



Your file - Votre référence
2AM-DOH1323

June 1, 2016

Our file - Notre référence
IQALUIT-#1070004

Licensing Department
Nunavut Water Board
GJOA HAVEN, NU
X0E 1J0

Sent via email: licensing@nwb-oen.ca

Re: Amendment Application No. 1 to Nunavut Water Board Water Licence No. 2AM-DOH1323. Status of Indigenous and Northern Affairs Canada Comments: INAC IR-12; INAC IR-16; and Roberts Bay Marine Outfall and Berm Authorization

To Whom It May Concern,

On May 18, 2016, Indigenous Affairs and Northern Development Canada (INAC or the Department) participated in a teleconference meeting chaired by the Nunavut Water Board (NWB) regarding TMAC Resource Inc.'s (the Licensee) application to amend the type A Water Licence for its Doris North Gold Mine, No. 2AM-DOH1323. Other organizations present at this meeting included the Licensee, the Kitikmeot Inuit Association, Environment and Climate Change Canada, Fisheries and Oceans Canada, and the Canadian Northern Economic Development Agency.

During the meeting the Department committed to provide an update on the following issues:

1. The Department's September 18, 2015 information request concerning the mine's underground capacity for the disposal of waste rock and detoxified tailings (IR-12);
2. The Department's September 18, 2015 information request concerning the Madrid Advanced Exploration Program's relationship with the Doris North Gold Mine (IR-16); and
3. The Department's role in regulating the Roberts Bay marine outfall berm and pipeline.

It should be noted that on February 3, 2016, the Department provided a letter to the NWB regarding the status of the above referenced information requests and the following information requests and technical comments:

- The Department's September 18, 2015 information request concerning the underground disposal of ammonium nitrate fuel oil (ANFO) and petroleum hydrocarbon impacted materials (IR-10);
- The Department's September 18, 2015 information request concerning the impacts of backfilled material to groundwater (IR-13);
- The Department's December 8, 2015 technical comment concerning the groundwater

- quality during the mine's post-closure phase (TC-3); and
- The Department's December 8, 2016 technical comment concerning the submitted water and load balance sensitivity analysis of flotation tailings release rates (TC-4).

Please note that the Department and Licensee will discuss the underground disposal of ANFO and petroleum hydrocarbon impacted materials during meetings that are scheduled in Iqaluit, NU from June 6-9, 2016.

UPDATE ON ISSUES IDENTIFIED DURING MAY 18, 2016 MEETING

1. INAC IR-12: Underground Disposal of Waste Rock and Detoxified Tailings

Indigenous and Northern Affairs Canada. *Re: TMAC Resources Inc.'s Application to Amend Water Licence No. 2AM-DOH1323*. Letter from Mr. David Abernethy, Indigenous and Northern Affairs Canada to Ms. Phyllis Beaulieu, Nunavut Water Board, Iqaluit, NU. September 18, 2015.

Information Request No. 12: Please provide an explanation on how all the waste rock can be placed underground as backfill at closure taking into consideration that the volume of excavated material will be much larger than the volume of the underground cavities.

The Licensee's ability to return all excavated waste rock and detoxified tailings underground as backfill was reviewed during the Nunavut Impact Review Board (NIRB) project certificate amendment process and is being considered under this water licence amendment application assessment process. Although this activity is technically feasible, it requires careful management to ensure that projected targets of backfill compaction and filling of void spaces are achieved during the construction, operation, and closure phases.

On December 8, 2015, the Department's Water Resources Division informed the NWB that it was satisfied with the Licensee's October 8, 2015 response to its September 18, 2015 information request that concerning issue (INAC IR-12). The Department requested an explanation of how all waste rock could be placed underground as backfill at closure taking into consideration that the volume of the excavated material would be much larger than the volume of the underground cavities. The Licensee referred the Department to Table A1 of Document P5-4, *Waste Rock and Ore Management Plan*, that was submitted with its application, to review the mining schedule including ore and waste rock production rates. The Licensee also provided information on void space requirements taking into consideration the in-situ density, quantity, and subsequent compaction of waste rock that will be placed underground.

The Department's March 14, 2016 final written submission to the NIRB recommended that the Project Certificate include a term and condition requiring the Licensee to monitor underground backfill use and mine waste placement during operations to confirm that target levels of backfill compaction and filling of void spaces are achieved (INAC Final Comment No. 4). It is understood that the Licensee committed to perform these monitoring and reporting activities during the April 12-14, 2016 NIRB Public Hearing in Cambridge Bay, NU (to date the Licensee's commitments have not been posted on the NIRB public registry and a Public Hearing Report is not anticipated until on or after June 13, 2016).

Information Request No. 12 is considered to be resolved, should the NIRB recommend the project certificate be amended and incorporate the above referenced recommendation. Pending an approved project certificate amendment, the Department will recommend incorporation of any terms and conditions on this matter in an amended water licence.

2. INAC IR-16: Madrid Advanced Exploration Program

Indigenous and Northern Affairs Canada. *Re: TMAC Resources Inc.'s Application to Amend Water Licence No. 2AM-DOH1323*. Letter from David Abernethy, Indigenous and Northern Affairs Canada to Ms. Phyllis Beaulieu, Nunavut Water Board, Iqaluit, NU. September 18, 2015.

Information Request No. 16: Explain whether the proposed amendment to the Doris North Gold Project's type A water licence considers the impact of developing the Madrid Advanced Exploration Project.

On December 17, 2014, the Licensee submitted an application to the NIRB to consider authorizing the Madrid Advanced Exploration Program pursuant to Section 12.10.2 of the *Nunavut Land Claims Agreement* (NLCA). This application is associated with the Licensee's proposed Phase 2 Hope Bay Belt Project. The Department understands that the Licensee will submit a Draft Environmental Impact Statement to the NIRB for Phase 2 in October 2016. On December 18, 2014, the TMAC Resources Inc. applied for a type B water licence specific to the Madrid Advanced Exploration Program. To date, this licence has not yet been issued.

Concerns raised by the Department regarding the cumulative effects of the Madrid Advanced Exploration Program and the Doris North Gold Mine should be assessed through the Licensee's s. 12.10.2 NLCA exception application and type B water licence application for the Madrid Advanced Exploration Program. The NIRB and NWB have distributed the respective applications to interested parties for review but have not yet made any final determinations.

The Licensee's Madrid Advanced Exploration Program should not be included in the scope of the current water licence amendment application.

3. Roberts Bay Marine Outfall Berm and Pipeline

Pursuant to s. 4(1) of the *Arctic Waters Pollution Prevention Act*, it is prohibited to deposit waste in arctic waters or in any place on land where waste may enter arctic waters, except as authorized under the Act. Waste is defined as any substance (or water containing a substance in such a quantity or concentration) that if added to any water, would degrade or alter or form part of a process of degradation or alteration of the quality of that water to an extent that is detrimental to their use by man or by any animal, fish, or plant that is useful to man.

Under Section 6 of the *Arctic Waters Pollution Prevention Regulations*, the deposit of industrial waste in arctic waters is permitted if it is of a type and quantity and is deposited under conditions authorized under what is now the *Canada Oil and Gas Operations Act*, the *Territorial Lands Act* or the *Public Lands Grants Act* (now the *Federal Real Property and Federal Immovables Act*). The *Canada Oil and Gas Operations Act* does not apply in this case.

The Department is currently determining whether an authorization under the *Arctic Waters Pollution Prevention Act* will be required for this project, and if so, whether it would be most appropriate to authorize the deposit of effluent into Roberts Bay using a permit, lease, or licence issued under the *Territorial Lands Act* or a licence issued under the *Federal Real Property and Federal Immovables Act*. If an authorization under the *Arctic Waters Pollution Prevention Act* is required, the Department will work with its federal partners to determine appropriate terms and conditions, in particular Environment and Climate Change Canada, to ensure any authorization is consistent with the *Metal Mining Effluent Regulations*. Any *Arctic Waters Pollution Prevention Act* authorization would be incorporated into a permit, lease, or licence that would already be required to build and operate the pipeline and diffuser in Roberts Bay. The authorization would incorporate any relevant terms and conditions relating to the protection of the marine environment from the amended NIRB project certificate.

Please don't hesitate to contact me by telephone at (867) 975-4555 or email at David.Abernethy@aandc-aadnc.gc.ca for further information.

Sincerely,

David Abernethy
Regional Coordinator
Water Resources Division
Resource Management Directorate
Aboriginal Affairs and Northern Development Canada
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Cc: John Roberts, TMAC Resources Inc.
Sharleen Ham, TMAC Resources Inc.