

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 008/021
NWB File: 2AM-WTP1830



February 16, 2021

via email at: licensing@nwb-oen.ca

Richard Dwyer
Manager Licencing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Dear Richard Dwyer,

RE: 2AM-WTP1830 Agnico Eagle Mines Ltd. Whale Tail Pit Adaptive Management Plan

Environment and Climate Change Canada (ECCC) has reviewed the Adaptive Management Plan submitted to the Nunavut Water Board (NWB) for Agnico Eagle Mines Ltd.'s (the Proponent) water licence 2AM-WTP1830.

ECCC's specialist advice is based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*.

The following comments are provided:

1. Waste Rock Storage Facility (WRSF) Permafrost Aggradation Adaptive Management Strategy – Mitigation options for Level 4

Reference:

- Adaptive Management Plan – Whale Tail Pit Expansion Project. December 2020. Version 1.2, Table 1: WRSF Permafrost Aggradation Adaptive Management Strategy

Comment:

In Table 1, the Proponent indicates in the high-risk situation, that the following could be implemented:

- a) Construction of passive ground freezing systems;
- b) Construction of active ground freezing systems;
- c) Relocation / reconfiguration of WRSF;
- d) Construction of new or expanded interception structures for water (ponds, sump, ditch, other conveyance systems) to redirect WRSF contact water in the flooded pits.



Details have not been provided regarding (a) Construction of passive ground freezing systems; and (b) Construction of active ground freezing systems. If needed, such mitigation measures would require lead time to design, commission, transport and install, and options should be identified and planned for in advance.

Recommendation:

ECCC recommends provision of details on options for (a) Construction of passive ground freezing systems; and (b) Construction of active ground freezing systems; and clarification on how these actions would help permafrost aggradation to move the average zero amplitude upwards. Timeframes for installing this form of mitigation should be identified and consideration given to earlier action if appropriate.

2. Removal of Deep Well Injection as an Option

Reference:

- Adaptive Management Plan – Whale Tail Pit Expansion Project. December 2020. Version 1.2, Table 5: Underground Mine Water Quantity Adaptive Management Strategy

Comment:

The Proponent has proposed to remove the following two components from the underground mine water quantity adaptive management strategy:

- Adaptive Management Level 2 – evaluate deep well injection for high TDS water and/or meromictic pit lake disposal approach
- Adaptive Management Level 3 – Perform deep well injection for high TDS water and/or meromictic pit lake disposal approach following approval from the NWB.
- However, the Proponent has not provided any rationale on why these components are being removed from the adaptive management plan.

Recommendation:

ECCC recommends the Proponent provide rationale for removal of adaptive management components for underground mine water quantity related to deep well injection or meromictic lake disposal.

Errata: On Table 5 (pdf p.21) with the removal of the last bullet for Level 2, the word “or” should be removed, unless another alternative is to be listed.

If you need more information, please contact Victoria Shore at Victoria.Shore@canada.ca.

Sincerely,

A handwritten signature in black ink, appearing to read "Shore".

Victoria Shore
Senior Environmental Assessment Officer, Environmental Assessment North (NT and NU)
Environmental Protection Operations Directorate, Prairie Northern Region

Cc: Jody Small, Head, Environmental Assessment North (NT and NU)
Environmental Protection Operations Directorate, Prairie Northern Region