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NWB File: 2BE-MEA1318

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Via email: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**RE: 2BE-MEA1318 – Agnico Eagle Mines Ltd. – Meadowbank Exploration Project – Type B  
Water License Amendment No.4**

Attention: Karen Kharatyan

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned Type B Water License Amendment Application. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act*, the pollution prevention provisions of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

The following comments are provided:

Surface Water

1. The main application and project description Section 10.3 Surface Water describes the use of water for drilling. Brine will be used, collected in sumps and recirculated. Contact water from the pads, waste rock piles, bulk ore sample, and quarry will be collected in a sump and pumped to A-P5 (a natural pond used as a holding pond). Currently A-P5 flows to Whale Lake, but a berm will be constructed to increase storage capacity and will prevent natural discharge to Whale Lake.

The Project Description states:

*"Water in A-P5 that is in excess of what can be used will be monitored monthly and, if found suitable, directed to a land treatment area. This will attenuate the water and remove nutrients and other substances before it reaches a watercourse. Water not meeting discharge criteria listed in Table 5 will continue to be held in A-P5 for later use, or be released following treatment."*

Table 5 includes limits for arsenic, copper, lead, nickel, zinc, total suspended solids, oil and grease, and pH. These are taken from the existing water license criteria found in Part D. 12

which apply to effluent discharges "directed to a natural depression where direct flow into a water body is not possible and no additional impacts are created." (Part D.1)

The increase in drilling and blasting may introduce substances into the water to be managed which are not currently included in the water license. Specifically, major ions and ammonia could be of concern for discharges to the terrestrial environment, both for effects on plants and fauna, and in the event that land discharges flow into surface waters.

ECCC recommends that:

1. The license discharge criteria be amended to include limits for salinity/chloride and ammonia;
2. Agnico-Eagle Mines Ltd. (the Proponent) clarify how and where water in A-P5 will be discharged once the berm is installed.

#### Groundwater

1. In the main application and project description document, Section 10.4 Groundwater describes ramp development through the continuous permafrost and into the talik below Whale Lake. Although low hydraulic conductivity is expected and there are no known faults which could lead to inflows, it is deemed likely by the Proponent that inflows will be encountered. Water is to be tested and if found acceptable will be released to the receiving environment. If quality is not acceptable, water will be held and used for dust control or make-up water.

There is no information provided on groundwater quality. In addition, if quantities are higher than expected, it is possible that land discharge would carry risks of surface erosion. It is not clear that there is sufficient holding capacity for high volumes of groundwater to be held if necessary.

ECCC recommends that the Proponent identify contingencies for storage and treatment if groundwater quality is not acceptable for discharge to the receiving environment (aquatic or terrestrial) and/or larger than predicted volumes of groundwater inflows are encountered.

Should you require further information, please do not hesitate to contact me at (867) 669-4746 or [Gabriel.Bernard-Lacaille@canada.ca](mailto:Gabriel.Bernard-Lacaille@canada.ca).

Sincerely,



Gabriel Bernard-Lacaille  
Environmental Assessment Coordinator

cc: Georgina Williston, Head, Environmental Assessment North (NT and NU)  
Anne Wilson, Head, Water Quality – Expert Support, PNR-EPOD  
Ryan Vanengen, Environment Superintendent - Nunavut, Agnico Eagle Mines Ltd.