



NIRB File No.: 11MN034
NWB File No.: 2AM-MEL1631

December 3, 2020

Terry Ternes
General Supervisor Environment
Agnico Eagle Mines Limited
Meliadine Mine, Suite 879
Rankin Inlet, NU X0C 0G0

Sent via email: terry.ternes@agnicoeagle.com

Re: The Nunavut Impact Review Board's 2019-2020 Annual Monitoring Report for the Meliadine Gold Mine Project and Board's Recommendations

Dear Terry Ternes:

The Nunavut Impact Review Board (NIRB or Board) is hereby releasing its 2019-2020 *Annual Monitoring Report for Agnico Eagle Mine Limited's Meliadine Gold Mine Project* (NIRB File No. 11MN034) (Monitoring Report) along with the NIRB's Assessment of Agnico Eagle Mine Limited's Compliance Status (Appendix I) based on the NIRB's monitoring activities as set out within the Meliadine Gold Mine Project Certificate No. 006 and Meliadine Gold Mine Project Certificate No. 006, Amendment 1 pursuant to Sections 12.7.1 and 12.7.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada* (Nunavut Agreement) and s. 135 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (NuPPAA). This Monitoring Report provides findings that resulted from monitoring of this Project that took place from October 2019 to September 2020.

All materials pertaining to the NIRB's ongoing Monitoring program for the Meliadine Gold Mine Project can be accessed from the NIRB's online public registry at www.nirb.ca/project/124106.

By way of a motion carried during its regular meeting held in October 2019, the Board has issued the following recommendations to assist Agnico Eagle Mines Limited (Agnico Eagle or Proponent) in achieving compliance with the Meliadine Gold Mine Project Certificate. These recommendations ensure that the NIRB has all the information necessary to adequately discharge its mandate with respect to provisions within Section 12.7 of the *Nunavut Agreement* and s. 135 of *NuPPAA* as they pertain to the Meliadine Gold Mine Project.

Update on the 2020 Saline Discharge Strategy and total suspended solids exceedances

On June 9, 2020 the Board determined that Agnico Eagle's 2020 *Saline Discharge Strategy* did not require an amendment to the terms and conditions of the Meliadine Gold Mine Project Certificate. In response to the Board's recommendations regarding the 2020 activities, the Proponent submitted a revised *Ocean Discharge Monitoring Plan*, Version 3 (June 2020). The Plan requires deleterious substance monitoring, including sampling of total suspended solids, which is done once a week during open water season. Samples are then sent to an accredited laboratory for analysis and results may take up to one (1) week to become available. Between the sampling frequency and the added time for sample analysis, the Board is concerned that total suspended solids exceedances may not be identified for up to two (2) weeks. The Board expects to receive a report from the Proponent on the results of its' monitoring programs, including the *Ocean Discharge Monitoring Plan* by December 10, 2020. Therefore, the Board will await the submission of this report and make recommendations at that time as more information may be available with regards to this concern.

Within the *2019 Annual Report* Agnico Eagle reported a total suspended solids concentration which exceeded the Metal and Diamond Mining Effluent Regulations (MDMER) authorized limit of 30 milligrams/litre (initially reported on August 26, 2019) from a sample collected on August 19, 2019; additional testing indicated that the high total suspended solids level was related to algal growth in the saline pond holding treated saline effluent. Monthly averages for total suspended solids also exceeded the allowable limit in August 2019. Furthermore, the increased chlorine dosing used to treat the algal bloom in the Saline Effluent Treatment Plant lead to two (2) acute lethality failures in September 2019 and release of an estimated 0.3 litres/day of chlorine into Melvin Bay before shut down of discharge after the second failed test. During 2020, Agnico Eagle reported two (2) additional total suspended solids exceedances: first, approximately 8,000 cubic metres (m³) of saline water was discharged prior to August 31, 2020 when results were received from an August 23, 2020 sample which did not meet the MDMER limits and a second halt to discharge occurred on September 18, 2020 after a second sample exceeded the MDMER for total suspended solids.

On October 2, 2020 Agnico Eagle submitted its follow up spill report on the August 23 exceedance determining that the TSS exceedance was due to algal growth and intermittent filter failure. Additionally on October 22, Agnico Eagle provided the follow up spill report determining that the September 18 exceedance was due to one (1) truck not pre-rinsing between loads. The latter exceedance only amounted to the volume of one truck, however, the relatively fast turn around time of two (2) days for test results would have ensured that a maximum of 798 m³ of out of compliance water was discharged into Melvin Bay.

The Board has considered the above issues with respect to the Board's ongoing assessment of the "Saline Effluent Discharge to Marine Environment" Project Proposal and the direction provided by the Minister of Northern Affairs to ensure the NIRB's assessment focuses in part on impacts to fish and fish habitat in Melvin Bay from increased volume of saline effluent discharge. The Board anticipates that any required updates to the mitigation measures or monitoring programs regarding MDMER compliance could be identified through the assessment process, and the Board would be in a position to recommend appropriate revisions or requirements following conclusion of its assessment.

Terrestrial Environment Management and Monitoring Plan (TEMMP) and Report

Within its *2018-2019 Monitoring Report*¹ the NIRB acknowledged that as the site moved from Construction to Operations, the TEMMP should be reviewed because the approved version was completed in 2015 when the Meliadine Project was in preconstruction. For the 2019 monitoring year the TEMMP, Version 2 from 2015 continued to be implemented.

Comments from the Government of Nunavut (GN) and Kivalliq Inuit Association (KIA) on Agnico Eagle's 2018 and 2019 Annual Reports for the Project requested additional data, and better reporting of methods and analysis on implementation of the TEMMP Version 2, as well as conclusions of what was successful and not, so that parties could provide recommendations on adaptive management decisions. In 2020, the GN and KIA further recommended that specific data on caribou be presented within the TEMMP Report as key details required to verify Agnico Eagle's conclusions were missing; specifically, data should include method for selection of groups of caribou for observation, make up of group, direction of movement around the Project, associated variables to observation data such as noise, dust, time of day, or environmental conditions. Agnico Eagle noted plans to analyze trends in results from the first three (3) years of operations and determine thresholds after 2021; however, the NIRB notes that appropriate data collection is required throughout this period in order to analyze results and establish thresholds and mitigation responses.

The NIRB received an updated TEMMP Version 3 in June 2020 with the *2020 Saline Discharge Strategy* which included a table acknowledging parties comments and how they were addressed in the updated Plan; however, minimal updates between the TEMMP Version 2 and TEMMP Version 3 were made to address comments requesting further details on study methods, reporting and analysis. Furthermore, the TEMMP Version 3 has not been updated to incorporate up to date monitoring data from which trends in natural variability (such as caribou migration numbers through the project area) could be seen.

Traffic levels along the All-Weather Access Road have continuously been higher than predicted, and due to Agnico Eagle using almost triple the amount of water truck trips on the road for the 2020 open water season, it is critical that the TEMMP is updated to reflect any changes or increased knowledge in natural variability in baseline conditions as well as improvement of data collection and reporting for each Valued Ecosystemic Component, where increased knowledge may allow for improvement of analysis on previously determined effects on Valued Ecosystemic Components, such as caribou, and inform appropriate modifications to thresholds and mitigation measures as part of adaptive management.

Recommendation 1: The Proponent shall provide a comprehensive update to the Terrestrial Ecosystem Management and Monitoring Plan to incorporate any observed changes in terrestrial baseline data since 2011, and additional information learned on natural variation of Valued Ecosystemic Components, to inform the effectiveness of the monitoring program, the adequacy of mitigation measures and adaptive management. The updated version of the Terrestrial Ecosystem Management and Monitoring Plan (TEMMP) shall also improve upon data collection methods and

¹ Public Registry ID No.: 327326

reporting requirements which will be reported on annually through the TEMMP Report.

The updated TEMMP and associated improvements to reporting shall be submitted within the Proponent's 2020 Annual Report to the NIRB.

Should you have any questions or require further clarification regarding this request or related to the NIRB's monitoring program for the Meliadine Gold Mine Project, please contact the undersigned at (867) 983-4612 or at ekoide@nirb.ca or Erin Reimer, Technical Advisor I, at ereimer@nirb.ca.

Sincerely,



Emily Koide
Technical Advisor I
Nunavut Impact Review Board

cc: Meliadine Distribution List

Enclosure: The Nunavut Impact Review Board's 2019-2020 *Annual Monitoring Report for Agnico Eagle Mine Limited's Meliadine Gold Mine Project (NIRB File No. 11MN034)*