



Water Resources Division
Resource Management Directorate
Nunavut Regional Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

Your file - Votre référence
2AM-DOH1335
Our file - Notre référence
CIDM#1245733

April 1, 2019

Licensing Administrator
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
E-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada Comments on TMAC Resources Inc. Notification of Construction of Contact Water Pond Berm as part of the Madrid North Project, Water Licence 2AM-DOH1335 – Amendment No. 2

Dear Ms. Porter,

Thank you for your March 22, 2019 invitation to provide comments on the Construction Notification for the Contact Water Pond Berm as part of the Madrid North Project, provided by TMAC Resources Inc. (TMAC) as a requirement of Part D, Item 1 and Schedule D, Item 1 of the Amended Type A Water Licence 2AM-DOH1335. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reviewed the submission. The following comments have been provided pursuant to CIRNAC's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

1. Minimization of soil and permafrost disturbance

References:

- TMAC Resources Inc., Notification of Construction, Detailed Design of the Contact Water Pond Berm at Madrid North, March 19, 2019.

TMAC has indicated in the Detailed Design of the Contact Water Pond Berm at Madrid North, under Section 3.1 *Berm Design Criteria*, that soil and permafrost disturbance should be minimized. TMAC does not indicate how minimization of disturbance will be achieved or what mitigations will be put in place in the case of unexpected soil disturbances.

Recommendation:



CIRNAC recommends that TMAC provide further details to describe how any unexpected soil disturbance, including permafrost degradation resulting from the contact water pond berm construction activities, will be mitigated.

2. Linear System Design Criteria

References:

- TMAC Resources Inc., Notification of Construction, Detailed Design of the Contact Water Pond Berm at Madrid North, March 19, 2019.

TMAC has indicated in the Detailed Design of the Contact Water Pond Berm at Madrid North, under Section 3.2 *Liner System Design Criteria*, angles in degrees which need to be rectified to properly match their slope gradients. The angles in degrees should be 33.7° for a 1.5H:1V slope gradient, and 26.5° for a 2H:1V slope gradient.

Recommendation:

CIRNAC recommends that TMAC rectify the angles provided to properly match their slope gradients.

3. Installation Requirements for Monitoring Devices

References:

- TMAC Resources Inc., Notification of Construction, Detailed Design of the Contact Water Pond Berm at Madrid North, March 19, 2019.

TMAC has indicated in the Detailed Design of the Contact Water Pond Berm at Madrid North, under Section 3.3 *Design Overview*, that monitoring devices will be installed to measure berm settlement. TMAC does not provide any installation requirements for these monitoring devices.

Recommendation:

CIRNAC recommends that TMAC provide installation requirements for the indicated monitoring devices required to measure berm settlement.

4. Construction Standards

References:

- TMAC Resources Inc., Notification of Construction, Detailed Design of the Contact Water Pond Berm at Madrid North, March 19, 2019.



TMAC has indicated in the Detailed Design of the Contact Water Pond Berm at Madrid North that they will lay and compact bedding material, made of crushed and screened geochemically suitable quarry or waste rock material, underneath the high-density polyethylene liner. However, the standard to which the bedding material will be compacted is not provided.

Recommendation:

CIRNAC recommends that TMAC specify the standard to which bedding material compaction must be done.

If there are any questions or concerns, please contact me at (867) 975-4282 or bridget.campbell@canada.ca, or Godwin Okonkwo at (867) 975-4550 or godwin.okonkwo@canada.ca.

Sincerely,

Bridget Campbell,
Water Resource Coordinator

CC:

Oliver Curran, Adam Grzegorzczuk, Shelley Potter, Ashley Mathai, TMAC Resources Inc.
Derek Donald, Nunavut Water Board