



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

Your file - Votre référence
2AM-WTP1826

November 08, 2018

Our file - Notre référence
CIDM# 1231073

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) reply to (Agnico Eagle Mines Limited's) AEM's response for the Water Management Plan, Waste Rock Management Plan, and Water Quality and Flow Monitoring Plans – Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-WTP1826.

Dear Mr. Dwyer,

Thank-you for the email notice, received on October 29, 2018, regarding AEM's response to interested parties comments for the aforementioned three Whale Tail Pit Project plans.

CIRNAC reviewed AEM's responses as they pertain to CIRNAC's comments on the plans, 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) 222-9278 or email ian.parsons@canada.ca.

Regards,

Ian Parsons
Manager, Water Resources, Nunavut Regional Office



Memorandum

To: Richard Dwyer, Manager of Licensing, NWB

From: Ian Parsons, Manager, Water Resources, CIRNAC

Date: November 08, 2018

Re: **Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) reply to (Agnico Eagle Mines Limited's) AEM's response for the Water Management Plan, Waste Rock Management Plan, and Water Quality and Flow Monitoring Plan – Whale Tail Pit Project under AEM's Type "A" Water Licence No. 2AM-WTP1826.**

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|------------------|----------------------------------|
| 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.

The Whale Tail Pit Project was part of a joint Nunavut Impact Assessment Board (NIRB) and Nunavut Water Board (NWB) process. The plans were therefore reviewed by CIRNAC for their compliance with "commitments made with respect to submissions received during the technical review of the Application, as well as final submissions and issues raised during the 2017-2018 Public Hearing" of Part B Item 15 of Water Licence 2AM-WTP1826, and with Term and Conditions #10, #14, #15 and #16 of the NIRB Project Certificate.



B. RESULTS OF REVIEW

On October 17 and 18, 2018, CIRNAC met with AEM to discuss the still unresolved outstanding concerns carried over from the NIRB project certificate and NWB water licence. The meeting did clarify some matters and AEM committed to address the four remaining overarching concerns in its management plans:

- ***Version 3 Water Management Plan,***
- ***Version 4 Waste Rock Management Plan,***
- ***Version 5 Water Quality and Flow Monitoring Plan for the Whale Tail Pit project, and***
- ***AEM Responses to CIRNAC's comments on above mention plans.***

CIRNAC reviewed the above-noted documents and found that none of the concerns was addressed satisfactorily. CIRNAC recommends that the plans be further revised to address the following concerns:

1) Justification for AEM not satisfying NIRB Project Certificate Term and Condition #15

The NIRB Project Certificate Term and Condition #15 requires:

- *“The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, construction and operation phases;*
- *Definition of vertical and horizontal groundwater flows in the project development areas;*
- *Delineates monitoring plans for both vertical and horizontal ground water”*

The expectation of CIRNAC and parties as agreed to by AEM was that additional site-specific hydraulic data to define the vertical and horizontal groundwater flows would be collected in the critical pre-development period during the summer 2018 field season. CIRNAC was informed on October 17, 2018 that AEM had not installed the new groundwater monitoring wells as required in the NIRB Project Certificate. Further, AEM indicated that the only pre-development water monitoring information would be from the Westbay multiport well. AEM indicated that the data collection was delayed and additional data is still to be collected in November 2018. Additionally, the Groundwater Monitoring Plan does not contain any reference to future sampling from any groundwater wells currently installed at the site.

CIRNAC is seeking explanation from AEM to justify their rationale for the alternative approach and for not complying with NIRB Project Certificate Term and Condition #15.



2) Waste Rock Segregation Plan

CIRNAC and AEM agree that based on AEM's model predictions, the waste rock storage facility (WRSF) cover needs to be at least 4.7 meter thick and be constructed with 100% "clean" waste rocks (i.e. Non Potential Acid Generation (NPAG) and Non Metal Leaching (NML) waste rocks) or be contaminant-free (i.e. free of any Potential Acid Generation (PAG) waste rocks and free of any Metal Leaching (ML) waste rocks). The Whale Tail Waste Rock Management Plan needs to be developed such that, if implemented, no PAG waste rocks or ML waste rocks would be misidentified and misplaced in the cover.

AEM has set a high standard for "clean" waste rock for the Whale Tail project WRSF cover. However, AEM continues to submit the Meadowbank Waste Rock Segregation plan which CIRNAC has made clear is not site specific to the Whale Tail Pit project geology and geochemical concerns. AEM acknowledges that waste rocks from the Whale Tail pit have much higher metal leaching potentials than those from the Meadowbank pits. CIRNAC asserts that the Meadowbank Waste Rock Segregation Plan does not provide enough detail or assurances that AEM can achieve its goal with the plan (e.g. the plan does not prescribe how ML waste rocks would be segregated from NML waste rocks).

CIRNAC is requesting a site specific Waste Rock Segregation plan with additional detail on AEM's methodology and practices to achieve the goal of constructing a contaminant-free WRSF cover.

3) Hydrogeological Characterization

AEM used regional sub-permafrost groundwater flow system calculations, based on regional lake water levels, to determine the site specific Whale Tail Pit project hydrogeological characterization. Based on the site specific concerns for long-term arsenic leaching at the Whale Tail Pit project, CIRNAC views the regional approach alone without Whale Tail site specific field data to substantiate the hydrogeological modeling and validate the underlying hydrogeological assumptions to be lacking. In the absence of the site specific data, CIRNAC would request AEM provide data to validate the talik below Whale Tail Lake is open to the sub-permafrost groundwater flow system.

4) Mitigation Measures and Adaptive Management

In the October 17 and 18, 2018 meeting with AEM, it was agreed that AEM would provide options available for mitigation if arsenic concerns materialized. AEM would incorporate these mitigation measures in the plans. The current version of the plans lacks this information.



Further, the NIRB Project Certificate Term and Condition #15 further requires that the plans include:

“thresholds that will trigger the implementation of adaptive management strategies that reflect site-specific conditions encountered at the project site.”

CIRNAC supports the NIRB requirement for thresholds which are requirements of the adaptive management process to mitigate uncertainties and address emerging conditions. CIRNAC maintains that the establishment of thresholds and the identification of the mitigation measures available would the thresholds be met need to be presented by AEM in their management and monitoring plans. The current version of the plans lack this information.

As agreed the monitoring plans need to be updated to incorporate mitigative measures (including thresholds) that AEM would be able to use in the event that arsenic levels are trending higher than predicted in the Whale Tail Pit or the WRSF effluent.