



Environment Environnement
Canada Canada

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December 29, 2004

Our file: 4703 001

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Nunavut Water Board
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Via Email at licensing@nwb.nunavut.ca

RE: NWB2ARN – Kennecott Canada Exploration Inc. – Arnak Project

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*, and the *Migratory Birds Convention Act*.

Kennecott Canada Exploration Inc. is proposing to conduct an exploration program at Frost Lake, NU, located approximately 180 km from Kugaaruk, NU. The proposed program will consist of prospecting, geological mapping, geophysical surveys and diamond drilling. The work will be supported out a 30 person campsite. Work is anticipated to occur from March 1, 2005 – March 1, 2007.

In order to facilitate the review of this proposal, EC requires the following information:

- A detailed map of the camp facilities, including the location of sumps and fuel caches, especially in relation to water.
- Once available, a map indicating the location of drill holes.

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

- 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 would like to inform the proponent that the *Canadian Environmental Protection Act* has recently listed CaCl as a toxic substance. The proponent shall therefore ensure that if CaCl is used as a drill additive, 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.
- For "on-ice" drilling, 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. Drilling wastes from land based drilling shall be disposed of in a sump such that the contents do not enter any water body.
 - If an artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.
 - 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.
 - All fuel caches shall be located above the high water mark of any water body. Further, EC recommends the use of secondary containment, such as self-supporting insta-berms, when storing barreled fuel on location rather than relying on natural depressions.
 - 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.
 - 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 Reclamation Plan for the Arnak Project submitted with the application indicates that soil be will inspected for contamination during the reclamation period. Environment Canada recommends that the Reclamation Plan include a conceptual plan for disposal and/or treatment of any contaminated soil found on site.
 - The Contingency Plan for Material Spills included with the application should include contact information (i.e. telephone numbers, pager numbers) for the spill response team members. Contact information should also be provided for the organizations and other nearby exploration sites that have the general spill response equipment that is available for use by Kennecott Canada Exploration Inc. The Contingency Plan should also include a list of equipment available on site, such as the contents of the spill kits.
 - **All spills** are to be documented and reported to the 24 hour Spill Line at (867) 920-8130.
 - 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.

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.meloche@ec.gc.ca.

Yours truly,

Original signed by

Colette (Meloche) Spagnuolo
Environmental Assessment / Contaminated Sites Specialist

cc: (Mike Fournier, Northern Environmental Assessment Coordinator, Environment Canada, Yellowknife)