



August 6, 2013

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
Gjoa Haven, NU X0E 1J0

Our reference
IQALUIT-#703615

Your reference
2AM-MEA0815

**Re: Water Licence #2AM-MEA0815 – Meadowbank Gold Mine – Agnico-Eagle
Mines Ltd. – Kivalliq Region**

Amendment Application #2 – Completeness Review

Dear Ms. Beaulieu,

Thank you for your email of July 15, 2013, concerning the above mentioned licence amendment application.

A memorandum is provided for the Board's consideration. Comments are provided pursuant to the Department'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.

Regards,

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

Encl.

c.c.: Murray Ball, Manager of Water Resources; AANDC, Iqaluit, NU
Erik Allain, Manager of Field Operations; AANDC, Iqaluit, NU

Memorandum

TO	Phyllis Beaulieu Manager of Licensing Nunavut Water Board	OUR REFERENCE IQALUIT-#703615
FROM	David Abernethy Water Resources Regional Coordinator Aboriginal Affairs and Northern Development Canada	YOUR REFERENCE 2AM-MEA0815 DATE August 6, 2013
SUBJECT	Water Licence #2AM-MEA0815 – Meadowbank Gold Mine – Agnico-Eagle Mines Ltd. – Kivalliq Region Amendment Application #2 – Completeness Review	

A. Background

On July 15, 2013, the Nunavut Water Board (the “NWB” or “Board”) provided notification of Agnico-Eagle Mines Ltd.’s (the “Proponent”) application to amend the Meadowbank Gold Mine’s Type ‘A’ Water Licence to authorize an increased freshwater consumption allowance. The application consists of the following documentation:

1. Cover letter;
2. Completed application form for water licence amendment;
3. Compliance assessment/status report;
4. Water Management Plan 2012, updated March 2013 and including
 - a. Appendix A1: Maps;
 - b. Appendix A2: Water Balance Schematics;
 - c. Appendix A3: Water Balance, Monthly Values 2012-2025;
 - d. Appendix A4: Freshwater Usage Sensitivity Analysis;
 - e. Appendix B: Water Quality for the Portage Area (2012-2025);
 - f. Appendix B1: Water Quality Analysis;
 - g. Appendix C: Ammonia Management Plan;
 - i. Appendix C1: Environmental Field Stations – Mine Site View;
 - ii. Appendix C2: Spill Control and Loading Procedures Plan;

- iii. Appendix C3: Dyno Nobel Emergency Responsibility Plan – Magazine, Plant, and Work Site; and,
- iv. Appendix C4: MSDS for Bulk Emulsion and Presplit;
- 5. Fresh Consumption Executive Summary – English and Inuktitut; and,
- 6. \$30 application fee.

The Proponent is requesting an increase in the freshwater consumption allowance specified in Part E, Item 3 of the licence from 700,000 m³ per year to 1,870,000 m³ in 2013 and 1,150,000 m³ per year from 2014 to 2018. This increase is attributed to higher than anticipated rates of ore processing (11,280 tons per day rather than the planned 8,500 tons per day rate) and an adjustment of the initial water balance model, resulting in a deficit of reclaim water. Despite freshwater reductions, the licensed limit was exceeded in 2010, 2011, and 2012. It is noted that on May 25, 2010, the Proponent submitted an amendment application to increase the licensed freshwater consumption allowance in advance of any design value exceedance (700,000 m³) and identified the primary causes of the higher than anticipated consumption. This application was not processed but is being addressed in the current application.

Interested parties were requested to review the scope of the information provided and identify any deficiencies requiring additional information or further response from the Proponent by August 6, 2013.

B. Results of review

The following comments are submitted for the Board's consideration,

1. Complete application

The submitted licence amendment application is considered to be complete. The requirements of the NWB's *Guide #7: Licensee Requirements Following the Issuance of a Water Licence* (NWB 2010) appear to have been satisfied.

2. Water withdrawal

The Proponent maintains, "no significant impacts to the local aquatic ecosystem are anticipated as a result of the requested increase in freshwater use, because the total volume withdrawn for mining under maximum use for 2010 – 2018 (10,666,451 m³) would be less than 2.5% of the volume of Third Portage Lake (446,000,000 m³)" (AEML 2013a, p. 2). The Proponent compares this water

withdrawal percentage to limits recommended in two related studies (5% and 10% maximum withdrawal limits). It is noted that the Department of Fisheries and Oceans recommends that the total withdrawal of water from a single water body should not exceed 10% of the available water volume in a single ice-covered season (DFO 2010).

Section 4.1 of the submitted application support document (AEML 2013a) states that Third Portage Lake's water levels are monitored on a monthly basis at the effluent discharge station in accordance with the Water Quality and Flow Monitoring Plan (this plan is required by Part I, Item 2 of the licence). The support document also states that monitoring will be increased to a weekly frequency if changes in water levels or erosion are observed. Additionally, if changes were to occur the lake's water balance would be reviewed to determine if freshwater use is a significant contributor or if declines are due to natural factors (e.g., precipitation).

Taking into consideration the information provided on water withdrawal and the Proponent's ongoing monitoring activities there should be no issue with the volume of water that will be withdrawn from Third Portage Lake.

3. Water Balance and Water Quality Modelling Reporting Requirements

Part E, Item 6 of the licence requires the Proponent to submit Water Balance and Water Quality Modelling Reports on an annual basis and to recalibrate the model, when necessary (Part E, Item 7 licence requirement) in accordance with criteria specified in section 3.2.5.2 of the now dated August 2007 Water Quality and Flow Monitoring Plan (MMC 2007). These reports should compare predicted and measured parameters. In May 2009, the Water Quality and Flow Monitoring Plan was revised (AEML 2009a) and according to section 4.1 of the 2012 Water Management Plan (SNC Lavalin 2013), it will be revised again in 2013.

Recommendation

The Proponent should confirm how it is satisfying the Part E, Item 6 licence requirement to submit Water Balance and Water Quality Modelling Reports to the NWB for review on an annual basis. There are no stand alone Water Balance and Water Quality Modelling Reports on the NWB's online public registry and they are not referenced in the 2009 Water Quality and Flow Monitoring Plan. It is noted that the 2012 Annual Report (AEML 2013b; Part B, Item 5 licence requirement) provides a brief water balance and water quality model reporting summary and references the 2012 Water Management Plan as a source of more

detailed information. The 2012 Water Management Plan (SNC Lavalin 2013) is believed to have been submitted pursuant to this licence requirement.

4. Clarifying Water Management and Reporting Requirements

Part F, Item 16 of the licence requires the Proponent to maintain a Mine Waste and Water Management Plan. This plan is to include the following:

- i. A detailed ammonia management plan;
- ii. Integration of the Waste and Water Management Plan submitted under Part D, Item 1 of Water Licence #8BC-TEH0809;
- iii. A Field testing program for closure cover depth of the Tailings Storage Facility and Waste Rock Storage Facilities with consideration for climate change; and,
- iv. A protocol for distinguishing seepage through facilities.

In 2009, although not in the form of a single plan, the Proponent submitted a Mine Waste Management Plan (AEML 2009c) and Water Management Plan (AEML 2009b) to the Board pursuant to the above mentioned licence requirement. Neither plan addresses point #i; both plans address point #ii; and, the Mine Waste Management Plan addresses point #'s iii and iv. It is noted that the 2012 Water Management Plan (SNC Lavalin 2013) includes an Ammonia Management Plan (point #i).

It is not clear how licence requirements pertaining to the submission of water management plans and reports are being satisfied. No confirmation has been provided that the 2012 Water Management Plan (prepared by SNC Lavalin) replaces the 2009 Water Management Plan (prepared by Agnico-Eagle Mines Ltd.) and it is not known if the 2012 Water Management Plan was intended to satisfy the annual water balance and water quality modelling reporting requirements specified in Part E, Item 6 of the licence (refer to comment #3 above).

Recommendations

The Proponent should confirm if the 2012 Water Management Plan (SNC Lavalin 2013) both (1) replaces the 2009 Water Management Plan (AEML 2009b) that was submitted pursuant to Part F, Item 16 of the licence; and, (2) satisfies the 2012 water balance and water quality modelling report that is required pursuant to Part E, Item 6 of the licence.

The NWB should work with the Proponent to ensure that an amended licence accurately references all water management plans and reports that are to be maintained and submitted to the Board. Of particular interest are the Water Management Plan; Water Quality and Flow Monitoring Plan; and annual water balance and water quality modelling reports required pursuant to Part F, Item 16; Part I, Item 2; and Part E, Item 6 of the licence.

C. Works cited

1. AEML 2009a. Agnico-Eagle Mines Ltd. *Meadowbank Gold Project – Water Quality and Flow Monitoring Plan, Version 2*. May 2009.
2. AEML 2009b. Agnico-Eagle Mines Ltd. *Meadowbank Gold Project – Updated Water Management Plan*. July 2009.
3. AEML 2009c. Agnico-Eagle Mines Ltd. *Meadowbank Gold Project – Mine Waste Management Plan*. October 2009.
4. AEML 2013a. Agnico-Eagle Mines Ltd. *Meadowbank Mine, Application for Amendment NWB License 2AM-MEA0815, Freshwater Consumption*. April 2013;
5. AEML 2013b. Agnico-Eagle Mines Ltd. *Meadowbank Gold Project, 2012 Annual Report*. April 8, 2013.
6. SNC Lavalin 2013. SNC Lavalin. *Final Technical Note: Agnico-Eagle Mines, Meadowbank Gold Project, Water Management Plan 2012*. Prepared by SNC Lavalin for Agnico-Eagle Mines Ltd. Project #610756-0000-4OER-0001. March 2013.
7. DFO 2010. Department of Fisheries and Oceans Canada. *DFO Protocol for Winter Water Withdrawal from Ice-covered Water Bodies in the Northwest Territories and Nunavut*. June 21, 2010.
8. MMC 2007. Meadowbank Mining Corporation. *Meadowbank Gold Project, Water Quality and Flow Monitoring Plan*. August 2007.
9. NWB 2008. *Water Licence No. 2AM-MEA0815*. Granted to Agnico-Eagle Mines Ltd. June 9, 2008.
10. NWB 2010. Nunavut Water Board. *Guide #7 – Licensee Requirements Following the Issuance of a Water Licence*. April 2010.

Prepared by David Abernethy