was approved by the Minister of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) on January 14, 2019.

The Management Plan was updated to "*take into consideration the recently approved Type 'A' Water Licence(s) 2AM-DOH1335 and 2AM-BOS1835 and to provide a comprehensive Waste Rock Management Plan for the purpose of the Madrid Advanced Exploration Project in compliance with Type B Water License 2BB-MAE1727, Part E, Item 1. The revised management plan also provides further details on the evaluation and monitoring protocol being implemented for use of non-mineralized waste rock for construction across the Hope Bay Belt.*"

As stated by TMAC, they intend to "*initiate development at Madrid North early in 2019. Areas approved for surface and underground development are located in areas suitable for quarry locations. As such, TMAC intends to evaluate the suitably of non-mineralized waste from these areas for use in construction.*"

On January 18, 2019, the NWB requested additional information and updates to the Management Plan. The NWB requested that the Plan include the criteria for determining if waste rock used for construction is potentially acid generating (PAG), metal leaching, or contains residues from drilling and blasting. An updated Plan was received by the Board on January 25, 2019.

On January 25, 2019, the first version of the Plan was distributed for a public review, requesting comments be submitted from interested parties by February 25, 2019. On February 25, 2019, two comments were received from Environment and Climate Change Canada (ECCC) and three comments were received from Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC).

In its submission, ECCC requested that TMAC: 1) provide clarification on how the onset of the waste rock acidification was determined, and 2) to clarify that the waste rock and detoxified tailings will not remain on the surface after closure.

In its submission, CIRNAC requested that TMAC: 1) provide further details on the actions to be taken to mitigate inappropriate construction materials, should these materials be discovered after they have been used in construction; 2) provide clarification on whether non-mineralized diabase from the Doris Project will continue to be used as a construction material; and 3) adds figure numbers referenced in text to the corresponding figures to improve ease of reference.

On March 5, 2019, TMAC provided a response to these comments. To ECCC's comments TMAC indicated that: 1) the onset to acidic conditions for the detoxified tailings is based on a humidity cell test (HCT) sample of Doris metallurgical detoxified tailings and adjusted for temperature. Also indicating that detoxified tailings are only stored on surface for days before it is backhauled underground; and 2) that at closure there will be no waste rock and detoxified tailings remaining on surface. To CIRNAC's comments TMAC stated that: 1) if monitoring indicated the occurrence of inappropriate material, it would be characterized, delineated and the impacts assessed. If waste rock is acidic, then removal of the rock would be assessed; 2) that non-mineralized diabase is still considered a good candidate for construction material; and 3) that figure numbers would be added in the next update submitted with the annual report.

On March 8, 2019, the NWB identified that a slightly outdated version of the Plan had been reviewed, and provided the up-to-date version of the Plan requesting that parties respond by March 15, 2019, indicating if the up-to-date version of the Plan meets their requirements.

On March 11, 2019, DFO responded indicating that they have no comments. On March 14, 2019, CIRNAC responded with one additional comments, recommending that TMAC modify the criteria to assess potential for acid generation. On March 15, 2019, ECCC responded indicating that they have no additional comments.

On March 18, 2019, TMAC responded by updating the criteria to assess potential for acid generation within the Plan in accordance with CIRNAC's recommendation.

The NWB has reviewed the Hope Bay Project, Waste Rock, Ore and Mine Backfill Management Plan and related submissions, and finds the Plan functional and generally satisfying Licence requirements. By copy of this letter, the Board approves Hope Bay Project, Waste Rock, Ore and Mine Backfill Management Plan, dated January 2019, through the Board Motion No. 2018-A1-033, dated March 25, 2019, as required by Part F, Item 12 and Item 15 of Licence.

Should you have any questions or require any clarification with respect to the above, please feel free to contact the undersigned via email at Derek.Donald@nwb-oen.ca or phone (867) 360-6338 (Ext. 32).

Sincerely,

NUNAVUT WATER BOARD

Derek Donald
Technical Advisor

Attachment: Comments by CIRNAC and ECCC
Cc: Distribution list – Doris North