Fisheries and Oceans Canada
Pêches et Océans Canada

Eastern Arctic Region
Fish Habitat Management
P.O. Box 358
Iqaluit, Nunavut
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Your file Votre référénce
NWB File No.
NWB2MRY
Our file Notre référénce
NU-04-0036

May 18, 2004

Phyllis Beaulieu
Nunavut Water Board
P.O. Box 119
Gjoa Haven, Nunavut
X0B 1J0

Dear Ms. Beaulieu:

RE: **Baffinland Iron Mines Corp. – Mary River Project – New Type "B"**

This letter is to advise that Fisheries & Oceans Canada, Fish Habitat Management (DFO-FHM) received the project proposal information, submitted to the Nunavut Water Board for water use and waste disposal associated with exploratory drilling and camp operations for the Mary River project in the Qikiktani region of Nunavut. DFO-FHM's assessment takes into consideration primarily fish and fish habitat related concerns. Your proposal has been assigned the following file number and name:

NU-04-0036: MINERAL EXPLORATION AND CAMP, MARY RIVER PROJECT, QIKIKTANI REGION

Please refer to this number on your correspondence or inquiries.

This letter is to advise that DFO-FHM has reviewed the plans/correspondence for the proposed work for impacts to fish and fish habitat. It is my understanding from the information submitted to this office, that:

- The duration of the exploration program and camp operation is May 2004 to December 2005.
- Operations will include the setup of a remote camp in the location where a historic camp was not historically located but that will be dismantled seasonally to minimize environmental impact
- The existing airstrip will be rehabilitated for use.
- Operations are also to conduct exploration for Iron Ore involving drilling of approximately 25 – 30 holes.
- Drill water will be re-circulated and collected in a sump.
- All fuels will be stored in sealed 200 litre drums and stored in graded depressions. They will be inspected daily for any seepage. Fuel caches will be underlain by an impermeable liner.
- Spill kits will be located at each of the drill sites, at the fuel cache site and at the camp.
- It is estimated that the quantity of water to be used for running the camp will be a total of 2000 litres per day for domestic use and 35 000 litres per day per drill.
- All intake water hoses will be equipped with mesh screen to prevent the intake of fish
- Camp grey-water will be discharged into a pit located at an acceptable distance away from any water body frequented by fish (i.e. stream, lake, river, or marine environment) to ensure that during rain events not deleterious grey-water enters any nearby water courses.

- Solid wastes will either be incinerated or removed from the site and disposed of at a licenced community waste area.

Operations in or near water may result in the harmful alteration, disruption or destruction of fish habitat, which is prohibited under Section 35 of the *Fisheries Act*. The following mitigation measures, along with mitigation measures indicated in the project proposal, are intended to prevent any potentially harmful impacts to fish and fish habitat.

- All disturbed areas should be stabilized and re-vegetated as required, upon completion of work, and restored to a pre-disturbed state.
- No material should be left on the ice when there is potential for that material to enter the water (i.e. spring break-up).
- If drilling requires water in sufficient volume that the source water body may be drawn down please submit details (volume required, size of water body, fish species etc.) to DFO-FHM for review. DFO-FHM strongly discourages the use of streams as a water source.

Extraction of water via intake from any water body is prohibited under Section 30 of the *Fisheries Act* unless the entrance of the intake is properly screened to prevent the entrapment of fish. For guidance please refer to the *Freshwater Intake End-of-Pipe Fish Screen Guidelines* (DFO 1995). No harm will come to fish during water removal as long as the following mitigation measures are pursued:

- Ensure that the holes in the screen are small enough that no fish of any size can pass through the screen and into the intake.
- Make certain that the fish guard or screen is properly maintained in a good and efficient state of repair, and do not permit its removal except for renewal or repair.
- During the time in which a renewal or repair is being conducted, the entrance of the water intake must be closed in order to prevent the passage of fish into the intake.
- The rate of water withdrawal should be low enough so that fish do not become impinged against the screen.

Depositing deleterious substances into fish bearing waters is prohibited as stated under Subsection 36(3) of the *Fisheries Act*. The following are additional measures to mitigate habitat disturbance or loss as well as the deposition of deleterious substances.

- Sediment and erosion control measures should be implemented prior to, and maintained during the work to prevent sediment entry into the water during a spring thaw.
- Drill cuttings should be disposed of in a sump such that they do not enter any water body. The use of biodegradable, salt free drill additives is encouraged over non-biodegradable types.
- Sediments from water used in the drilling process should be filtered out before the water is discharged onto the surrounding landscape.
- All wastes, drill cuttings, sewage containments and fuel caches must be located at an adequate distance away from the normal high water mark of any water body. Impermeable spill mats or plastic sheets as well as efficient containment berms should be incorporated into these caches to ensure that contaminants do not enter water bodies.
- All activities, including maintenance procedures and vehicular refuelling, should be controlled to prevent the entry of petroleum products, sediment, debris, rubble, or other deleterious substances into the water. Impermeable spill mats, drip pans or other measures to prevent ground or ice

contamination should also be used when refuelling equipment on site. Ensure that refuelling activities are conducted at an adequate distance away from the normal high water mark of any water body.

- Have available an extra fuel storage container equal to or bigger than the size of the largest fuel container. This container can be used to replace any existing container showing signs of leakage. Check for container leaks on a daily basis and prepare any visible leaks immediately. Ensure that spill kits are readily available at all times.
- All spills of oil, fuel, or other deleterious material should be reported immediately to the 24-Hour Spill Line at (867) 920-8130.

If the proposed work is carried out as described in the plans provided to DFO-FHM and if the additional mitigation measures specified above are implemented, the proposed work will not be considered as contravening Subsection 35(1) of the *Fisheries Act* which reads:

"No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

Therefore, an authorization under Subsection 35(2) of the *Fisheries Act* will not be necessary. If a harmful alteration, disruption or destruction of fish habitat and/or the deposition of deleterious substances into fish bearing waters occurs as a result of a change in the plans for the proposed works or failure to implement the additional mitigation measures specified above, prosecution under Subsection 35(1) and/or Subsection 36(3) of the *Fisheries Act* may be initiated.

Please note that this letter of advice does not release the proponent of the responsibility for obtaining any other permits that may be required under federal, provincial, territorial or municipal legislation.

Please note that this letter of advice will apply for the period of the current lease. If you have any questions concerning the mitigation measures or should there be any changes to the proposed work, please contact me at (867) 979-8011 or by fax at (867) 979-8039.

Original Signed By:

Tania Gordanier
Habitat Management Biologist
Fisheries & Oceans Canada
Department of Fisheries and Oceans – Eastern Arctic Area

c.c. Michael T. Zurowski, Baffinland Iron Mines Corporation
Ipeelee Itorcheak, Conservation and Protection, Fisheries and Oceans Canada