



Environmental Protection Operations Directorate
Prairie & Northern Region
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ECCC File: 6100 000 012/012
NIRB File: 11MN034

May 10, 2019

via email at: info@nirb.ca

Erin Reimer
Technical Advisor I, Monitoring Officer
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

Dear Erin Reimer:

RE: 11MN034 – Agnico Eagle Mines Ltd. – Meliadine Gold Project – 2018 Annual Report

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Impact Review Board (NIRB) regarding the above-mentioned annual report and is submitting comments via email. ECCC's specialist advice is provided based on our mandate, in the context of the *Canadian Environmental Protection Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

The following comments are provided:

1. Incineration

Reference(s)

- Meliadine Gold Project Incineration Management Plan, 2018 Air Quality Monitoring Report

Comment

ECCC acknowledges the Proponent's commitment to annual stack testing to ensure that emissions of dioxins, furans, and mercury as a result of incineration activities are limited. Another important component of reducing these emissions is the establishment of a program that records critical incineration parameters (e.g., chamber temperatures, air flows, and waste volumes) for each burn. High emissions

can occur as a result of waste volumes above the chamber capacity and temperatures that are too low. Record keeping ensures that appropriate incineration conditions take place throughout the year.

ECCC notes that the incinerator employed at the Project is capable of this record keeping through its computerized interface. However, there is no mention of regular review of the incinerator's operating parameters in either the Operation Procedures (Section 6.1.1) or Inspections (Section 6.1.5). Review of this data on a daily or weekly basis is needed to ensure the incinerator is operating effectively.

ECCC Recommendation(s)

ECCC recommends that the Proponent revise the Incineration Management Plan to include regular review of the incinerator's operating parameters, including chamber temperatures, air flows, and waste volumes.

2. Canadian Ambient Air Quality Standards

Reference(s)

- 2018 Air Quality Monitoring Report; Section 2.2.3

Comment

Since completion of the environmental assessment for the Project, the Canadian Council of Ministers of the Environment (CCME) have established new Canadian Ambient Air Quality Standards (CAAQS) for sulphur dioxide (SO₂) and nitrogen dioxide (NO₂), on October 3rd, 2016 and November 3rd, 2017, respectively.

ECCC is of the view that monitoring results be compared to the most stringent air quality standards applicable to a given area. The passive air quality monitoring for NO₂ and SO₂ produces annual averages that can be compared with the corresponding CAAQS.

The CAAQS are not intended to be used as enforceable standards rather to evaluate the nature and severity of the Project's impact on air quality levels.

ECCC Recommendation(s)

ECCC recommends that the Proponent:

- Provide a comparison of annual average concentrations of NO₂ and SO₂ to their respective CAAQS in future Air Quality Monitoring Reports.
- Update relevant management plans to include the CAAQS.

3. Migratory Bird Incident and Mortality Reporting

Reference(s)

- 2018 Terrestrial Effects Monitoring and Mitigation Program (TEMMP) Annual Report; Section 6.3.2
- Terrestrial Effects Monitoring and Mitigation Program (TEMMP; Version November 2015)

Comment

A gosling was found deceased on August 2, 2018. Geese are migratory birds protected under the *Migratory Birds Convention Act*. Procedures outlined in section 4.12.3 of the TEMMP (Version: November 2015) include contacting ECCC for migratory bird mortalities, however, ECCC was not contacted regarding this mortality.

ECCC Recommendation(s)

ECCC recommends that the Proponent follow the procedures established in the TEMMP and report all migratory bird incidents and mortalities to ECCC at:

ec.dalfnord-wednorth.ec@canada.ca and ec.eenordrpntno-eanorthpnrnwt.ec@canada.ca.

4. Upland Breeding Birds Project-Related Mortality

Reference(s)

- 2018 Terrestrial Effects Monitoring and Mitigation Program (TEMMP) Annual Report; Table 6.5-1, Table 10.4.1

Comment

ECCC notes that no threshold is established for upland breeding birds for Project-related mortality. Among migratory birds, only waterbirds currently have a mortality threshold.

ECCC Recommendation(s)

ECCC recommends that the Proponent add a Project-related mortality threshold for upland breeding birds in Tables 6.5-1 and 10.4.1.

5. Barren-ground Caribou

Reference(s)

- 2018 Terrestrial Effects Monitoring and Mitigation Program (TEMMP) Annual Report; Section 8.0

Comment

The Proponent states that barren-ground caribou have a “*federal status*” (TEMMP, Section 8.0, Page 19). This should be revised to reflect that barren-ground caribou are COSEWIC-assessed as “*Threatened*”, but are currently not listed on Schedule 1 of the *Species at Risk Act* (i.e. no status).

ECCC Recommendation(s)

ECCC recommends that the Proponent revise the sentence provided on Page 19 of the TEMMP Annual Report to reflect that barren-ground caribou are COSEWIC-assessed as “*Threatened*,” but are not currently listed on Schedule 1 of the *Species at Risk Act*.

6. Waterbird Surveys

Reference(s)

- 2018 Terrestrial Effects Monitoring and Mitigation Program (TEMMP) Annual Report; Figure 10.1-1

Comment

It is unclear from Figure 10.1-1 which waterbodies fall within 200m of mining infrastructure and were surveyed for waterbirds.

It would be valuable to present annual results of shoreline surveys spatially on a map. This would allow ECCC to determine which waterbodies are being used and to make annual comparisons.

ECCC Recommendation(s)

ECCC recommends that the Proponent:

- Revise Figure 10.1-1 to clearly indicate which waterbodies were surveyed in 2018.
- Present the annual results of shoreline surveys spatially in a figure.

7. Waterbirds and Upland Breeding Birds Monitoring Objectives

Reference(s)

- 2018 Terrestrial Effects Monitoring and Mitigation Program (TEMMP) Annual Report; Sections 10, 10.3
- Terrestrial Effects Monitoring and Mitigation Program (TEMMP; Version November 2015); Section 4.11

Comment

The description of monitoring objectives for bird surveys, in particular PRISM surveys, is inconsistent between the TEMMP Annual Report and the TEMMP (Version: November 2015).

In some cases the objectives are to determine Project-related effects, and in others the objectives are to contribute to ECCC's regional monitoring. ECCC had discussions with the Proponent about the waterbird and upland breeding bird VECs monitoring objectives and suggested that further analyses of the existing data or use of a proxy should be considered to support changes to the monitoring objectives. Project Certificate Term and Condition numbers 71-72 also requires that discussions on the development and implementation of migratory bird monitoring plans be provided in the annual monitoring reports. ECCC welcomes further discussions with the Proponent regarding the migratory bird monitoring objectives, survey protocols, sampling design and frequency of surveys.

ECCC Recommendation(s)

ECCC recommends that the Proponent:

- Provide an analysis that supports the change to the migratory bird objectives that was included in the 2018 Annual Report.
- Moving forward, include changes to TEMMP objectives in the TEMMP annual reports as recommendations.

8. Marine Mammal and Seabird Observer Report

Reference(s)

- Marine Mammal and Seabird Observer (MMSO) Report for the 2017 and 2018 Shipping Season
- Gjerdrum, C., D.A. Fifield, and S.I. Wilhelm. 2012. Eastern Canada Seabirds at Sea (ECSAS) standardized protocol for pelagic seabird surveys from moving and stationary platforms. Canadian Wildlife Service Technical Report Series No. 515. Atlantic Region. vi + 37 pp.

Comment

ECCC reviewed the MMSO Report and has concerns about the quality of the data provided. The surveys also do not appear to have followed established ECCC seabird survey protocols (Gjerdrum *et al.* 2012).

ECCC Recommendation(s)

ECCC recommends that the Proponent:

- Contact ECCC to discuss the implementation of the ECCC seabird survey protocols.
- Provide staff with adequate training to implement established ECCC seabird survey protocols.

9. ECCC Comments Pertaining to the Freshwater Environment

ECCC will be providing comments related to the freshwater environment for the 2018 Meliadine Annual Report as part of the Nunavut Water Board (NWB) review process. ECCC will also send comments to the NIRB on July 3, 2019 when the NWB Annual Report comments are due.

Should you require further information, please do not hesitate to contact me at (867) 669-4732 or Emily.Nichol@canada.ca.

Sincerely,

[original signed by]

Emily Nichol
A/Senior Environmental Assessment Coordinator

cc: Georgina Williston, Head, Environmental Assessment North (NT and NU)