

Environmental Protection Operations Directorate  
Prairie & Northern Region  
5019 52<sup>nd</sup> Street, 4<sup>th</sup> Floor  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

ECCC File: 6100 000 010/024  
NIRB File: 05MN047  
NWB File: 2AM-DOH1335



June 30, 2023

via email at: [info@nirb.ca](mailto:info@nirb.ca) and [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Kelli Gillard  
Manager, Project Monitoring  
Nunavut Impact Review Board  
P.O. Box 1360  
Cambridge Bay, NU X0B 1J0

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

Dear Kelli Gillard and Richard Dwyer:

**RE: 05MN047 / 2AM-DOH1335 – Agnico Eagle Mines Limited – Hope Bay/Doris North Gold Mine Project – 2022 Annual Monitoring Report**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Impact Review Board (NIRB) by Agnico Eagle Mines Limited (AEM, the Proponent) regarding the above-mentioned 2022 Annual Monitoring Report.

ECCC provides expert information and knowledge to project assessments on subjects within the department's mandate, including climate change, air quality, water quality, biodiversity, environmental preparedness and emergencies. This work includes reviewing proponent characterization of environmental effects and mitigation measures, and providing advice to decision makers on activities needed to mitigate these environmental effects. 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. Compliance Monitoring**

Comment

No authorizations from ECCC have been issued.

The Agnico Eagle Mines Hope Bay/Doris North Project is captured under several pieces of ECCC legislation such as subsection 36(3) of the *Fisheries Act* (FA), *Metal and Diamond Mining Effluent Regulations* (MDMER), *Canadian Environmental Protection Act* (CEPA), *Environmental Emergency Regulations* (E2 Regs), *Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulations* (XBR), *Storage Tank Systems for*



*Petroleum Products and Allied Petroleum Products Regulations (STSR), and Greenhouse Gas Pollution Pricing Act/Output-Based Pricing System Regulations.*

In 2022, One on-site inspections was completed:

1. July 6-7, 2022:

- Multi-Reg onsite inspection conducted under FA, MDMER, E2 Regs, XBR, and STSR at the following locations:
  - i) Roberts Bay facilities
  - ii) Doris Main Camp
  - iii) Waste Management Area
  - iv) Bulk Fuel Storage Areas including the Three Tank Farm and the Single Tank Farm, the Jetty, the aircraft de-icing pad
  - v) Windy Lake raw water intake pump house
  - vi) Doris Lake raw water intake
  - vii) Windy road bridges and large diameter culvert
  - viii) Doris Camp Pad
  - ix) Doris Camp Diversion Ditch north of camp
  - x) fuel storage and refueling station
  - xi) Waste rock pile
  - xii) Sedimentation pond
  - xiii) Pollution prevention control pond
  - xiv) The tailings line
  - xv) Catchment basins east and west, Re-agent storage facility, North and South Dams, tailings discharge line, Tailings Impoundment Area (TIA)
- No compliance issues were noted during the July 6-7, 2022 on-site inspection.

2. MDMER chemistry and toxicity sampling did not occur as the Roberts Bay final discharge point discharge was suspended on July 6, 2022, while on site due to high total suspended solids (TSS) levels, and was not resumed until July 8, 2022 after maintenance was completed on the TSS treatment circuit.

### MDMER

The Project is subject to the MDMER. The purpose of the MDMER is to authorize a deposit of certain deleterious substance(s) into water frequented by fish while monitoring the environmental effects of those deposits to ensure that deleterious substances are not released in quantities or concentrations that could result in harmful effects on waters frequented by fish. To do this, certain effluent deposit conditions (concentrations, limits, and parameters) apply so that regulatees are exempted and protected from the more stringent prohibition of subsection 36(3) under the *Fisheries Act*. Samples of the effluent by the Proponent must be taken and tested at the identified Final Discharge Point (FDP) to ensure the above conditions are met on a scheduled basis and reported. The one current FDP is as follows:

1. FDP Roberts Bay Discharge-1 (RBD-1): Intermediately effluent discharge from Tailings Impoundment Area by 710 pump house and or Water Treatment Plant 720 pump house 8 KM overland to 730 pump house then to Roberts Bay, Arctic Ocean diffuser. The effluent consists of water collected from 3 sources:

- i) Contact water ponds
- ii) Saline water from underground mines
- iii) Excess water in the reclaim pond of the tailings impoundment area.

The MDMER requires reports to be submitted in ECCC's online database (Mine Effluent Reporting System - MERS) which are reviewed by an assigned Enforcement Officer on a quarterly basis. The quarterly administrative regular report verifications are conducted to ensure that the sampling and testing has been conducted in accordance with the MDMER and to ensure the reports are submitted on time. Each Enforcement Activity includes an administrative report verification of each quarterly report which are due 45 days at the end of each quarter: 1st Quarter (due May 15), 2nd Quarter (due Aug 14), 3rd Quarter (due Nov 14) and 4th Quarter (due Feb 14), as well as a administrative report regular verification of the 2022 Annual Effluent Monitoring Summary Report (due March 31). Furthermore, an administrative report regular verification was completed on the Environmental Effects Monitoring (EEM) 2022 Annual Report (information related to effluent and water quality monitoring studies) and as part of this verification the officer submitted a copy of the report to the EEM Coordinator for review to also confirm compliance.

In 2022, AEM submitted all required MDMER reports:

1. First Quarter:

- Report submitted on time.
- FDP Roberts Bay Discharge-1 (RBD-1): Administrative verification not conducted as no effluent was discharged through this FDP during Q1 therefore no compliance issues.

2. Second Quarter:

- Report submitted on time.
- FDP Roberts Bay Discharge-1 (RBD-1): Effluent was discharged intermediately during Q2 with no exceedances.
- The following non-compliance was determined:
  - i) 21(2)(b) – AEM failed to record in the effluent monitoring report the pH and concentrations of the deleterious substances as prescribed in section 3 of the MDMER which were collected in a grab sample on June 15, 2022 - Warning Letter Issued.
  - ii) 14.4 – AEM failed to conduct an *Acartia tonsa* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method STB 1/RM/60 which was collected in a grab sample on June 15, 2022 - Warning Letter Issued.
  - iii) 14.1 – AEM failed to conduct a Rainbow trout acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/13 which was collected in a grab sample on June 15, 2022 – Warning Letter Issued.
  - iv) 21(2)(b) – AEM failed to collect during the June 26, 2022 to July 2, 2022 week a grab sample of effluent and record the concentration of the deleterious substance radium-266 as prescribed in section 3 – Warning Letter Issued.

3. Third Quarter:

- Report submitted on time.

- FDP Roberts Bay Discharge-1 (RBD-1): Effluent was discharged intermediately during Q3 with no exceedances.
- The following non-compliance was determined:
  - i) 14.2 – AEM failed to conduct a *Threespine stickleback* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/10 which was collected in a grab sample on July 5, 2022 – Warning Letter Issued.
  - ii) 14.1 – AEM failed to conduct a *Rainbow trout* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/13 which was collected in a grab sample on August 12, 2022 – Warning Letter Issued.
  - iii) 14.2 – AEM failed to conduct a *Threespine stickleback* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/10 which was collected in a grab sample on August 22, 2022 – Warning Letter Issued.
  - iv) 21(2)(b) – AEM failed to collect during the August 28, 2022 to September 3, 2022 week a grab sample of effluent and record the concentrations of the deleterious substances as prescribed in section 3 – Warning Letter Issued.
  - v) 14.2 – AEM failed to conduct a *Threespine stickleback* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/10 which was collected in a grab sample on September 6, 2022 – Warning Letter Issued.

#### 4. Fourth Quarter:

- Report submitted on time.
- FDP Roberts Bay Discharge-1 (RBD-1): Effluent was discharged in Q4 with no exceedances.
- The following non-compliance was determined:
  - i) 21(2)(b) - AEM failed to collect a grab sample of effluent and record the concentrations of the deleterious substances as prescribed in Section 3 during the October 2, 2022 to October 8, 2022 week – Warning Letter Issued.
  - ii) 14.1 – AEM failed to conduct a *Rainbow trout* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/13 which was collected in a grab sample on October 11, 2022 – Warning Letter Issued.
  - iii) 14.4 – AEM failed to conduct in the 2022 fourth quarter a *Acartia tonsa* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method STB 1/RM/60 which was collected in a grab sample on November 1, 2022 – Warning Letter Issued.
  - iv) 21(2)(b) – AEM failed to collect a grab sample or composite sample of effluent and record the concentrations of the deleterious substances as prescribed in Section 3 during the December 4, 2022 to December 12, 2022 week – Warning Letter Issued.
  - v) 14.2 – AEM failed to conduct a *Threespine stickleback* acute lethality test in accordance with the procedures set out in section 5 or 6 of Reference Method EPS 1/RM/10 which was collected in a grab sample on December 12, 2022 – Warning Letter Issued.

5. 2022 Annual Effluent Monitoring Report:
6. Report was submitted on time and no compliance issues noted.
7. 2022 Annual EEM Report:
8. Report was submitted on time and no compliance issues noted.

ECCC Files Regarding Reported 2022 Spills:

1. 2022-398 – Lead agency CIRNAC – Possible suspended solids MDMER Monthly Mean Exceedance – File closed – No Enforcement Action taken under MDMER

The above comments exclude water quality, air quality, and mining-related comments. Comments under these topics will be provided with the Nunavut Water Board 2022 Annual Report review for Hope Bay/Doris North, and shared with the NIRB.

If you need more information, please contact Stephinie Mallon at [Stephinie.Mallon@ec.gc.ca](mailto:Stephinie.Mallon@ec.gc.ca).

Sincerely,

*[original signed by]*

Stephinie Mallon  
Environmental Assessment Officer

cc: Melissa Pinto, Acting Head, Environmental Assessment North (NT and NU)