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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No. 2AM-MEA1525 TR/B14

December 9, 2015

Manon Turmel, Senior Environmental Compliance Technician
Stéphane Robert, Manager Regulatory Affairs Nunavut
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Toronto, ON M5C 2Y7

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Subject: Licence No. 2AM-MEA1525 – Updated Management Plans

Dear Ms Turmel and Mr. Robert:

On November 3, 2015, Nunavut Water Board (NWB or Board) received from Agnico-Eagle Mines Limited (AEM) the following updated Management Plans as a requirement of Part B, Item 14 of the current Water Licence No. 2AM-MEA1525 issued to the Meadowbank Project:

- a. Aquatic Effects Management Plan (AEMP);
- b. Core Receiving Environment Monitoring Program (CREMP);
- c. Water Management Report and Plan;
- d. Freshet Action Plan;
- e. Ammonia Management Plan;
- f. Groundwater Monitoring Plan;
- g. Tailings Storage Facility: Operation, Maintenance and Surveillance Manual;
- h. Operation and Maintenance Manual: Sewage Treatment Plan; and
- i. Spill Contingency Plan.

On November 4, 2015, the NWB distributed AEM's submission to interested parties for a thirty (30) day public review. On December 4, 2015, the NWB received comments from Aboriginal Affairs and Northern Development Canada¹ (AANDC), Environment Canada² (EC), Fisheries

¹ Letter and Memorandum from D. Abernethy, AANDC, to P. Beaulieu, NWB; Re: Agnico Eagle Mines Ltd.'s Submission of Updated Management Plans pursuant to Part B, Item 14 of Renewed Water Licence No. 2AM-MEA1525.

² Letter and Recommendations' Table from Melissa Pinto, EC, to P. Beaulieu, NWB; Re: 2AM-MEA1525 – Agnico-Eagle Mines Ltd. – Meadowbank Mine – Type A Water Licence Management Plans.

and Oceans Canada³ (DFO) and Kivalliq Inuit Association⁴ (KIA). These submissions are available at the NWB's FTP site at the following address:

[ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEA1525%20Agnico/3%20TECH/1%20GENERAL%20\(B\)/0%20GENERAL/B%2014%20Mgmt%20Plans/](ftp://ftp.nwb-oen.ca/1%20PRUC%20PUBLIC%20REGISTRY/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-MEA1525%20Agnico/3%20TECH/1%20GENERAL%20(B)/0%20GENERAL/B%2014%20Mgmt%20Plans/)

The NWB has reviewed the plans as well as the interveners' comments received related to the plans. Although the NWB is generally satisfied with the updated documents provided by AEM, the NWB, however, notes that there are a number of clarifications and information requested/identified by Parties with respect to the following management plans:

Water Management Report and Plan

The Water Management Report and Plan states *that recommendations and requirements concerning the water use and management, the water balance and the water quality modelling and outlined in the document Water License: 2AM-MEA1525 Reasons for Decision Including Record of Proceedings from the Nunavut Water Board will be included in the next version of the Meadowbank Water Management Plan Report which will be submitted with the Meadowbank Annual Report 2015 (March 31, 2016).*

In its comment, EC indicated that *it will provide technical review comments when the plan is updated as part of the 2015 Annual Report submission. AEM should address previous comments and include the full 2015 data and activities.*

Core Receiving Environment Monitoring Program (CREMP)

In its submission, EC expressed concerns with the potential for effects in the mid-field (MF) to go unmeasured for an entire year until the next sampling period and the next annual CREMP analysis. EC believes that *if changes are detected in the near-field, then confirmatory sampling on whether those changes extend into the MF should be analyzed in a timely manner.*

EC indicates that under the current sampling strategy the MF and far-field (FF) areas are only sampled during the open-water period, and no data exists on the conditions of these areas during the ice cover period. EC recommends that a rationale be provided on why the sampling in the MF, if triggered, would only take place during the ice covered period in the proposed new sampling strategy.

The Licensee is also requested to describe how uncertainty related to the MF will be managed in the event that changes are identified in the near-field (NF); and to describe timelines for additional sampling in the MF.

³ Letter from Julie Dahl, DFO, to NWB, Re: Submission of management Plans for Approval – Meadowbank Project, Kivalliq Region.

⁴ Letter and Technical Memorandum from R. Nesbitt, KIA, to P. Beaulieu, NWB; Re: Kivalliq Inuit Association Submission: Review of Updated Meadowbank Management Plans.

Tailings Storage Facility: Operation, Maintenance and Surveillance Manual

EC indicated in its review letter that Section 6.1.3 Annual Inspection *does not list what is to be inspected*, and recommended that this information should be included within the Plan.

Ammonia Management Plan

NWB notes that EC reiterated the following recommendations it provided in December 2014 regarding the Ammonia Management Plan Version 1, February 2013 and in August 2015 regarding the March 2015 Version:

EC stated that the March 2015 Plan didn't address its recommendations to include the estimations of ammonia/nitrogen loading to all mining infrastructure designed to contain mine water and mine waste, and estimations of ammonia/nitrogen loading to the receiving environment.

EC expressed again its concerns about if the same ammonia treatment options are going to be retained in future, in particular:

- in-situ volatilization of ammonia during the summer months (i.e. potential air quality issues); and
- ammonia removal by snow making (i.e. Northern challenges).

Freshet Action Plan

EC stated that the following recommendations were not addressed:

- snow/ice disposal locations; and
- description of disposal methods to be implemented in the eventuality that water in the containment area does not meet discharge criteria for:
 - o Section 2.6.2 Baker Lake Tank Farms, and
 - o Vault Tank Farm, not listed in Appendix 1.

In its comment, AANDC required that the Applicant confirms *how long the ST-16 Seepage Monitoring Program presented in the Freshet Action Plan will be implemented (i.e., until closure activities are complete, then re-assessment of frequency?)*. The proponent is also advised to ensure that all applicable Monitoring Program Stations in the licence are referenced in the Plan with the consideration to include a table of concordance and reiteration of monitoring requirements (parameters and monitoring frequency) included in the licence.

In its comment, the KIA stated that the monitoring plan only proposes monthly sampling for many variables at locations that are affected by freshet, which is insufficient for freshet as it may only last a month. The KIA therefore mentioned that sampling should be conducted weekly at least until a large proportion of snow and ground ice has melted.

It is also noted that a minor discrepancy exists related to the completion date of the Plan as the cover page reads October 2015 while the footer reads September 2015.

Groundwater Monitoring Plan

In its review letter, AANDC indicated that the *Proponent should ensure that all applicable licensed Monitoring Program Stations are referenced in the Groundwater Management Plan. A table of concordance and reiteration of licensed monitoring requirements (parameters and monitoring frequency) should be considered.*

Spill Contingency Plan

As stated by DFO, Section 36 of the Fisheries Act is administered by Environment Canada, and in Nunavut spills are to be reported to the Department of Environment and Natural Resources. As such, the Table 4 (page 4-8) of the Spill Contingency Plan shall include EC as its contact information instead of DFO's Iqaluit contact information.

The KIA stated that although it is clear that seepage from the tailings storage facility (TSF) and waste rock storage facilities (WRSF) will now be treated as actionable and reportable spills, however, there is no clear reference in the Plan to the management of seepage. *It should be made clear in the Spill Contingency Plan that the current mitigation of seepage will be to pump it back to the TSF and that regular inspections will occur.*

KIA also indicated that its recommendation, KIA-IR-05, to include the weak acid dissociable cyanide to be analysed at Vault Attenuation Pond monitoring station ST-10 in addition to total seems outstanding as they *have found no evidence that ST-10 will be sampled and analysed for weak acid dissociable cyanide as requested.* The NWB advises that, as per the Monitoring requirements of the Licence, if CN total is detected above 0.05 mg/L in an analysis result for monitoring station in receiving environment; further analysis of CN WAD will be triggered at Monitoring Program Station ST-10.

Upon review of the submitted documents, terms and conditions in the Licence No. 2AM-MEA1525 and submissions from interested parties, the NWB hereby accepts and approves the following Updated Management Plans under Motion No. 2015-P9-002, dated December 9, 2015.

Aquatic Effects Management Plan (AEMP), November 2015;
Core Receiving Environment Monitoring Program (CREMP), November 2015;
Groundwater Monitoring Plan, September 2015;
Tailings Storage Facility: Operation, Maintenance and Surveillance Manual, October 2015; and
Operation and Maintenance Manual: Sewage Treatment Plan, September 2015.

The Board recognizes that the Applicant generally updates the management plans as a means of best management practice, and acknowledges that minor issues identified regarding these plans, would be addressed within the next annual updates.

The Licensee is also advised that the next update of the following documents:

Water Management Report and Plan,
Ammonia Management Plan,
Freshet Action Plan, and
Spill Contingency Plan

shall include recommendations and requirements provided during the Licence renewal process. These updated Plans shall be included within the 2015 Annual Report for Board approval.

Should you have any questions or require any clarification with respect to the above, please contact the undersigned at (867) 360-6338 ext. 35 or by email at karen.kharatyan@nwb-oen.ca or David Hohnstein, Director Technical Services at (780) 443-4406 or by email at david.hohnstein@nwb-oen.ca.

Sincerely,

Original Signed By

Karen Kharatyan
Senior Technical Advisor

Attachment: Comments AANDC, EC, DFO and KIA

Cc: Distribution list - Kivalliq