



Your file - Votre référence
2BE-MEA1525

December 10, 2015

Our file - Notre référence
IQALUIT-#1007875

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
GJOA HAVEN, NU X0E 1J0

Sent via email: licensing@nwb-oen.ca

Dear Ms. Beaulieu,

**Re: Technical Review of Waste Water Treatment System Operation and Maintenance Plan
Submission Pursuant to Part E, Item 6 of Water Licence No. 2BE-MEA1318**

Thank you for your email of November 26, 2015 concerning the above mentioned submission. A memorandum is provided for the Nunavut Water Board's consideration. Comments and recommendations have been provided pursuant to Aboriginal Affairs and Northern Development Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at 867-975-4555 or email at David.Abernethy@aandc-aadnc.gc.ca for further information.

Sincerely,

David Abernethy

Regional Coordinator
Water Resources Division
Resource Management Directorate
Aboriginal Affairs and Northern Development Canada
IQALUIT, NU X0A 0H0

Encl.

Cc. David Frenette, Agnico-Eagle Mines Ltd.

Memorandum

To: Phyllis Beaulieu, Nunavut Water Board

From: David Abernethy, Regional Coordinator, Aboriginal Affairs and Northern Development Canada

Cc: Andrew Keim, A/Manager, Water Resources Division, AANDC; and
Erik Allain, Manager, Field Operations, AANDC

Date: December 10, 2015

**Re: Technical Review of Waste Water Treatment System Operation and Maintenance Plan
Submission Pursuant to Part E, Item 6 of Water Licence No. 2BE-MEA1318**

Applicant: Agnico Eagle Mines Ltd.
Project: Amaruq Gold
Region: Kivalliq

Comments:

A. Background

On November 26, 2015, the Nunavut Water Board (NWB) invited interested parties to review a Waste Water Treatment System (WWTS) Operation and Maintenance Plan that was submitted by Agnico Eagle Mines Ltd. (the proponent) on May 19, 2015. This plan was submitted pursuant to Part E, Item 6 of their water licence, No. 2BE-MEA1318. This licence condition states:

The Licensee shall submit to the Board for approval within 90 days following issuance of this amendment or at least 60 days prior to commissioning the Waste Water Treatment System "Bionest (WWTS)," and Operation and Maintenance Plan for WWTS providing at a minimum the treatment process overview and WWTS maintenance requirements, monitoring and inspection details, and emergency procedures.

Interested parties were asked to review the submitted plan and provide comments by December 10, 2015.

B. Results of review

On behalf of Aboriginal Affairs and Northern Development Canada's (AANDC) Water Resources Division, the following comments and recommendations are provided:

1. Monitoring and Inspection Details

Section 2.5 of the submitted plan states that treated waste water effluent samples will be collected from the final point of control, Monitoring Program Station No. MEA-1, on a weekly basis to confirm that effluent discharge criteria are being met. This section also states that results will be submitted to the NWB (the reporting mechanism has not been indicated).

The plan does not provide any additional monitoring and inspection details. It is expected that the WWTS will be monitored on a daily basis by qualified staff. Monitoring activities can include documenting the following information:

- effluent temperatures (septic tank and bioreactor);
- air temperature within the WWTS;
- aeration (air pumps are working properly);
- re-circulation of treated effluent;
- sludge buildup;
- any additional monitoring activities (e.g., pH and turbidity of effluent).

Recommendations

The Proponent should confirm the frequency of reporting Monitoring Program Station MEA-1 water sample results to the NWB. Although not specified in the licence, it is recommended that this information be provided to the NWB on a monthly basis (i.e., monthly monitoring reports).

The Proponent should confirm that dedicated, qualified staff are responsible for maintaining the WWTS and revise the WWTS Operations and Maintenance Plan to include the daily and weekly inspection activities that will be followed.

2. Emergency Procedures

The submitted plan does not include emergency procedures that will be followed if the quality of wastewater cannot satisfy the effluent quality limits specified in Part D, Item 13 of the licence for Monitoring Program Station No. MEA-1. Part E, Item 6 of the licence states that the WWTS Operations and Maintenance Plan should include emergency procedures.

Recommendation

The Proponent should revise its WWTS Operations and Maintenance Plan to include emergency procedures pursuant to the Part E, Item 6 licence requirements. At a minimum, measures that will be followed if treated effluent does not meet discharge criteria should be provided.

3. Greywater Sump

Section 2.0, of the WWTS Operations and Maintenance Plan states, “grey water from the laundry and kitchen facilities would pass through a sump before being released into the environment. This grey water will also be redirected to the Kodiak Bionest.” It is not clear whether the grey water will report to the sump before or after being treated in the WWTS.

Recommendation

The Proponent should confirm the greywater treatment process in a revised WWTS Operations and Maintenance Plan. The plan should clearly indicate whether or not grey water will be treated in the WWTS before entering a dedicated sump.

4. Visual Representation of WWTS, Relevant Features, and Surrounding Area

The WWTS Operations and Maintenance Plan includes a map that shows where the WWTS is located at the Amaruq Camp. The effluent discharge location and scale of receiving water bodies is not shown.

Recommendation

The Proponent should revise its WWTS Operations and Maintenance Plan to include a detailed map or diagram that presents the WWTS, relevant features, and the surrounding area. At a minimum, the map or diagram should reference the following information:

- Monitoring Program Station No. MEA-1 (final point of control for effluent released from the WWTS);
- the greywater sump;
- the flow path of effluent discharged from the WWTS; and
- the scale of surrounding water bodies.