



Environment Environnement
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Our file: 4703 001

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Via Email at licensing@nwb.nunavut.ca

RE: NWB2MRY – Baffinland Iron Mines Corp – Mary River Project - Amendment

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Baffinland Iron Mines Corp. is proposing to conduct a mineral exploration program at the Mary River project. Proposed activities include geological mapping, surface testing, diamond drilling, preliminary environmental baseline work, and the rehabilitation of the Milne winter road. The Milne Inlet access road will only be used in March and April to move materials from the coast to the camp location. A temporary 60 person camp will be established.

Environment Canada recommends that the following conditions be applied throughout all stages of the project:

GENERAL

- The application indicates that the programme will start on or about April 4/05. Environment Canada would like to remind the proponent that all required permits and approvals must be in place prior to the start of any work.
- The proponent shall not deposit, nor permit the deposit of any fuel, drill cuttings, chemicals, wastes 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.
- Environment Canada recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately June 1-July 15. These dates are approximate, and if active nests (i.e., nests containing eggs or young) are encountered outside of these dates, the proponent should avoid the area until nesting is complete (i.e., the young have left the nest). Paragraph 6(a) of the *Migratory Birds Regulations* state that no one shall disturb or destroy the nests or eggs of migratory birds.
- **All spills** are to be documented and reported to the 24 hour Spill Line at (867) 920-8130.



CAMP

- All fuel caches shall be located above the high water mark of any water body. Environment Canada commends the proponent for creating bermed areas underlain with an impermeable liner for the storage of their barreled fuel on location.
- Any sumps, including those created for the disposal of drill cuttings, shall be located above the high water mark of any water body and in such a manner as to prevent the contents from entering any water body frequented by fish. Further, all sumps shall be backfilled upon completion of the field season and contoured to match the surrounding landscape.
- The Nunavut Water Board has expressed concerns regarding the use of a latrine pit and sump given the size of the proposed camp. The proponent has indicated that four propane toilets have been ordered, and are scheduled for delivery to the site in June/05. Given that it is already July, EC recommends that the use of a sump for sewage disposal be halted as soon as the Propane Toilets arrive at site. If the Propane Toilets do not arrive on site for this field season, EC recommends that the proponent monitor the receiving waterbody for BOD, fecal coliforms, and TSS to determine if there have been any impacts to the waterbody. The results of the monitoring should be included in the annual report to the Nunavut Water Board. If the monitoring results indicate impacts are occurring, the proponent should be prepared to have a sewage treatment system in place for the next field season.
- The proponent shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
- Environment Canada recommends the use of an approved incinerator for the disposal of combustible camp wastes.
- The proponent shall ensure that any non-combustible waste is disposed of appropriately at an approved facility.
- The proponent shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.
- The Abandonment and Restoration Plan included with the application indicates that spilled materials (up to 10 tonnes) will be contained in 100 kg impermeable sacks and flown to the "approved disposal facility in Pond Inlet". Environment Canada requests further information regarding the "approved facility" in Pond Inlet, as EC is unaware of any facility in Pond Inlet that is designed to appropriately contain and/or treat soils contaminated with hydrocarbons or other materials that may be located at the Mary River camp, especially in the volumes indicated in the Plan.
- Page 5 of the Spill Response Plan included with the application indicates that the camp on site is sufficient for 30 persons. Environment Canada recommends that the camp size be updated to 60 persons, as indicated in the license amendment application.

DRILLING

- Environment Canada has recently listed calcium chloride as a toxic substance under the *Canadian Environmental Protection Act*. The proponent shall ensure that all sumps containing CaCl are properly constructed and located in such a manner as to ensure that the contents will not enter any water body.
- Drilling additives or muds shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or demonstrated to be non-toxic.
- If "on-ice" drilling is conducted, any return water released must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers for the Environment Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100mg/L).
- Land based drilling should not occur within 30 m of the high water mark of any water body.



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- If an artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.

MILNE ACCESS ROAD

- The application does not indicate the length of the access road from Milne Inlet to the camp that will be rehabilitated. Environment Canada requires this information in order to adequately assess the impacts of the proposed rehabilitation and use of the road.
- The application indicates that fuel, calcium chloride salt, equipment and vehicles will be brought in via a sealift and stored at Milne Inlet in late 2005. Environment Canada requests information regarding the location of the laydown facility and the types/volumes of material that will be stored there. The latitude and longitude of this area should be submitted, and a map prepared outlining the location of fuel storage and calcium chloride storage, especially in relation to water. The proponent shall ensure that this laydown area is included in the Spill Contingency Plan for the Mary River Project and that spill kits are available at this location.
- The email from M. Zurowski to the NWB on May 25/05 included with the application indicates that the Milne Inlet access road "will only be utilized in March-April to cart materials put on coast with sealift." Given the number of uncertainties regarding the road (length? exact routing? number of trips per year?) EC recommends that the NWB only approve the use of the road for the period indicated, in order that all-weather use is not approved without a thorough review.

USE OF BINDING AGENT EK-35

- Environment Canada is currently investigating the status of the binding agent EK-35. Further information will be forwarded to the Nunavut Water Board regarding this product once it is available.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at colette.spagnuolo@ec.gc.ca.

Yours truly,

Original signed by

Colette Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc: (Stephen Harbicht, Head, Assessment and Monitoring, Environment Canada, Yellowknife)