



Water Resources Division
Nunavut Regional Office
Iqaluit, NU X0A 0H0

Your file - Votre référence
2AM-WTP1826

November 20, 2018

Our file - Notre référence
CIDM# 1231759

Richard Dwyer
Manager of Licensing
Nunavut Water Board
Gjoa Haven, NU X0B 1J0

Sent via email: licensing@nwb-oen.ca

**Re: Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)
response to Agnico Eagle Mines Limited's (AEM's) Mammoth Dike Design –
Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-
WTP1826.**

Dear Mr. Dwyer,

Thank-you for the email notice to interested parties, received on October 23, 2018, regarding AEM's Mammoth Dike Design at the Whale Tail Pit Project.

CIRNAC reviewed and provided comment on AEM's Mammoth Dike Design pursuant to its mandated responsibilities from the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

If you have any questions or require further information with respect to this matter, contact me at (867) 975-3877 or email michelle.blade@canada.ca, or Ian Parsons at (867) 222-9278 or email ian.parsons@canada.ca.

Regards,

Michelle Blade
Regional Coordinator, Water Resources, Nunavut Regional Office



Memorandum

To: Richard Dwyer, Manager of Licensing, NWB

From: Michelle Blade, Regional Coordinator, Water Resources, CIRNAC

Date: November 20, 2018

Re: **Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) response to Agnico Eagle Mines Limited's (AEM's) Mammoth Dike Design – Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-WTP1826.**

Applicant:	Agnico Eagle Mines Limited (AEM)
Representatives:	Jamie Quesnel and Ryan Vanengen
Project:	Whale Tail Pit Project
Region:	Kivalliq

A. BACKGROUND

On July 11, 2018, the Minister of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) approved Agnico Eagle Mines Limited's (AEM) Whale Tail Pit Project Type 'A' Water Licence No. 2AM-WTP1826 application. The Whale Tail Pit Project is a gold deposit located near Baker Lake, Nunavut.

SUBMISSIONS

The following documents were reviewed:

- **IFC Drawings** (Location Map and Drawing Index, General Arrangement Plan, General Plan of Field Investigation Locations, Mammoth Dike – Field Investigation, Location Plan and Soil Stratigraphic Section, Mammoth Dike – Design Plan and Longitudinal Section, Mammoth Dike – Selected Design Sections) – SNC-Lavalin, September 6th, 2018
- **Technical Memorandum on the Stability Analyses of Mammoth Dike** – SNC-Lavalin, October 8th, 2018
- **Thermal Analysis of Mammoth Dike** – SNC-Lavalin, October 15th, 2018
- **Technical Specifications Construction of Mammoth Dike** – SNC-Lavalin, October 16th, 2018
- **Design Report of Mammoth Dike** – SNC-Lavalin, October 22nd, 2018

B. RESULTS OF REVIEW

Section	Pages	Comments
4.2 Dam Classification and Safety Criteria	Page 8 of the Design Report	CIRNAC recommends AEM clarify the specific measures included in the design for erosion protection purpose.
8.0 Construction	Page 11 of the Design Report	CIRNAC noted a series of QC/QA narratives in the provided technical specifications. However, considering the dike's performance is largely governed by the care and thoroughness demonstrated during its construction, AEM is to clarify and provide a clear description of site specific criteria (available dike materials, investigation of construction material sources, etc.) incorporated in the design for the execution phase.
Access Roads	-	No dike access details have been provided. CIRNAC recommends AEM to provide adequate details for any required access roads to access the dike during high flow periods for routine inspections and regular maintenance.
Geotechnical Comments		
Design Report – 1.2	6	All assumptions based on past experience should be included in the report for completeness.
6.2	10	What is the impact if the FFAB layer is unfrozen? If there is a risk of lowered performance of the FFAB in an unfrozen state, is there a proposed mitigation plan? See comment on dike stability below.
Dike Stability	Appendix B	Have thermistor readings being taken between March 2018 and September 2018 to capture the full depth of thaw through the summer months? Are readings available between 2015 and 2017?
Specs – App A – 1.3	1	As thermistors will be placed to monitor the FFAB: will these be placed during construction or placed post construction in boreholes?