



Water Resources Division  
Resource Management Directorate  
Nunavut Regional Office  
P.O. Box 100  
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Your file - Votre référence  
2AM-BOS1335 + 2BB-BOS1727  
Our file - Notre référence  
GCDocs# 121562417

February 7, 2024

Robert Hunter  
Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0B 1J0  
E-mail: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

**Re: Crown-Indigenous Relations and Northern Affairs Canada's Review of the  
Licence Review of the Interim Closure and Reclamation Plans for The Hope Bay  
Project, Type A and B Water Licence No. 2AM-BOS1835 and 2BB-BOS1727**

Dear Robert,

Thank you for the January 10, 2024 invitation to review the referenced licence interim closure and reclamation plans, submitted by Agnico Eagle Mines Limited, for Type A and B Water Licence No. 2AM-BOS1835 and 2BB-BOS1727.

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) examined the application pursuant to its mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Crown-Indigenous Relations and Northern Affairs Act*. Please find CIRNAC comments and recommendations in the attached Technical Memorandum.

The applicant shall provide confirmation from the Nunavut Water Board that all outstanding water license fees have been paid in full prior to approval of this application.

If there are any questions or concerns, please contact me at (867) 975-3877 or [Joyce.Demers@rcaanc-cirnac.gc.ca](mailto:Joyce.Demers@rcaanc-cirnac.gc.ca) or Andrew Keim at (867) 975-4550 or [Andrew.Keim@rcaanc-cirnac.gc.ca](mailto:Andrew.Keim@rcaanc-cirnac.gc.ca).

Sincerely,

Joyce Demers, B.Sc.,  
Industrial Coordinator



## **Technical Review Memorandum**

**Date:** February 7, 2024

**To:** Robert Hunter – Licensing Administrator, Nunavut Water Board

**From:** Joyce Demers – Industrial Coordinator, CIRNAC

**Subject:** Crown-Indigenous Relations and Northern Affairs Canada's Review of the Licence Review of the Interim Closure and Reclamation Plans for The Hope Bay Project, Type A and B Water Licence No. 2AM-BOS1835 and 2BB-BOS1727

**Region:** ☒ Kitikmeot ☐ Kivalliq ☐ Qikiqtani

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### **A. BACKGROUND**

The Doris mine is located approximately 110 km south of the Bathurst Inlet, 705 km northeast of Yellowknife, North West Territories and 153 km southwest of Cambridge Bay in Nunavut. The Hope Bay Project is made of three distinct areas: Doris, Madrid, and Boston. Hope Bay Mine Project which currently holds five separate water license (2AM-DOH1335, 2AM-BOS1835, 2BB-MAE1727, 2BB-BOS1727 and 2BE-HOP1222).

Agnico Eagle Mines Limited (Agnico) submitted an interim closure and reclamation plan (the plan) for review. They have also provided a detailed cost breakdown for the plan for the 2AM-BOS1335 water licence.

CIRNAC provides the following comments and recommendations pertaining to the application package. A summary of the subjects of recommendations can be found in Table 1. Documents reviewed as part of this submission can be found in Table 2 of Section B. Detailed technical review comments can be found in Section C.



**Table 1: Summary of Recommendations**

| Recommendation Number | Subject                                                            |
|-----------------------|--------------------------------------------------------------------|
| R1                    | Water License Fees                                                 |
| R2                    | Security Update for 2AM-BOS1335                                    |
| R3                    | Post-Closure Monitoring                                            |
| R4                    | Underground Mine Workings                                          |
| R5                    | Bulk Sample Locations Remediation not Specified in the Application |
| R6                    | Unclear that the CCRP for 2AM-BOS1335 is also for 2BB-BOS1727      |
| R7                    | Detoxified Cyanide Leach Tailings                                  |

## **B. DOCUMENTS REVIEWED AND REFERENCED**

The following table (Table 2) provides a list of the documents reviewed under the submission and reference during the review.

**Table 2: Documents Reviewed and Referenced**

| Document Title                                                                          | Author, File No., Rev., Date             |
|-----------------------------------------------------------------------------------------|------------------------------------------|
| 240109 2AM-DOH and 2AM-BOS Update Email to NWB-ILAE                                     | Jennifer Range, January 9, 2024          |
| 240109 2AM-BOS1335 Hope Bay Project Boston CCRP-ILAE                                    | Agnico Eagle Mines Limited, January 2024 |
| 240109 2AM-BOS1335 Hope Bay Project Boston CCRP Detailed Cost-ILAE                      | SRK Consulting, November 30, 2017        |
| 240110 2AM-BOS1835, 2BB-BOS1727 Interim Closure and Reclamation Plans - Email Dist-OLAE | Robert Hunter, January 10, 2024          |



## **C. RESULTS OF REVIEW**

### **1. Water License Fees**

#### **Comment:**

The applicant shall confirm with the Nunavut Water Board that all outstanding water license fees have been paid in full prior to approval of this application.

#### **Recommendation:**

(R-01) CIRNAC recommends that the applicant confirm with the Nunavut Water Board that all fees have been paid in full.

### **2. Security Update for 2AM-BOS1335**

#### **Comment:**

In the document labeled 240109 2AM-DOH and 2AM-BOS Update Email to NWB-ILAE it states that;

“2. 2AM-BOS1335

a. ICRP update

Note: As was agreed by KitlA and CIRNA; there are no security updates to this particular licence”

CIRNAC agreed that there would be no need for a security update until the licence comes out of care and maintenance. However, once it does come out of care and maintenance it would be subject to a security review. No security is currently held under for this file (2AM-BOS1335) at this time. As no major projects have started to trigger the payment of security.

Under Part J item 7 of the water license;

“The Licensee shall, should the Project remain, or be in Care and Maintenance, submit an updated estimate of total mine closure restoration liability, within twelve (12) months of entering Care and Maintenance and every three (3) years thereafter”

Therefore, we look at the Nunavut Water Board for direction.

Water licence 2BB-BOS1727 currently sets security for the Boston site and Agnico Eagle has already agreed to increase securities related to current site conditions under this water licence. CIRNAC is of the opinion that the Minister currently holds sufficient securities for the Boston Site.



Once the project comes out of care and maintenance, CIRNAC would request that water licence 2AM-BOS1335 undergo a security estimate update.

**Recommendation:**

(R-02) CIRNAC recommends that the wording be changed to include a security review following the project coming out of care and maintenance.

### **3. Post-Closure Monitoring**

**Comment:**

Under section 9.2 Post-Closure Monitoring in the document labeled 240109 2AM-BOS1335 Hope Bay Project Boston CCRP-ILAE it states;

“Based on engineering design and analysis, it is expected that post-closure monitoring will be required for ten years.”

The concern is that 10 years is not long enough to ensure long-term site stability. CIRNAC's position is that post-closure monitoring should be maintained for 25 years to prove site stability, which would mirror what was done with water license 2AM-DOH1335 security review which was completed at the end of 2023.

**Recommendation:**

(R-03) CIRNAC recommends that the post-closure monitoring be extended to 25 years to reflect that of the Doris water license 2AM-DOH1335.

### **4. Underground Mine Workings**

**Comment:**

It is unclear exactly what soil types will be backfilled into the underground mine workings and to what standard they will be placed there in. For example in section 4.4.8 in the document labeled 240109 2AM-BOS1335 Hope Bay Project Boston CCRP-ILAE it states that;

“The currently existing Landfarm facility will be decommissioned and reclaimed as part of the development work for Phase 2. ... Soil will be stored temporarily within the facility until it can be disposed of underground in permafrost areas.”



This is a concern as it is unclear what exactly the modeling used to determine if the ground within the mine workings will remain frozen or if there exist potential for artesian flows/ground water infiltration.

Additionally, it is unclear how the proponent would access the workings underground given the ice lensing and cap that have developed within the portal. It is unclear how these items will be placed into the underground mine workings as it is presumed to be iced over following years of inactivity.

**Recommendation:**

(R-04) CIRNAC recommends that the applicant provide a list of contaminated soils and expected volumes to be placed inside the underground mine workings. Additionally, the applicant should be prepared to provide the modeling used to determine the safety of this option in the event that the project comes out of Care and Maintenance and a security review will be required.

**5. Bulk Sample Locations Remediation not Specified in the Application**

**Comment:**

Remedial activities and objectives have not been defined in the bulk sampling application. This is a concern as bulk sample locations must also be remediated after closure.

**Recommendation:**

(R-05) CIRNAC recommends that the applicant add a section for options for remediation activities at bulk sampling locations.

**6. Unclear that the CCRP for 2AM-BOS1335 is also for 2BB-BOS1727**

**Comment:**

It is unclear if the CCRP (conceptual closure and reclamation plan), also referred to as the interim closure and reclamation plan, submitted is also for water licence 2BB-BOS1727 as it is labeled for only 2AM-BOS1335.

**Recommendation:**

(R-06) CIRNAC recommends that the applicant clarify if the plan is for all of Boston's water licences.



## **7. Detoxified Cyanide Leach Tailings**

### **Comment:**

In the document labeled 240109 2AM-BOS1335 Hope Bay Project Boston CCRP-ILAE under section 3.3 it states that;

“Detoxified cyanide leach tailings will be filtered and the filter cake will be mixed with waste rock and used as underground backfill.”

It is unclear how the cyanide leach tailings will be detoxified and if there is a possibility for cyanide to leach out of the underground workings into artesian flows/ ground water.

### **Recommendation:**

(R-07) CIRNAC recommends that the applicant provide further information on this process and describe how the cyanide will be detoxified and how it will remain stable inside the portal following disposal.