



March 24, 2020

Karén Kharatyan
Director of Technical Services
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0B 1J0

RE: Request for Expedited Amendment to Permit Ministerial Approval of Amendment to 2AM-MEL1631 on or before May 1, 2020

Dear Mr. Kharatyan:

This letter is to notify you that Agnico Eagle Mines Limited (Agnico Eagle) is requesting an expedited amendment to the Meliadine Water License 2AM-MEL1631 for the ability to release waters from Containment Pond 1 (CP1) commencing in May 2020. To support release of these waters, Agnico Eagle is requesting the Nunavut Water Board (NWB or the Board)'s approval on or before May 1, 2020 for the following:

- A time-limited amendment of the total dissolved solid (TDS) discharge criteria set out at Part F, Item 3 of Water Licence 2AM-MEL1631 (the Water Licence) to permit discharge at levels of an average of 3,500 mg/L, only to be in effect for 2020 CP1 discharge season; and,
- Approval of the attached Water Quality Management Optimization Plan (WQMOP).

1. Rationale for Expedited or Emergency Amendment

The NWB has advised that their standard applicable timelines for amendment of the Water Licence cannot be completed by May 1, 2020 unless the application is declared an emergency amendment.

Accordingly, Agnico Eagle is requesting that the Board (with the consent of the Minister) declare the enclosed amendment application to be required on an expedited or emergency basis in accordance with Section 43, Section 52 and Section 55 of the Nunavut Waters and Nunavut Surface Rights Tribunal Act. Agnico Eagle wishes to emphasize that no emergency at the Meliadine Mine currently exists, and no emergency will occur if Agnico Eagle is permitted to release the CP1 waters in a timely way. While the current situation at the Meliadine Mine is not an emergency in the near term, in order to ensure that the infrastructure remains protected it is essential to dewater CP1 starting in May 2020.



This situation arises because Agnico Eagle has a current accumulation of contact water in CP1 located at the Meliadine Mine, which meets all discharge criteria under the Metal and Diamond Mining Effluent Regulations (MDMER) and the Water Licence, with the exception of the TDS discharge criteria set out at Part F, Item 3 of the Water Licence. The current TDS discharge criteria in the Water Licence of 1,400 mg/L (i.e. maximum average concentration) referenced at Part F, Item 3 is lower than necessary to remain protective of the receiving environment (i.e., required to minimize adverse effects on aquatic ecosystems), and thereby limits the management of waters at site in an appropriate manner.

The accumulation of the contact water in CP1 is primarily related to the high volume of precipitation during the 2019 season and the stringent Water Licence TDS discharge criteria. To ensure Agnico Eagle has capacity moving forward and to comply with the operational design criteria of the CP1 dike (DCP1), CP1 is to be drawn down every year prior to freeze-up. This ensures the site has capacity for the following freshet.

Since 2017 various treatment and water management options have been evaluated and implemented in order to limit the increase of TDS at CP1. The Mine has run into operational challenges with both the efficiency of the salt maker and securing large storage volumes for the brine produced by the reverse osmosis. Agnico Eagle has invested over \$30 million into water management in order to try to establish a robust and economic treatment for this signature of water.

Without complete dewatering of CP1 during 2020, the integrity of the infrastructure (i.e. DCP1) will be at significant risk. The sequence of action is essential for ongoing operations and for protection of the environment.

The proposed amendment approval timing of May 1, 2020 would permit Agnico Eagle to begin releasing collected water in CP1 once freshet begins, which is best site management practice and will ensure the integrity of DCP1 is maintained.

2. Summary of Technical Rationale for Amendment

As described in the enclosed WQMOP, the planned discharge levels in 2020 would be in the range of a TDS concentration of 3,500 mg/L. This concentration that is recommended for TDS at CP1 would result in no acute toxicity at the point of discharge and no unacceptable chronic toxicity at the edge of the mixing zone, and would be well within the assimilation capacity of Meliadine Lake. This concentration was derived from results of on-going toxicity testing of water collected from CP1 and would be further validated through comprehensive monitoring during the discharge period. The enclosed WQMOP provides further rationale.

The short term, time limited approach to TDS, set out in the WQMOP would not affect the quality, quantity, or flow of the waters in Meliadine Lake. Based on the predictions included in



the Final Environmental Impact Statement (**FEIS**) for the Meliadine Gold Project (Golder 2014), the one-time release of mine wastewater to Meliadine Lake during 2020 is not predicted to result in potential project effects. That is, water quality in the receiver and downstream environment would remain within the predictions included in the FEIS. For the FEIS assessment, a maximum allowable effluent concentration of TDS in the discharge of 4,685 mg/L was applied. This is above the proposed interim TDS average concentration of 3,500 mg/L.

Under operating conditions, a plume delineation survey conducted in 2018 in the near-field region of Meliadine Lake as part of the EEM/AEMP (Golder 2019) reported mixing factor range of between 72 and 139 at the edge of the 100 m mixing zone boundary. Therefore, the proposed discharge of effluent with a TDS average concentration of 3,500 mg/L, even at the lowest measured mixing ratio of 72, would result in negligible (meaning too low to be measurable) risk that sublethal toxicity would be measured at the edge of the mixing zone. This mixing potential at the edge of the mixing zone boundary limits any potential for a sublethal response.

Beyond the mixing zone, into the near and far-field in Meliadine Lake, effluent will be carried by currents within the lake and further mixed with ambient water. The location of the effluent outfall diffuser is also within the expected main flow channel of the lake, which will act to convey and further disperse the effluent toward the lake outlet.

In summary, as described in detail in the enclosed WQMOP, the proposed time-limited release of waters that possess TDS average concentrations of 3,500 mg/L would not result in adverse effects on the environment of Meliadine Lake. As in any release from CP1, there would be a temporary change in water quality to a localized downstream extent of Meliadine Lake, which would be rapidly assimilated and dispersed.

3. Conclusion

In this case, Agnico Eagle anticipates that the Board would set stringent conditions in its approval of the amendment and give consideration to the following conditions:

- Clearly state that this is a time-limited circumstance, permitted as a one- time discharge during 2020 to fully dewater CP1;
- Provide validation monitoring as per the WQMOP; and
- Request Agnico Eagle to submit an application, for the long term strategy, by August 2020 to amend Part F, Item 3 to permanently address the TDS criteria described therein. This application would be subject to the standard Board amendment process and timelines for approval by May 2021 freshet.



In Agnico Eagle's view, the current circumstances warrant the Board's exercise of its discretion to process this amendment application as an emergency under the NWNSRTA, as well as Ministerial consent to the Board to do so.

It is essential to get timely approval for the short term 2020 release described in the amendment to ensure that this accumulation of waters within CP1 (which the WQMOP shows will be safe to discharge, will be within FEIS predictions and is not expected to have a measurable effect on the aquatic life in Meliadine Lake) does not create an urgent situation in 2020.

Agnico Eagle requests that the Board schedule a teleconference with KIA, ECCC and CIRNAC at its earliest convenience to address any questions, provide clarification and to confirm next steps. It is essential for the Board and the Minister to issue its approval on or before May 1, 2020 and for discharge from CP1 to Meliadine Lake to commence shortly thereafter.

Approval of the amendment is a high priority for Agnico Eagle and we wish to emphasize that we are available to the Board staff and interveners at any time to discuss any questions they may have with respect to the enclosed materials.

Thank you for your consideration of our request. Should you have any questions regarding this letter, please do not hesitate to contact the undersigned.

Sincerely,

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Regional Manager – Permitting and Regulatory Affairs