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EC File: 4703 001 062
NWB File: 2BB-MEL0914

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Via email: licensing@nunavutwaterboard.org

RE: 100920 2BB-MEL0914 Amendment 3 – Bulk Sampling

Environment Canada (EC) has reviewed the information submitted with the above-mentioned amendment application to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Agnico-Eagle Mines Ltd. (AEM) is applying for a third amendment of water license 2BB-MEL0914 to allow for water use and waste disposal associated with advanced exploration activities at the Meliadine Project site. Following a preliminary technical review of the amendment application the NWB requested the update of management plans to reflect the advanced stage of exploration. These plans are: Fuel Management and Spill Contingency Plan, Interim Abandonment and Restoration Plan, Waste Management Plan, Water Management Plan, and, Waste Rock and Ore Management Plan.

EC provides the following comments and recommendations for the NWB's consideration:

Fuel Management and Spill Contingency Plan

- Please note that the number provided on page 13 of the Plan for the Yellowknife office is incorrect, the number should be updated to (867) 669-4730. Additionally, the number provided for the Environment Canada 24 hour Emergency Pager, also on page 13, is no longer in service and should be removed. Also, the numbers provided for Environment Canada on page 23 should be updated to only (867) 975-4644.

Waste Management Plan

- AEM must ensure that any effluent discharged is in compliance with Section 36(3) of the *Fisheries Act*. The proponent shall not deposit, nor permit the deposit of any wastes, chemicals or sediment into any water body. According to the *Fisheries Act*, Section 36(3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited. For example, the wetland treatment area should be located above the high water mark of any water body and designed in such a manner that prevents the contents from entering any water body frequented by fish until they are non-deleterious.

- EC recommends that sludges are characterized prior to disposal to ensure disposal options are appropriate.
- Where the sludge is applied to land, there must be no migration of solids or deleterious runoff from the sludge materials.

Water Management Plan

- EC notes that the Metal Mining Effluent Regulations value of 0.05 mg/L of arsenic is targeted as the discharge criteria for arsenic. Section 11.0 states that arsenic is naturally elevated in the areas of exploration and development. For such sites, it would be more appropriate to use the CCME protocol for developing site-specific guidelines (available on the following web site, under Guidelines for the Protection of Aquatic Life, Guidance on the Site-Specific Application of Water Quality Guidelines in Canada: <http://ceqg-rcqe.ccme.ca/>).
- A review of the 2009 Annual Report also identifies ammonia, nitrate and nitrite, as well as the metals copper, chromium, iron, nickel, lead and zinc as other parameters of concern/parameters that have exceeded CCME or MMER values. TDS concentrations are also elevated in A54 and upstream water bodies. Continued monitoring of downstream receiving waters should be done, and thresholds for mitigative action identified.
- Section 13.2 discusses the monitoring of leachate water quality from the waste rock pads and ore stockpiles. What will be the monitoring frequency for these parameters? What will the mitigation measures be if the parameters are found to be above CCME guidelines?

If there are any changes in the project EC should be notified as further review may be necessary. Comments previously submitted on behalf of EC regarding water license 2BB-MEL0914 would still apply to this project. Please do not hesitate to contact the undersigned with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at Paula.C.Smith@ec.gc.ca

Yours truly,



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