

November 15th, 2016

Karen Kharatyan,
A/ Manager of Licensing
Nunavut Water Board
P.O. Box 119 Gjoa Haven, NU. XOB 1J0

Re: NWB 2BE-MEA1318 regarding Agnico Eagle Mines Ltd.'s "Amaruq Exploration – Portal/ Ramp,

Quarry and Advanced Underground Exploration and Bulk Sample" project proposal

Dear Mr. Kharatyan,

As requested, the following responses are intended to address the recommendations and comments outlined in NWB email dated November 7th, 2016, regarding the "Amaruq Exploration – Portal/ Ramp, Quarry and Advanced Underground Exploration and Bulk Sample" Type B Amendment proposal. Agnico Eagle appreciates that NWB has provided Agnico Eagle the opportunity to respond to the recommendations provided by ECCC and INAC.

Agnico Eagle believes we have adequately addressed the recommendations from the interveners technical concerns related to closure costs, site water management and ground water quality at Amaruq. We will work with INAC to address concerns regarding the closure and reclamation costs and ensure adequate bonding prior to the start of construction. Furthermore, attached you will find a site specific Water Management Plan and a summary report of recent groundwater quality results.

Agnico Eagle will continue to work with regulatory agencies prior to the construction, during construction and during the operation of the Amaruq exploration ramp/portal, quarry and bulk sample to ensure the concerns that were raised in these comments have been adequately addressed.

Should you have any questions or require further information, please contact the undersigned Jamie Quesnel at <u>Jamie.quesnel@agnicoeagle.com</u> M: 819.856.0821, or, Ryan Vanengen at <u>ryan.vanengen@agnicoeagle.com</u> M:819.651.2974.

Regards,

Agnico Eagle Mines Limited – Meadowbank Division

Regards,

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# Indigenous and Northern Affairs Canada (INAC) Comments and Recommendations (Dated: November 7<sup>th</sup>, 2016)

#### 1.1 INAC comment #1 Reclamation and Closure Cost Estimate

Source: ARCADIS Closure Cost Estimate (on behalf of INAC)

Comment: The three (3) tables below outline the total reclamation closure costs associated with water licence 2BE-MEA1318. Table 1 is an overall comparison of closure costs between INAC and AEM. Table 2 is a breakdown of closure costs associated with the Amaruq exploration site/camp and Table 3 is a breakdown of closure costs associated with the Meadowbank exploration site/camp.

Recommendation: INAC is aware that there is an approximate difference of \$2.0 Million between the two closure costs estimates and hopes that an agreement can be reached on Quantum of security under water licence 2BE-MEA1318.

#### Agnico Eagle's Response to 1.1:

Overall, Agnico Eagle is in agreement with INACs closure cost estimate provided by ARCADIS. Agnico Eagle will work with INAC to resolve the discrepancies between the closure costs estimated by INAC and Agnico Eagle's original estimates. Agnico Eagle will ensure an agreement and sufficient bonding is in place for closure of the exploration site and activities, sixty (60) days prior to construction of the ramp, portal or quarry, or as otherwise instructed by the NWB.

1.2 INAC comment #2 – Bulk Sample/ Waste Rock Storage Pads

Source: Main Application Document – Part 2 – Section 10.2

Comment: Under Section 10.2 – Waste Pads Engineered configuration. The applicant states: "In 2018 when the bulk sample is stored on the pad, leachate having trace metals above licence criteria may prove to be an issue. Water flowing from the pad will be intercepted and sampled to ensure water quality criteria are not being exceeded. If any licence criteria for trace metals is exceeded, the water will be pumped to AP5".

Recommendation: INAC would like further clarification here on whether the run-off from these waste pads will be collected in a sump or collection pond prior to testing/sampling. The concern here is that if there is no collection system in place then possible contamination/contaminants will enter the environment.

#### Agnico Eagle's Response to 1.2:

Agnico Eagle agrees with this recommendation made by INAC and refers INAC to the attached Water Management and Water Balance Related to Amaurq Exploration Portal/Ramp Program, Quarry and Advanced Underground Exploration and Bulk Sample, Amaruq Exploration Site, Nunavut (Golder, 2016). The waste rock pad is located within the natural drainage area of AP-5. AP-5 will serve as the collection



pond to ensure no contaminants will enter the receiving environment and a diversion structure will be constructed to ensure all drainage is controlled and directed to AP-5.

# Environment and Climate Change Canada (ECCC) Comments and Recommendations (Dated: November 3<sup>rd</sup>, 2016)

## 2.1 ECCC #1: Surface Water

The main application and project description Section 10.3 Surface Water describes the use of water for drilling. Brine will be use, 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 AP-5 (a natural pond used as a holding pond). Currently AP-5 flows to Whale Tail Lake, but a berm will be constructed to increase storage capacity and will prevent natural discharge to Whale Tail Lake.

#### The project description states:

"Water in AP-5 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 the watercourse. Water not meeting discharge criteria listed in Table 5 will continue to be held in AP-5 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.

#### ECC recommends that:

- 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.

#### Agnico Eagle's Response to 2.1:

Agnico Eagle agrees with ECCCs recommendation. Please refer to the attached groundwater quality results report. Given the similarities of the groundwater quality at Amaruq to Meadowbank, Agnico Eagle proposes to use the Type 2AM MEA1525 Part F Item 3 Portage Effluent limits for TDS, chloride and ammonia presented in Table 1.



Table 1: Proposed Amendments to Type B – 2BE MEA 1318 Part D Item 12.

| Parameter                 | Maximum Average<br>Concentration | Maximum Allowable Grab<br>Sample Concentration |
|---------------------------|----------------------------------|--|
| TDS (mg/L)                | 1400                             | 1400   |
| NH <sub>3</sub> -N (mg/L) | 16                               | 32   |
| T-Cl- (mg/L)              | 1000                             | 2000   |

The discharge location will be the same as the existing and approved grey water discharge location identified on Figure 2 (in Appendix B) of the attached Amaruq Advanced Exploration Water Management Plan (Golder, 2016), or a suitable location will be determined in the future by Agnico Eagle in consultation with the NWB.

#### 2.2 ECCC Comment #2 – Groundwater

In the main application and project document 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.

### Agnico Eagle's Response to 2.2:

Agnico Eagle refers ECCC to the attached Ground Water Quality Investigation, Amaruq Site, Nunavut (Golder, 2016) and Water Management and Water Balance Related to Amaurq Exploration Portal/Ramp Program, Quarry and Advanced Underground Exploration and Bulk Sample, Amaruq Exploration Site, Nunavut (Golder, 2016).

Updated groundwater inflows predict that the volume of the proposed AP-5 storm water pond will allow for the retention of 122,000 m³ of water. This provides a contingency volume of 180 % of the overall projected underground ramp development contact water volumes between June 2018 and 2020. Furthermore, as a contingency, Agnico Eagle will install evaporators if water quality cannot be discharged to ensure sufficient storage volume of contact water is available within A-P5.