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Prairie & Northern Region  
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ECCC File: 6100 000 008/015  
NWB File: 2AM-WTP1826

October 22, 2018

Via email at: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

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

Dear Mr. Dwyer:

**RE: 2AM-WTP1826 – Agnico Eagle Mines Ltd. – Whale Tail Project – Groundwater Monitoring Plan**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned adaptive monitoring plan 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*, and the pollution prevention provisions of the *Fisheries Act*.

The following comments are provided:

**1. Updates of the Groundwater Monitoring Plan**

References

- Section 2.3.3 Groundwater Monitoring Plan

Comment

ECCC notes that the groundwater/pit water flow regime for this project is not fully understood, and that certain assumptions were made in the Groundwater Monitoring Plan. As per Section 2.3.3, the Groundwater Monitoring Plan will be further defined as the open pit is developed. However, the Plan does not indicate how frequently the Plan will be reviewed for potential updates.

#### ECCC Recommendation(s)

ECCC recommends that the Groundwater Monitoring Plan specify how frequently the Plan will be reviewed for potential updates and recommends that the Plan be reviewed and updated on an annual frequency.

## **2. Seepage Surveys**

#### References

- Section 2.4.1 Water Quantity

#### Comment

During construction and operations, groundwater inflow to the pit will be evaluated as part of monthly updates to the overall pit water balance. This flow monitoring will be supplemented by periodic seepage surveys to be conducted twice (i.e., early summer and late August) during the first year of mining and once a year (i.e., August) thereafter. It is not clear why the early summer seepage survey is conducted only once and no longer continues after the first year of mining.

#### ECCC Recommendation(s)

ECCC recommends that Agnico Eagle Mines Ltd. (the Proponent) provide rationale for the timing and frequency of the seepage survey.

## **3. Groundwater Monitoring During Closure/Post-Closure**

#### References

- Groundwater Monitoring Plan

#### Comment

The Groundwater Monitoring Plan does not describe groundwater monitoring during closure or post-closure.

#### ECCC Recommendation(s)

ECCC recommends that the Proponent provide clarification on plans for groundwater monitoring past operations.

## **4. Groundwater Monitoring Wells**

#### References

- Groundwater Monitoring Plan
- 2017 Groundwater Monitoring Program Report for Meadowbank

#### Comment

The 2017 Groundwater Monitoring Program Report for Meadowbank includes a Factual Report by SNC Lavalin. This report acknowledged that pit monitoring was not a good indicator of groundwater quality, and recommended that groundwater wells be installed in appropriate locations to measure quality.

It is not clear whether groundwater monitoring wells will be established to monitor groundwater flow and quality in flow paths adjacent to the pit and Waste Rock Storage Facility.

#### ECCC Recommendation(s)

ECCC recommends that the Proponent describe whether and how groundwater monitoring wells will be established to monitor groundwater flow and quality in flow paths adjacent to the pit and Waste Rock Storage Facility. In addition, ECCC recommends that the Proponent clarify whether any existing or planned groundwater monitoring wells will be displaced by the pit and/or by the Waste Rock Storage Facility, and if so, how groundwater data collection will be maintained.

### **5. Comparison of Monitoring Results Against Model Predictions**

#### References

- Section 2.5 Data Compilation and Updates to Groundwater Model

#### Comment

As per Section 2.5 of the Groundwater Monitoring Plan, groundwater monitoring data will be compiled into a Project-specific database and evaluated for trends in groundwater data with respect to pit inflow quantity and quality. The Plan outlines how measured groundwater quantity will be compared to model predictions, and the steps taken if significant variations from model predictions are observed. However, the Plan does not outline/address how measured groundwater quality will be compared to model predictions, nor what steps would be taken should significant variations from model predictions be observed.

#### ECCC Recommendation(s)

ECCC recommends that the Groundwater Monitoring Plan outline how measured groundwater quality will be compared against base-case (i.e., expected) model predictions, and what steps would be taken should significant variations from model predictions be observed. For consistency of comparison, ECCC also recommends that the groundwater quantity results be compared against base-case (i.e., expected) model predictions. The Groundwater Monitoring Plan should be updated to include these details.

## 6. Monitoring Summary Table

### References

- Groundwater Monitoring Plan

### Comment

The Groundwater Monitoring Plan would benefit from the inclusion of a monitoring summary table so information is easier to understand. Information such as monitoring station numbers and descriptions, applicable project phase(s), monitoring parameters and frequency, and criteria/action levels should be included in the tabular summary.

### ECCC Recommendation(s)

ECCC recommends including a tabular summary of the groundwater monitoring program in the Groundwater Monitoring Plan, including the data specified in the comment above.

Should you require further information, please do not hesitate to contact me at (867) 669-4733 or [Melissa.Pinto@canada.ca](mailto:Melissa.Pinto@canada.ca).

Sincerely,

*[original signed by]*

Melissa Pinto  
Senior Environmental Assessment Coordinator

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