



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
GCdocs # 108809571

January 18, 2022

Mr. Richard Dwyer
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU, X0B 1J0
sent via e-mail: licensing@nwb-oen.ca

Re: Crown-Indigenous Relations and Northern Affairs Canada Comments on Agnico Eagle Mine Ltd.'s Notice of South Dam Toe Berm Notice of Construction for Type A Water Licence 2AM-DOH1335 for the Hope Bay Project.

Dear Mr. Dwyer,

Thank you for your January 6, 2023 invitation to review the referenced South Dam Toe Notice of construction for the Hope Bay Project.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the Report and its attachments pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*.

Please find CIRNAC comments and recommendations in the attached Technical Memorandum for the Nunavut Water Board's (NWB) consideration.

If there are any questions or concerns, please contact me at (867) 975-4738 or by e-mail at vincent.okonkwo@canada.ca or Andrew Keim at (867) 975-4550 or by e-mail at andrew.keim@rcaanc-cirnac.gc.ca

Sincerely,

Vincent Okonkwo
Sr. Environmental Assessment Specialist



Technical Review Memorandum

Date: January 18, 2023

To: Richard Dwyer, Manager of Licensing, Nunavut Water Board

From: Vincent Okonkwo, Senior Environmental Assessment Specialist, CIRNAC

Subject: Crown-Indigenous Relations and Northern Affairs Canada Comments on Agnico Eagle Mine Ltd.'s Notice of South Dam Toe Berm Notice of Construction for Type A Water Licence 2AM-DOH1335 for the Hope Bay Project.

Region: ☒ Kitikmeot ☐ Kivalliq ☐ Qikiqtani

A. BACKGROUND

Hope Bay gold mine project is located on a property approximately 20km x 80km along the south shore of Melville Sound in the Kitikmeot region of Nunavut, and continued to be operated by TMAC Resources Inc. (TMAC) in 2021. TMAC was acquired by Agnico Eagles Mines (AEM) on February 2, 2021 and is now a wholly owned subsidiary of AEM. On January 1st, 2022, AEM and TMAC amalgamated and continued to exist under the name AEM. Accordingly, by operation of law and without any further acts or steps necessary, TMAC ceased to exist and continued as AEM.

During the 2021 Annual Geotechnical Inspection, ponding, tension cracking and sloughing were noticed at the down stream slope of the South Dam. A rockfill material of about 1.5m in thickness was recommended by the Engineer on Record (EOR), to be placed at the toe of the dam to proactively mitigate the risk of foundation thaw and further degradation of the permafrost prior to the construction of the South Dam Phase 2 raise. AEM is providing a notice of construction to carry out a repair at toe of the South Dam by building a berm with a rockfill materials that will be integrated into the phase 2 dam shell volume resulting in an additional fill material of about 2,700m³ as against the 2m thickness initially modelled, that would have consumed about 4,000m³ of additional fill. The Nunavut Water Board (NWB) invited interested parties on January 6, 2023 to comment on the AEM's South Dam Toe Berm Notice of Construction.

The documents reviewed are listed in Table 2 under Section B. A summary of CIRNAC recommendations can be found in Table 1. Review comments for the interim dike design report are provided in Section C and References are in Section D.



Table 1: Summary of Recommendations

Recommendation Number	Subject
R-01	The South Dam Footprint
R-02	South Dam Toe Berm Construction Timelines
R-03	Rockfill Material location

B. DOCUMENTS REVIEWED

The following table (Table 2) provides a summary of the documents reviewed under the submission.

Table 2: Documents Reviewed

Document Title	Author, File No., Rev., Date
230105 2AM-DOH1335 Hope Bay South Dam Toe Berm Notice of Construction-ILAE	Agnico Eagle, January 5, 2023
2AM-DOH1335 - South Dam Toe Berm Notice of Construction	Nunavut Water Board, January 6, 2023
220413 2AM-DOH1335 2021 TIA AGI Main Body SRK 2022-ILAE	SRK Consulting Canada Inc. March 2022
220413 2AM-DOH1335 2021 TIA AGI Recommendations and Agnico Responses-ILAE	Agnico Eagle

C. RESULTS OF REVIEW

The following comments and recommendations are provided for the NWB's consideration.

1. The South Dam Footprint

Comment

In the South Dam Toe Berm Notice of Construction Letter, “**Re: Water License 2AM-DOH1335 – Conditions Applying to Construction and Operation – Construction of South Dam Berm**”, AEM indicated that “*the berm will be located entirely within the permitted footprint for phase 2 of the south dam*”.

Note number 4 of the engineering drawing states that: “*The berm/access road may be widened or pull outs may be necessary to allow safe construction. Berm widening or pull-outs may be added as determined in the field for a safe construction process*”

CIRNAC is not sure on the extent of the possible widening of the berm to allow for a safe construction process as proposed by AEM, whether it would still be within the permitted footprint for phase 2 of the south dam or not.



Recommendation

CIRNAC recommends that AEM clarify if the proposed potential widening of the berm will be within the permitted footprint for phase 2 of the south dam, and in event it is not, any plans of seeking permission for modifications prior to the widening of the berm/access road for safe work purposes.

2. South Dam Toe Berm Construction Timelines

Comment

AEM indicated that the construction is expected to take place during Q1 – Q2 of 2023, and will take place during the winter in order to mitigate impacts to the tundra.

CIRNAC note that Quarter 2 is during freshet when ice/snow is beginning to melt, and uncertain about the measures AEM will be putting in place to mitigate impact to the tundra should the construction spill over to the Q2 as indicated by the AEM's construction timelines.

Recommendation

CIRNAC recommends that AEM clarify the measures intended to take to mitigate impact to the tundra should the construction spill over to Q2 of 2023 during freshet.

3. Rockfill Material Location

In the South Dam Toe Berm Notice of Construction Letter, AEM stated that:

“The berm will be constructed by conventional haul and place methods, using geochemically suitable rockfill material sourced from an approved quarry or other source, and will be in accordance with the Hope Bay Technical Specifications (SRK 2022b)”

AEM stated the rockfill material will be sourced from an “approved quarry or other source”, and did not mention the location of the quarry or the other sources. It is unclear to CIRNAC where AEM intends to source the estimated 2,700m³ of additional rockfill material. This information will be helpful in determination of the history and geochemical composition of the rockfill material.

Recommendation

CIRNAC recommends that AEM clarify the specific location it intends to source the rockfill materials.



D. REFERENCES

Department of Crown-Indigenous Relations and Northern Affairs Act (2019)

Nunavut Waters and Nunavut Surface Rights Tribunal Act (2019)

Nunavut Water Board, December 7, 2018: Amended Type A Water Licence 2AM-DOH1335