May 4th, 2022

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

RE: 2AM-MEL1631 Design Report & Drawings - WRSF3 South Sump

Dear Mr. Dwyer,

Agnico Eagle Mines Limited (Agnico Eagle) thanks the Nunavut Water Board (NWB) for the opportunity to address interveners comments on the *Design Report & Drawings for the WRSF3 South Sump* submitted by Agnico Eagle to the NWB on April 19th, 2022.

Please find attached Agnico Eagle's answers to the recommendations and comments contained in the below document, shared by the NWB on May 4th, 2022:

> *2AM-MEL1631 CIRNAC Comments To NWB On AEM Meliadine Mine WRSF3 South Sump Design Report and Construction*

Should you have any questions or require further information, please do not hesitate to contact us.

With our best regards,

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819-759-3555
Compliance Specialist

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

CIRNAC 1 – Defined time-table for water quality monitoring

Comment

As part of the Sump Design Basis and Water Management Strategy described on page 5 of the WRSF3 design report, AEM states:

"The overall objective of the water management strategy of the Meliadine Gold project is to develop a practical and feasible site wide water management plan to minimize the potential negative impacts of mining development on the surrounding environment including habitats for fish and wildlife, and to facilitate mine operation and long-term closure and reclamation of the mine site.
To achieve this objective, sumps are used to collect and temporarily store seepage water and overland runoff from mine facilities and disturbed mine catchments.
WRSF3 South Sump will be constructed to:

- *collect seepage from WRSF3, and runoff induced by precipitation in the southern catchment of the facility, and*
- *to prevent unwanted flow into the natural environment (i.e., tundra).*

The collected water will be regularly monitored for water quality constituents and pumped to CP1"
CIRNAC would like AEM to develop a definitive water quality monitoring time-table that should indicate specific months, weeks and days as well as frequency of samples to be collected; for water quality monitoring of "collected-water". CIRNAC is concerned that the term "regularly", does not provide specifics on how AEM plan to execute the water quality monitoring of "collected water", thus, requires AEM to clarify how it intends to implement the statement; "*The collected water will be regularly monitored for water quality constituents and pumped to CP1"*

Recommendation

CIRNAC recommends that AEM provide a definitive water quality monitoring time-table indicating specific periods (i.e., months, weeks, days) of the year, and frequency (i.e., samples per week, month, etc.); for water quality monitoring of "collected water" and report this information in future Annual Reports.

Agnico Eagle Answer

Agnico Eagle intends to conduct regular monitoring at a frequency that matches the frequency of Type A Water Licence 2AM-MEL1631 monitoring stations MEL-19 and MEL-23, which represent facilities CP2 and CP6, respectively. These stations are used to monitor the collection of drainage from WRSF3. As the proposed sump also meets this description, Agnico Eagle believes a sampling frequency of "Monthly during open-water or when Water is present" to be appropriate and in keeping with existing Water Licence monitoring program.

Monitoring of the facility during its construction will also be in accordance with the conditions outlined in Part D of the Water Licence. Following this, routine sampling of Group 1 parameters will be conducted monthly during open-water, or when water is present.

Water quality monitoring results will be included in future Annual Reports.

CIRNAC 2 –Design of WRSF3 South Sump

Comment

In Section 3.1 of the WRSF3 design report, AEM provided a brief description of how the WRSF3 South Sump will be constructed and/or put in place, contrary to the requirement for the provision of a "detailed" report/description by the NWB Water Licence 2AM-MEL1631. Part D, Item 2(d) of the Water Licence 2AM-MEL1631 states:

"The detailed report(s) referred to in Part D, Item 1 shall include:

Construction methods and procedures regarding how infrastructure will be put in place, including quality assurance and quality control measures and equipment to be used"

CIRNAC is concerned about the lack of detailed description of construction methods and procedures regarding how AEM plan to put in place the Waste Rocks sourced from the open pit and used in the construction of the WRSF3 South Sump. The lack of sufficient detail makes it difficult to understand whether the quality of the proposed Sump would meet the standards, enough to contain/hold the intended "collected water" while protecting both the ground water and nearby water bodies from contamination that might occur as a result of an accidental over-flow/spill or waste rock barrier thickness breakdown within the banks of the Sump.

Recommendation

CIRNAC recommends that AEM provide a detailed description of the construction methods and procedures to be implemented for the placement of Waste Rocks sourced from the Open Pit and used in the construction of the WRSF3 South Sump. This should include the quality assurance and quality control measures, as required by the NWB Water Licence Condition Part D, Item 2 (d).

Agnico Eagle Answer

Agnico Eagle thanks CIRNAC for their comment and recommendation. Below are the detailed construction steps and methods for the WRSF3 South Sump:

- The first step prior to construction will be to delaminate the extents of the WRSF3 South Sump footprint (using survey stakes) and a field review by Agnico Eagle's Engineering and Environment departments;

- The sump will be excavated via drilling and blasting of the overburden and will be carried out according to the drill and blast pattern designed and approved by Agnico Eagle's Engineering department;
- Mucking of the overburden material to the lines and grades of the design after blasting will be conducted with an excavator immediately following blasting. Approximately 3,600 m^3 of material will be removed, as per Table 2 of the WRSF3 South Sump Design Report;
- A geotechnical inspection of the prepared foundation of the WRSF3 South Sump after mucking will be carried out and as-built surveying will be conducted by Agnico Eagle's Engineering Department;
- Unwoven geotextile fabric will be placed (if sufficient material is available on site as stated in the design report) on a surface area of 1,130 m^2, and as-built surveying will be conducted by the Engineering department after placement;
- Waste rock sourced from Open Pit waste rock stockpiles of maximum particle size of 500 mm will be placed with an excavator on the geotextile, as per the stamped Construction drawings provided in the Design Report. Approximately 1,900 m^3 of waste rock will be placed as per Table 2 of the WRSF3 South Sump Design Report;
- As-Built surveying and reporting will be conducted after the waste rock placement by the Engineering Department.

Water management during construction is detailed in the WRSF3 South Sump Design Report, section 4.2.

The above steps will be carried out by qualified Agnico Eagle personnel in accordance with the submitted WRSF3 South Sump Design report and drawings and following best management practices to ensure the required construction quality is met.

Quality assurance and quality control measures will consist of visual observation of the works that are carried out and of the construction materials that are used by the Engineering team, in addition of the activities described above including the geotechnical inspection of the foundation and surveying activities.

CIRNAC 3 – Sources of Waste Rocks

Comment

In Section 3.1 of the WRSF3 design report, AEM confirmed that Waste Rocks for the WRSF3 South Sump construction will be sourced from open pits. CIRNAC would like AEM to confirm if there have been approved Geotechnical analysis performed on the Open pit sources of the Waste Rocks sites that demonstrate the Acid Rock drainage and Metal Leaching characteristics of the waste rock sources.

In accordance with Part D, Item 2 (c) of Water Licence 2AM-MEL1631, AEM is required to provide the Geotechnical approval of the Waste Rock sources to ensure that the materials are safe and would not contaminate the ground water and/or other water bodies within the banks of the intended Sump construction site via the process of "Metal Leaching".

Recommendation

CIRNAC recommends that AEM provide information confirming that the source(s) of the Waste Rock fill materials to be used in the construction of the WRSF3 South Sump have been approved by a Geotechnical Engineer and the Acid Rock drainage and Metal Leaching characteristics of the waste rock sources confirmed to be within acceptable standards.

Agnico Eagle Answer

As per the WRSF3 South Sump Design Report (Table 2), the waste rock to be used for construction will be sourced from open pit waste rock stockpiles and have a maximum particle size of 500 mm. Material to be used will be approved by a Geotechnical Engineer from Agnico Eagle's Engineering Department.

Geochemical monitoring is conducted on mined waste rock as per the Mine Waste Management Plan and as per the MEND (2009) recommendations. As detailed in the 2021 Annual Geochemical Report submitted as part of the Meliadine Gold Mine 2021 Annual Report, all Open Pit waste rock samples collected in 2021 (from Tiriganiaq Open Pits 1 and 2 and Containment Pond 2) showed Neutralization Potential Ratios (NPR) greater than 2, indicating non-PAG. Geochemical monitoring continued in 2022 and results received so far for Open pit waste rock samples are classified as non-PAG. Findings are consistent with predictions that the majority of operational waste rock would be non-PAG and that ARD potential is low.

For metal leaching and as detailed in the 2021 Geochemical Report, it was predicted by Golder (2014) to be low enough that management of waste rock to inhibit leaching was not required. However, based on project screening studies, arsenic was determined to be the main element of interest and analysis of this element (and all regulated elements) were part of operational monitoring since mining began. To ensure arsenic concentrations are within project predictions, results are compared against average and maximum arsenic concentrations reported by Golder (2014). Solid phase arsenic concentrations of 2021 and 2022 Open Pit waste rock samples mainly fall within or below the average concentration (of 218 mg/kg). All 2021 and 2022 samples collected to date are below the maximum concentration (of 8000 mg/kg) reported by Golder (2014).

Based on the above, Agnico Eagle is confident the waste rock material that will be used for construction of the WRSF3 South Sump will meet acceptable standards with regards to ARD/ML potential. In addition, as due diligence, the waste rock used for the construction of WRSF3 South Sump will be sampled for geochemical analysis to confirm expected geochemical characteristics.

Geochemical monitoring for operational waste rock, tailings and other excavated or construction material continues in 2022 and results are reviewed internally as they become available to ensure there is no risk to the receiving environment.