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NWB File: 2BM-ULU0914

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Via email: licensing@nunavutwaterboard.org

RE: 2BM-ULU0914 I,2 Interim and Abandonment and Restoration Plan

Environment Canada (EC) has reviewed the above-mentioned Abandonment and Restoration Plan (A&R Plan) submitted 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*.

Elgin Mining Inc. has submitted an Interim Abandonment and Restoration (A&R) Plan for the Ulu Exploration Project as a requirement of Part I, Item 1 of water license 2BM-ULU0914.

Upon review of the A&R Plan, EC provides the following comments and recommendations for the NWB's consideration:

- Under Section 3.2.4 Fuel Storage, it states that upon closure "Fuel tanks would be removed from service as they are emptied and prepared for removal off site". How would fuel tank sludge be handled?
- Also under Section 3.2.4 Fuel Storage, it states that "The berm containment area of each tank farm is expected to contain some fuel contaminated ground (esker sand) from normal transfer procedures. If timing permits, the material will be subjected to in-situ landfarming to facilitate the removal of residual hydrocarbons. Any richly laden soils may be ignited prior to disposal". The Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils (SAIC, 2005) should be consulted as they contain landfarming specifics including minimum distances from landfarms to surface waters (500 m). Reference: SAIC Canada. 2005. Federal guidelines for landfarming petroleum hydrocarbon contaminated soils. (Document attached)
- The burning of waste products releases numerous contaminants to the air, many of them persistent, bio-accumulative and toxic (e.g. polycyclic aromatic hydrocarbons - PAH's - heavy metals, chlorinated organics – dioxins and furans). These contaminants can result in harmful impacts to human and wildlife health through direct inhalation and they can also be deposited to land and water, where they bio-accumulate through food chains affecting wildlife and country foods. Therefore, burning should only be considered after all other alternatives for waste disposal have been explored and the devices used for

incineration meet the emission limits established under the CCME Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions. The Government of Canada, the Governments of the Northwest Territories, Nunavut and the Yukon are signatories to these standards and are required to implement them according to their respective jurisdictional responsibilities.

- EC recommends the use of an approved incinerator for the disposal of combustible camp wastes. EC has developed a Technical Document for Batch Waste Incineration, and is available at the following web link:

<http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1>

The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.

- Solid wastes that are conditionally suitable for burning are paper products, paperboard packaging and untreated wood. EC is concerned with possible side effects of dioxin and furan emissions which can occur due to the incineration of certain wood structures and therefore requests that only clean wood, which has not been coated with preservative chemicals or paint, be considered for incineration.

For reference, below is a link to the Nunavut Municipal Open Burning Policy:

<http://www.gov.nu.ca/env/Open%20burning.pdf>

and below is a link to information from EC regarding open burning:

http://www.ec.gc.ca/gdd-mw/684B44DD-5780-4F73-BC58-A97E31A19EDC/COM1170_Open_Burning_Brochure_e_v6_for%20web.pdf

- EC recommends that all non-combustible associated structure waste (i.e., plastics, tar paper, floor coverings, shingles, insulation, wiring, and tents) be thoroughly removed prior to burning and that all residual waste from the burning (i.e. nails and coals) be thoroughly collected, removed from site, and disposed of at a suitable facility.
- The proponent shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.

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 2BM-ULU 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,



Paula C. Smith
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, EC, Yellowknife, NT)
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