



Indigenous and
Northern Affairs Canada

Affaires autochtones
et du Nord Canada

Your file - Votre référence
2AM-DOH1323

September 21, 2016

Our file - Notre référence
IQALUIT-#1100531

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

Sent via email: licensing@nwb-oen.ca

**Re: Blackline Copy of Water Licence and Management Plan Updates, Water Licence
No. 2AM-DOH1323**

To Whom It May Concern,

Thank you for providing an opportunity to review the blackline copy of Water Licence No. 2AM-DOH1323 and management plan updates that TMAC Resources Inc. provided to the NWB on September 14, 2016 during the Public Hearing for Amendment Application No. 1 to its Water Licence.

Comments and recommendations have been provided pursuant to Indigenous and Northern Affairs 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 867-975-4555 or email at David.Abernethy@aandc-aadnc.gc.ca for further information.

Sincerely,

David Abernethy
Regional Coordinator
Water Resources Division
Resource Management Directorate
Indigenous and Northern Affairs Canada
IQALUIT, NU X0A 0H0
Encl.

Cc. John Roberts, TMAC Resources Inc.
Sharleen Hamm, TMAC Resources Inc.

Canada 

Memorandum

To: Licensing Department, Nunavut Water Board

From: David Abernethy, Regional Coordinator, Indigenous and Northern Affairs Canada

Cc: John Roberts, TMAC Resources Inc.
Sharleen Hamm, TMAC Resources Inc.

Date: September 21, 2016

Re: Blackline Copy of Water Licence and Management Plan Updates, Water Licence No. 2AM-DOH1323

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

A. Background

On September 16, 2016, the Nunavut Water Board (NWB or Board) invited interested parties to review and provide comments on the blackline copy of Water Licence No. 2AM-DOH1323 prepared by TMAC Resources Inc. (TMAC or the Licensee) that identifies suggested amendments to the Licence. This document was filed as Exhibit 22 during the licence amendment application No. 1 Public Hearing on the morning of September 14, 2016. Interested parties were asked to provide comments on or before 4 p.m. MST on Wednesday, September 21, 2016.

On September 19, 2016, the Licensee provided notification of two proposed changes to the blackline copy of the licence¹. They are as follows:

1. *New position on Part B Item 6, wherein TMAC will align recommendation with that presented in Part B item 4 inasmuch as:
The Licensee shall implement Plan revisions upon approval from the Board or upon 45 days following plan submission to the Board, whichever occurs first.*
2. *Addition of the following condition. TMAC committed to include a new licence condition as per our final written submission, yet neglected to include it in the Exhibit:
The Proponent shall monitor the underground backfill use and mine waste placement underground during operations to confirm that ultimate targets of*

¹ TMAC Resources Inc. *Re: 2AM-DOH1323-Update to items in Exhibit 22*. Email from S. Hamm, TMAC Resources Inc. to D. Abernethy, Indigenous and Northern Affairs Canada, and other interested parties. September 19, 2016.

returning all waste rock and leach tails underground can be achieved.

In addition to commenting on the submitted blackline copy of the licence, Indigenous and Northern Affairs Canada (INAC or the Department) is providing comments on the issue of making changes to schedules of the water licence without an amendment process and on the following updated management plans that the Licensee submitted to the Board during the September 13-14, 2016 Public Hearing. These updated management plans are as follows:

- Aquatic Effects Monitoring Plan²
- Interim Closure and Reclamation Plan Addendum³
- Waste Rock and Ore Management Plan Addendum⁴
- Water Management Plan Addendum⁵
- Tailings Impoundment Area Operations, Maintenance, and Surveillance Manual Addendum⁶

B. Results of Review

Blackline Copy of Licence

Provided below is a table that identifies TMAC's proposed changes to the Water Licence where the Department wishes to provide comments or rewording.

The Department supports TMAC's proposed new licence condition regarding the monitoring of backfilled waste rock and leach tails identified in the above mentioned September 19, 2016 Licensee correspondence. Including this term and condition would satisfy concerns raised by the Department during the Nunavut Impact Review Board Project Certificate amendment application review process and the Department's Information Request No. 12 for the Water Licence amendment application review.

Changes to Water Licence Schedules

At the hearing, counsel for the Board asked INAC for its position on whether the Board has the authority to make changes to Water Licence schedules outside of the amendment process provided for in the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* ("the Act"). It remains INAC's position, as stated at the hearing, that no change can be made to the text of the main body or any schedule of the Water Licence outside of an amendment process. However, INAC does recognize the practical utility of maintaining some flexibility over certain technical

² TMAC Resources Inc. *Hope Bay Project Doris Aquatic Effects Monitoring Plan*. September 2016.

³ TMAC Resources Inc. *Doris North Mine Interim Closure and Reclamation Plan*. Hope Bay Nunavut. Addendum. September 2016.

⁴ TMAC Resources Inc. *Waste Rock and Ore Management Plan*. Hope Bay Project, Nunavut. Addendum. September 2016.

⁵ TMAC Resources Inc. *Water Management Plan*. Hope Bay Project, Nunavut. Addendum. September 2016.

⁶ TMAC Resources Inc. *Hope Bay Project Doris Tailings Impoundment Area Operations, Maintenance, and Surveillance Manual*. Hope Bay, Nunavut. Addendum. September 2016.

details of the Project. It is important to adopt an approach that allows for some flexibility and efficiency while being consistent with the Act.

In previous water licences (e.g. Meadowbank), the Board has included the following term:

The Schedules attached to this Licence provide details regarding the requirements associated with specific items in the main body of the Licence and are included in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. If the Board subsequently determines that an item in any of the Schedules requires revision in order to better reflect the intent and objectives of the Licence, the Board may at its discretion, and upon consulting and providing written notice to the Licensee and interested parties, revise the Schedule accordingly. Unless the Board directs otherwise, such revision may not necessarily be considered as an "Amendment" to the Licence.

INAC submits that this language is not consistent with the Act and should not be used in the amended licence for Doris North. It is important that the schedules are and are understood to be an enforceable part of the licence, not as aids to interpretation. INAC's position is that the schedules are an integral part of the licence, and the Board does not have the authority to make changes to any text in the licence, including the text of the schedules, outside of an amendment process.

It is also important that the Minister knows when she is approving a licence, on a schedule by schedule basis, exactly which technical details of the Project the Board views as requiring some flexibility and which would require an amendment process. The provision quoted above does not provide for the necessary clarity on this issue.

INAC notes that pursuant to section 9(1)(a) of the *Nunavut Waters Regulations*, a public hearing is not required for an amendment to a water licence if the amendment does not affect the use, flow or quality of waters or alter the term of a licence. For these kinds of changes, the Board already has the authority to make amendments using a summary paper-based process without a public hearing.

For issues requiring even greater flexibility, the Board can draft the licence so that it can by written direction supersede the contents of a schedule. The location of monitoring sites in Schedule J may be an appropriate use of this approach. For example, it would be consistent with the Act for the licence to say "The licensee shall monitor in accordance with the requirements of Schedule X of the licence, or as may be directed by the Board after consulting with the licensee and other interested parties".

Similar language could be used elsewhere in the licence where flexibility is necessary. This approach would achieve the objective of ensuring that the schedules remain an enforceable part of the water licence consistent with the Act, and that flexibility is built into the licence in a clearly targeted manner. If the Board decides to take this approach, it may want to canvas the parties about which specific parts of the schedules should be drafted in this manner. As noted above, monitoring points would be a good candidate. In INAC's view, provisions directly affecting use, flow or quality of waters or that would alter the term of a licence would not be good candidates; nor would a provision setting the amount of water licence security.

Management Plan Updates

Aquatic Effects Monitoring Plan

- The updated plan addresses INAC recommendation R6 (freshwater sediment sampling).
- The updated plan addresses INAC recommendation R26 (Doris Lake sampling stations).

Interim Closure and Reclamation Plan Addendum

- The addendum satisfies INAC technical comment TC10 (Ponding along pads).

Waste Rock and Ore Management Plan Addendum

- The addendum satisfies INAC recommendation R44 (personnel for geotechnical waste rock pile inspections).

Water Management Plan Addendum

- The addendum satisfies INAC recommendation R46 (calibration of water and load balance model).

Tailings Impoundment Area Operations, Maintenance, and Surveillance Manual Addendum

- The addendum addresses INAC recommendation R14 (geochemical characterization of tailings deposited in impoundment area).

CONDITION NO. AND CURRENT LICENCE WORDING	TMAC SUGGESTED REWORDING	INAC COMMENTS
PART A: SCOPE, DERFINITIONS AND ENFORCEMENT		
2. DEFINITIONS		
a) The Licensee shall refer to Schedule A for definitions of terms used in this Licence.	The Licensee shall refer to Schedule A for definitions of terms used in this Licence. <u>For greater clarity, the Board may approve revisions to the schedules to this Licence from time to time and such revisions shall not constitute or require an amendment to this Licence.</u>	INAC submits that the Board does not have the authority to make any change to the text of the licence outside of an amendment process (see explanation in letter above). Also, if this issue is to be addressed, Part A is not the appropriate part of the licence to address whether and how changes can be made to the schedules. INAC does not support including the additional text proposed by TMAC. Part A, 2(a) should not be amended.
PART B: GENERAL CONDITIONS		
4. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.	<u>Except as otherwise reflected in this Licence,</u> the Licensee shall, for all Plans submitted under this Licence, implement <u>Plans upon receipt of approval from the Board, or upon 45 days following Plan submission to the Board, whichever occurs first.</u> include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives <u>of the Nunavut Waters and Nunavut Surface Rights Tribunal Act</u> and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.	INAC does not support the automatic approval of Plans submitted to the Board for approval 45 days following their submission. The recommended timeline for making approval decisions on Plans may be unreasonable because of the time required for interested parties to review submitted plans and for the Board to make approval decisions. The NWB and Licensee should maintain dialogue on the approval status of Plans to address any unnecessary delays.

PART C: CONDITIONS APPLYING TO SECURITY		
2. The Licensee shall submit to the Board for approval, within six (6) months of the start of Operations and again following eighteen (18) months of the start of Operations, an updated estimate of the total mine closure restoration liability using the current version of RECLAIM, its equivalent or other similar method approved by the Board in writing, in accordance with principles of the INAC “Mine Site Reclamation Policy for Nunavut” (2000). Should the Project be in Care and Maintenance, an updated estimate of total mine closure restoration liability shall be submitted, as above, at least every three years from the issuance of the Licence.	The Licensee shall submit to the Board for approval, within six (6) months prior to Closure following eighteen (18) months of the start of Operations , an updated estimate of the total mine closure restoration liability using the current version of RECLAIM, its equivalent or other similar method approved by the Board in writing, in accordance with principles of the INAC “Mine Site Reclamation Policy for Nunavut” (2000), <u>as may be revised from time to time</u> . Should the Project be in Care and Maintenance, an updated estimate of total mine closure restoration liability shall be submitted, as above, at least every three years from the issuance of the licence <u>most recent approved estimate</u> .	Six months prior to the start of Closure may not provide sufficient time to review and approve an updated closure cost estimate. INAC recommends that the Licensee provide both an updated closure cost estimate and a Final Closure and Reclamation Plan to the NWB for approval at least 12 months prior to the expected end of planned mining. In addition, INAC recommends retaining the requirement to submit the updated estimate of the total mine closure restoration liability within six (6) months of the start of Operations.
PART D: CONDITIONS APPLYING TO CONSTRUCTION AND OPERATIONS		
4. The Licensee shall implement sediment and erosion control measures prior to and maintained during the construction and operation where necessary to prevent entry of sediment into water.	The Licensee shall implement maintain sediment and erosion control measures prior to, and maintained during the e Construction, and during e Operation where necessary to prevent entry of sediment into w Water.	INAC recommends the following revision for simplicity: The Licensee shall implement sediment and erosion control measures <u>during all phases of the undertaking</u> prior to and maintained during the construction and operation where necessary to prevent entry of sediment into w Water.

PART E: CONDITIONS APPLYING TO WATER USE		
1. The Licensee shall obtain fresh water for domestic camp use, mining and milling and associated uses, from Doris Lake at Monitoring Station ST-7 using the Fresh Water Intake. Domestic water may also be obtained from Windy Lake at Monitoring Station ST-7a and shall not exceed 22,995 cubic metres per year. The total volume of the use of Waters from all sources and for all purposes, shall not exceed 480,000 cubic meters per year, unless otherwise approved by the Board in writing.	The Licensee shall <u>may</u> obtain fresh W water for domestic camp use, M mining and M milling and associated uses, from Doris Lake at Monitoring Station ST-7 using the Fresh Water Intake . Domestic W water may also be obtained from Windy Lake at Monitoring Station ST-7a and shall not exceed 22,995 cubic metres per year. The total volume of the use of Waters from all sources and for all purposes, shall not exceed 480,000 cubic meters per year, unless otherwise approved by the Board in writing. <u>For clarity, non-consumptive uses and diversions are permitted water uses in accordance with this Licence and are not limited by volume.</u>	All uses of water need to be authorized and accounted for. There cannot be any discretion in this area and the authorized consumption allowance cannot be changed without the approval of the Minister.
PART G: CONDITIONS APPLYING TO WASTE MANAGEMENT AND WASTE MANAGEMENT PLANS		
3. The Licensee shall operate the Wastewater Treatment Plant in accordance with the following: d) During Operations, effluent from the Wastewater Treatment Plant shall be discharged to the Tailings Impoundment Area, or as required, to the tundra as per Item 3(c) upon providing notification to an Inspector;	The Licensee shall operate the <u>Domestic</u> Wastewater Treatment Plant in accordance with the following: During Operations, E effluent from the <u>Domestic</u> Wastewater Treatment Plant shall be discharged to the Tailings Impoundment Area, or as required, to the tundra as per Item 3(c) <u>provided the criteria set out in Item 3 are met upon providing notification to an Inspector;</u>	INAC recommends that the Licensee notify an Inspector at least ten days prior to changing the discharge location for Domestic Wastewater Treatment Plan effluent from the Tailings Impoundment Area to the tundra.

	and	
6. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters, unless otherwise approved by the Board in writing.	The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood <u>in order</u> to prevent the deposition of W waste materials (<u>i.e products</u> of incomplete combustion, and/or leachate from contaminated ash residual); from impacting any surrounding W waters, unless otherwise approved by the Board in writing.	INAC does not believe that regulating the open burning of wastes is within the NWB's jurisdiction and that this term and condition should be removed from the licence. If the NWB decides that this term and condition should remain in the licence, INAC recommends the following highlighted revision: The Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood <u>in order</u> to prevent the deposition of W waste materials (<u>i.e., products</u> of incomplete combustion, and/or leachate from contaminated ash residual); from impacting any surrounding W waters, unless otherwise approved by the Board in writing.
PART I: CONDITIONS APPLYING TO CONTINGENCY PLANNING		
7. The Licensee shall, upon providing notification under PART L, Item 2, submit to the Board, an addendum to the Spill Contingency Plan, detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.	The Licensee shall, upon providing notification under PART L, Item 2, submit to the Board, <u>in the Annual Report and as required by the Spill Reporting Regulation</u> , details of an addendum to the Spill Contingency Plan, detailing any changes in O operations, personnel, responsibilities, availability of equipment and access to the site for assistance, <u>arising from the spill. Corrective action planning shall be documented on site with records made available to an Inspector upon request.</u>	INAC recommends that the Licensee continue to provide an addendum to its Spill Contingency Plan to the NWB within three months of providing notification of any intent to enter into a Care and Maintenance Phase pursuant to Part L, Items 2 and 3 of the Licence. Submitting an addendum to the Plan with an Annual Report is considered to be an unnecessary delay.

PART J: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING		
7. Additional monitoring may be requested by the Board or by the Inspector.	Remove	<p>INAC agrees with TMAC that the Board does not have the authority to delegate the power to direct additional monitoring to the Inspector, so supports removal of that part of this term. However, the Board does itself have the authority to direct additional monitoring. INAC suggests amending this term as follows:</p> <p>7. Additional monitoring may be requested <u>directed</u> by the Board or by the Inspector</p>
<p>20. The Licensee shall visually monitor and record observations, to be made available to an Inspector upon request, on a daily basis during periods of discharge onto the tundra from:</p> <p>a) Landfill Sump; b) Sedimentation Pond; c) Landfarm Sump; d) Plant Site Fuel Storage and Containment Area Sump; e) Roberts Bay Fuel Storage and Containment Area Sumps; f) Wastewater Treatment Plant (during the construction phase); and h) Reagent and cyanide storage facility sumps.</p>	<p>The Licensee shall visually monitor and record observations, to be made available to an Inspector upon request, on a daily basis during periods of discharge onto the tundra from:</p> <p>a) Landfill Sump; b) Sedimentation Pond; c) Landfarm Sump; d) Plant Site Fuel Storage and Containment Facility Area Sump; e) Roberts Bay Fuel Storage and Containment Facility Area Sumps; f) Domestic Wastewater Treatment Plant (during the Construction phase); and g) h) Reagent and Cyanide Storage Facility sumps.</p> <p><u>The Licensee shall visually monitor and record observations, to be made available to an Inspector upon request, on a</u></p>	<p>INAC recommends that the Licensee visually monitor and record observations during periods of tundra discharge from the Domestic Wastewater Treatment Plant via either weekly visual inspections or monthly inspections with photographic comparison. Monitoring results should be provided in monthly monitoring reports.</p>

	<u>monthly basis during periods of discharge onto the tundra from the Domestic Wastewater Treatment Plant.</u>	
PART L: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION, AND CLOSURE		
4. The Licensee shall provide to the Board, at least thirty (30) days advanced notification in writing, of the initial start or change of Operations. Notification may be provided separately or in accordance with monthly monitoring report as per PART J, Item 21.	The Licensee shall provide to the Board, at least thirty (30) days advanced notification in writing, of the initial start or change of Operations , <u>deposition of tailings or change of Project Phase</u> . Notification may be provided separately or in accordance with monthly monitoring report as per PART J, Item 21.	INAC recommends that the Licence be revised to require to notifications pertaining to all significant project phases or milestones, including but not limited to: construction, ore extraction, milling, tailings deposition, care and maintenance, closure, etc.
8. The Licensee shall submit to the Board for approval, within eighteen (18) months of the start of Operations, a Final Mine Closure and Reclamation Plan prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories, 2006 and consistent with the INAC Mine Site Reclamation Policy for Nunavut, 2002. The Final Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include the following: a) Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut Environmental Guideline for Site Remediation; b) Environmental Site Assessment plans in accordance Canadian Standards	The Licensee shall submit to the Board for approval, within eighteen (18) months of the start of Operations <u>six (6) months prior to the start of Closure</u> , a Final Mine Closure and Reclamation Plan prepared in accordance with the Mine Site Reclamation Guidelines for the Northwest Territories, 2006 and consistent with the INAC Mine Site Reclamation Policy for Nunavut, 2002 <u>as may be revised from time to time</u> . The Final Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include the following: a) Soil Quality Remediation Objectives along with CCME Guidelines and the Government of Nunavut Environmental Guideline for Site Remediation; b) Environmental Site Assessment plans	Six months prior to the start of Closure may not provide sufficient time for a Final Closure and Reclamation Plan to be reviewed and approved. INAC recommends that the Licensee provide both a Final Closure and Reclamation Plan and an updated closure cost estimate to the NWB for approval at least 12 months prior to the expected end of planned mining. This timeline is consistent with the Meadowbank Type A Water Licence, No. 2AM-MEA1525.

Association (CSA) criteria; and c) Evaluation of the Human Health and Ecological Risk Assessment.	in accordance Canadian Standards Association (CSA) criteria; and c) Evaluation of the Human Health and Ecological Risk Assessment.	
PART M: SCHEDULES		
Schedule A: Definitions		
“Operations” means the entire set of site activities (excluding construction, care and maintenance, and decommissioning activities) associated with mining, processing and recovery of gold at the Doris North Project, as described in the Revised Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted to the Board throughout the regulatory process;	“Operations” means the entire set of site activities (excluding <u>C</u> onstruction, <u>C</u> are and <u>M</u> aintenance, and decommissioning <u>C</u> losure activities) associated with mining, processing and recovery of gold at the Doris North Project, as described in the Revised Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted to the Board throughout the regulatory process. <u>Operation commences with the deposition of tailings;</u>	For greater clarify, the Department recommends that Operations commence with ore processing rather than tailings deposition because the project is dependent on gold production.
Schedule J. Conditions Applying to General and Aquatic Effects Monitoring		
Station TL-1 (Tailings Impoundment Area Discharge [TIA])	Removal of cyanide monitoring requirements because cyanide destruct tailings will be placed underground.	INAC recommends that cyanide monitoring remain in place (Free CN and Total CN) because mill process water will be directed to the TIA. Residual cyanide may be present in this effluent.