



Nunavut Regional Office  
Operations Directorate  
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November 20, 2008

*via Email*

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

CIDMS File: 9545-2-2.2AM.MEAA  
CIDMS #281870

**SUBJECT    Water License #2AM-MEA0815, Agnico-Eagle Mines Ltd.,  
              Meadowbank Gold Project, Incinerator Waste Management  
              Plan (Revised)**

Dear Richard,

Please be advised that on behalf of Indian and Northern Affairs Canada (INAC), I have completed a review of the above-referenced management plan submitted by Agnico-Eagle Mines Ltd. to the Nunavut Water Board for approval as per the requirements of Part F, Item #10 of the Meadowbank Gold Project's water license, #2AM-MEA0815.

A Technical Memorandum is provided for the Board's consideration.

Should you have any questions regarding my comments / recommendations, feel free to contact me at 867-975-4555 or [AbernethyD@inac-ainc.gc.ca](mailto:AbernethyD@inac-ainc.gc.ca).

Regards,  
David W. Abernethy

Cc.    Kevin Buck, Manager of Water Resources  
         Bernie MacIsaac, Manager of Field Operations  
         Phyllis Beaulieu, Nunavut Water Board

## Technical Review Memorandum

Date: November 18, 2008

To: Richard Dwyer, Nunavut Water Board

From: David Abernethy, Indian and Northern Affairs Canada

**Re:** Agnico-Eagle Mines Ltd. (AEM), Meadowbank Gold Project, "October 2008 Incinerator Waste Management Plan (revised)," submitted to the Nunavut Water Board on October 6, 2008.

### DESCRIPTION

AEM submitted the above referenced Plan to the Board for approval in accordance with Part F, Item #10, Water License #2AM-MEA0815. On October 21, 2008 the Board posted this plan on their public registry and requested interested parties to review and/or comment on or before November 21, 2008.

Part F, Item #10 states:

"The Licensee shall submit to the Board for approval, within three (3) months of Licence approval, a revised Incineration Management Plan. The Plan shall consider best management practices for ash disposal."

The following documents were reviewed in preparation of this technical review memorandum:

- Agnico-Eagle Mines Ltd., Meadowbank Division. *Meadowbank Gold Project - Incinerated Waste Management Plan*, Version 1, Vancouver: October 2008;
- Canadian Council of Ministers of the Environment. *Canada-wide Standards for Mercury Emissions*, Quebec City: June 2000;
- Canadian Council of Ministers of the Environment. *Canada-wide Standards for Dioxins and Furans*, Winnipeg: June 2001;
- Golder Associates Ltd. *Incineration Waste Management Plan, Meadowbank Gold Project*, Burnaby: December 2007;
- Government of Northwest Territories. *Used Oil And Waste Fuel Management Regulations*, Reg. 064-2003;
- Government of Nunavut, Department of Sustainable Development. *Environmental Guideline for General Management of Hazardous Waste*, Iqaluit: January 2002;
- Government of Nunavut, Department of Sustainable Development. *Environmental Guideline for Industrial Waste Discharges*, Iqaluit: January 2002; and,

- Nunavut Water Board. *Water License #2AM-MEA0815*, Gjoa Haven: June 2008.

## **DESCRIPTION / HISTORY**

As previously stated, AEM submitted a revised Incinerator Waste Management Plan (Plan) to the Board for approval as per the requirements of Part F, Item #10 of water license #2AM-MEA0815. This plan was initially developed by Golder Associates Ltd. to support AEM's application for a Type A license.

An Eco Waste Solutions Incinerator (Model # ECO 1.75TN 1P MS 60L) will be used to dispose of solid waste, that cannot be landfilled, from the accommodation camp, kitchen, shops and offices. Performance limits for this incinerator will be in accordance with the emission regulations set out by the Canadian Council of Ministers of the Environment (CCME) Canada-wide Standards for Dioxins and Furans and the CCME Canada-wide Standards for Mercury Emissions. Ash produced from the incinerator will be disposed of according to the Government of Nunavut's Environmental Guideline for Industrial Waste Discharges (GN Environmental Guideline).

Due to the absence of Nunavut specific Guidelines / Regulations on the management of used oil and waste fuel, AEM will manage these wastes as per the Northwest Territories Used Oil and Waste Fuel Management Regulations, N.W.T. Reg. 064-2003 (NWT Regulation).

## **COMMENTS / RECOMMENDATIONS**

The following comments / recommendations are provided to the Board for consideration in the approval of this Plan.

### **1. Revisions to Environmental Management System**

Section 1 of the Plan states that it is a component of the Environmental Management System, that "will be reviewed annually and updated every two years to ensure that site experience is communicated to all parties." INAC recommends that AEM revise the Plan and the Environmental Management System, when necessary rather than every two years. This will ensure that project staff and interested parties are kept aware of any changes to project operations. Revisions must be communicated to the Board in annual report submissions.

## **2. Ash Testing and Disposal**

Section 3.3 of the Plan states that leachate resulting from collected ash samples will be analyzed for the parameters listed in the GN Environmental Guideline, Schedule IV: Standards for Solid Waste / Process Residuals Suitable for Landfill. The Plan proposes that residual ash that does not meet the specified leachate concentrations in Schedule IV will be disposed of in the Tailings Storage Facility or sent to a licensed hazardous waste disposal facility. Correspondingly, residual ash that meets the specified leachate concentration will be disposed of in on-site landfills.

Section 6.3 states that ash samples will be collected once per month for the first three months of the incinerator's operation and the leachate will be tested for metals content (Table 3.4). Following this initial testing, ash samples will be collected and analyzed annually, or upon a significant change in the source or type of material sent to the incinerator."

INAC recommends that AEM ensure that the analysis of all leachate from ash residues be analyzed for all the parameters listed in Schedule IV as originally proposed in the project's Type A license application. In addition, the Plan should identify trigger limits that indicate when residual ash will be disposed in the TSF and when it will be shipped off site. If any of this material is to be shipped off site the Plan should reference that it will be in accordance with the GN Environmental Guideline for General Management of Hazardous Waste. AEM should also note the location in the TSF where any residual ash is disposed and include this in the Annual Report.

## **2. Waste Oil/Fuel Testing**

Section 6.2 of the plan states that, "A sample of one month's feedstock of waste oil / waste fuel will be tested each month. Waste oil that does not meet the NWT Regulation impurity limits will be shipped off site each summer to a re-refining facility or licensed disposal facility. The Plan should state that all waste oil/fuel shipped off site will be in accordance with the GN Environmental Guideline for General Management of Hazardous Waste and, as such, ship wastes using proper manifests.

## **3. Reporting**

Section 7 of the Plan states that an Annual Incinerator Management Report will be prepared and submitted to the Board and the Nunavut Impact Review Board. "The quantity and type of materials incinerated on site during operations, together with results from periodic stack emission and ash monitoring, are to be included within the annual report." A template for this

report is provided in Appendix #2 of the Plan. INAC concurs with this reporting format.

#### **4. Meadowbank Gold Project Site Plan**

A Site Plan (Figure #1) of the Meadowbank Project has been included in this Plan. This diagram does not reference where the incinerator and used / waste oil furnace are situated. INAC recommends that these facilities be referenced on a revised map and / or diagram.

### **SUMMARY**

The submitted plan is an improvement from the previous version that was submitted to the Board for approval in the project's Type A license application. It includes specifications for the incinerator that will be used for the disposal of certain waste materials. The Board is recommended to consider the following points:

- AEM should approach this plan and the Environmental Management System to which it belongs as a living document. This plan should be reviewed on a regular basis and revised when necessary;
- INAC recommends that AEM ensure that the analysis of ash residues be analyzed for all parameters listed in Schedule IV of the GN Guideline, as originally proposed in the project's Type A license application. Furthermore the Plan should identify trigger limits that indicate when residual ash will be disposed in the TSF or shipped off site. If any of this material is to be shipped off site the Plan should reference that it will be in accordance with the GN Environmental Guideline for General Management of Hazardous Waste. AEM should also note the location in the TSF where any residual ash is disposed and include this in the Annual Report;
- INAC concurs with the Annual Report for Incinerated Waste Management template provided in Appendix #2 of the Plan; and,
- The Meadowbank Project Site Plan (Figure #1) included in this Plan does not reference where the incinerator and used / waste oil furnace are situated. INAC recommends that these facilities be referenced on a revised map and / or diagram.

Prepared by David W. Abernethy