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EC File: 4703 003 013
NWB File: 2AM-DOH0713

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Via email: licensing@nunavutwaterboard.org

RE: 101105 2AM-DOH0713 Amendment 2 Application Review

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* (CEPA 1999), Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Hope Bay Mining Ltd. (HBML) is applying for a second amendment to water license 2AM-DOH0713 to allow for activities associated with project development at the Doris North Project site. Activities associated with this amendment include Roberts Bay tank farm and laydown expansion, airstrip expansion, airstrip bypass road construction, and purpose-built secondary containment facilities for the relocated reagent and cyanide storage. It is proposed that construction would occur in 2011. The amendment would not change the composition, quantity, method of treatment, or method of disposal of water and/or waste as approved by the existing license.

Following a review of the amendment application and supporting documents, EC provides the following comments and recommendations for the NWB's consideration:

General

- HBML must ensure that any effluent discharged is in compliance with Section 36(3) of the *Fisheries Act*. HBML 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.

Fuel Storage and Containment Facility

- HBML shall ensure that the Spill Contingency Plan and the Revised Emergency Response Plan are updated to address activities proposed under this requested water license amendment, prior to construction.

Airstrip Bypass Road and Airstrip Expansion

- The amendment proposes using non-potentially acid generating (PAG) rock for airstrip expansion and bypass road construction. The airstrip and bypass road construction management plans should include guidance on rock type segregation. Any PAG rock which is to be used in subaqueous construction should be emplaced directly after mining, so that weathering does not occur, as this gives rise to particulates accumulating on the rock surface and would potentially result in the rock being considered deleterious. Such rock materials would need to be capped with sufficient non-PAG rock that they remain well below the water surface.
- Appropriate mitigation measures regarding drainage management, dust suppression, and minimizing ammonia residues in construction rock should be implemented.
- HBML shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
- HBML shall ensure that measures are employed (i.e. silt screens/curtains) to prevent sedimentation of the downstream environment during the installation and excavation of the fill material used to create the airstrip expansion and bypass road (during Roberts Bay fuel tank farm expansion).
- HBML shall not deposit, nor permit the deposit of sediment into any water body. It is recommended that an undisturbed buffer zone of at least 100 m be maintained between quarry operations and the normal high water mark of any water body.

Secondary Containment for Relocated Reagent and Cyanide Storage

- The application notes that all of the proposed secondary containment systems are located 30 m away from any water body. EC recommends that in addition to this minimum distance, HBML ensures that the facilities are located in such a manner as to prevent the contents from entering any waterbody frequented by fish. For example, locating a facility on the top of a steep hill which is 30 vertical metres from a waterbody could still result in contamination of the waterbody if a failure occurred.
- The proponent should be aware that cyanide (CAS No. 74-90-8) is a listed substance under the Environmental Emergency Regulations under CEPA 1999. As such, environmental emergency plans developed by the proponent should be consistent with these regulations.

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 2AM-DOH0713 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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