

Environmental Protection Operations Directorate
Prairie & Northern Region
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Yellowknife, NT X1A 2P7

ECCC File: 6100 000 010/042
NWB File: 2AM-DOH1335



July 13, 2022

via email at: licensing@nwb-oen.ca

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

Dear Richard Dwyer:

RE: 2AM-DOH1335 – Agnico Eagle Mines Ltd. – Hope Bay Project – Submission of 2021 Annual Report and Annual Geotechnical Inspection Report

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-2021 Annual Report and Annual Geotechnical Inspection Report submission.

ECCC is providing technical, science-based information and knowledge based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*. These comments are intended to inform the assessment of this project's potential effects in the receiving environment and on valued ecosystem components. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

The following comments are provided:

1. Aquatic Effects Monitoring Program Results

Reference(s)

- Section 7.0 - Aquatic Effects Monitoring Program, Hope Bay Project - 2021 Nunavut Water Board Annual Report

Comment

The Annual Report only provides a brief summary of the overall conclusions of the 2021 aquatic effects monitoring program but does not provide the detailed report.



ECCC Recommendation(s)

ECCC recommends that the annual report include the referenced Aquatic Effect Monitoring Report as an appendix to the annual report as the AEMP is a requirement of the Water Licence.

2. TL-12 Monitoring of Underground Dewatering

Reference(s)

- Appendix D: Water Licence(s) Monitoring Data, Hope Bay Project - 2021 Nunavut Water Board Annual Report

Comment

Appendix D-1 provides the monitoring results for the various sampling stations at the mine site. Station TL-12 monitors the underground dewatering. The monitoring data provided at this location is for TL-12A and TL-12B. In response to comments from ECCC in the 2020 Annual Report, the Proponent provided information that TL-12A monitors quality before treatment, and TL-12B monitors quality after treatment has occurred. This distinction between monitoring stations at TL-12 is not described in the annual report and may cause confusion to the reviewer when interpreting results.

ECCC Recommendation(s)

ECCC recommends that in future annual reports the Proponent provide a description of the differences in monitoring location for TL-12A and TL-12B to aid the reviewer in interpretation of results.

3. Air Quality Data

Reference(s)

- Section 3.1 Construction and Operations: Doris, Hope Bay Project - 2021 Nunavut Water Board Annual Report

Comment

The report mentions that installation and commissioning of air quality monitors at the Doris Air Quality monitoring building was performed in 2021. It is not evident whether the installation is consistent with the objectives of the Air Quality Management Plan issued by TMAC Resources in April 2019. There is no summary of any air quality data in the annual report.

ECCC Recommendation(s)

ECCC recommends the Proponent confirm the details of what instruments were installed, and what parameters are measured, at the Doris Air Quality monitoring building. Please provide summaries, if available, of air quality measurements taken at the monitoring building.

4. Visual Monitoring for Thermal Degredation

Reference(s)

- Summary of Recommendations - Table 2: Madrid Project 2021 Annual Geotechnical Inspection, Attachment 2: Summary of Observations and Recommendations – Madrid, 2021 Annual Geotechnical Inspection Report for the Doris and Madrid Sites, Hope Bay Project, Nunavut

Comment

The recommendation by SRK Consulting (Canada) Inc. is that “Visual monitoring of this location should occur on an at least biweekly between approximately May and the end of August. Visual monitoring should look for signs of thermal degradation (in the disturbed areas below the former pad) and any signs of erosion (or increased sediment in the runoff water).”

ECCC Recommendation(s)

ECCC recommends that the Proponent implement this recommendation and follow through with the visual monitoring suggested by SRK Consulting (Canada) Inc.

In addition to the comments presented above, ECCC would like to provide the following additional comments to the NWB, that were provided as part of the Hope Bay 2021 NIRB report, that are relevant to this project and NWB’s mandate.

1. Sublethal Toxicity Testing

Reference(s)

- Section 3.2.2 – 2021 Effluent Characterization and Sublethal Toxicity Testing, 2021 NIRB Annual Report - Hope Bay Project
- Appendix F - 2021 Hope Bay Project - Effluent Monitoring Reports

Comment

The Annual Report states, “effects to giant kelp *Macrocystis pyrifera* were observed at effluent concentrations of 26.1% and 4.1% for germination (IC25 values; Appendix F).” However, no further analysis or interpretation of this result has been provided in the annual report, and Appendix F only includes the data results.

ECCC Recommendation(s)

ECCC recommends that the Proponent provide analysis and interpretation of sublethal toxicity testing results.

2. Updates to Water Quality Benchmarks

Reference(s)

- Table 2.2-2: Long Term Water Quality Benchmarks for the Hope Bay Project, Appendix D-4: 2021 Aquatic Effects Monitoring Program Report
- Federal Environmental Quality Guidelines (FEQGs) - Canada.ca

Comment

Table 2.2-2 provides a summary of the water quality benchmarks used for the Hope Bay Project, which primarily include guidelines developed by the Canadian Council of Ministers for the Environment (CCME). However, in recent years the federal government has undertaken the development of new guidelines and updating of old guidelines in the form of the Federal Environmental Quality Guidelines (FEQG). These guidelines include updates to dated guidelines for aluminum, copper, and lead, as well as new guidelines for cobalt and strontium. FEQGs are similar to the CCME guidelines in that they are benchmarks for the quality of the ambient environment and are developed where there is a federal need for a guideline, but where the CCME guidelines for the substance have not yet been developed or are not reasonably expected to be updated in the near future.

ECCC Recommendation(s)

ECCC recommends the Proponent review the Federal Environmental Quality Guidelines, and incorporate the newly updated guidelines into the list of water quality benchmarks used for analysis at site.

If you need more information, please contact Stephinie Mallon at Stephinie.Mallon@ec.gc.ca.

Sincerely,

[original signed by]

Stephinie Mallon
Environmental Assessment Officer

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)