



Environment Canada **Environnement Canada**

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Via Email

RE: 2BE-KIR0507 – Triex Minerals Corp. – Kirwan Lake Project – Amendment – Type B

On behalf of Environment Canada (EC), I have reviewed 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*.

Triex Minerals Inc. has submitted a licence amendment application for water use and waste disposal associated with drilling operations in its Kirwan Lake Project. This project is aimed at analyzing the quality of uranium deposits within the acquired property. Due to uranium development concerns previously expressed by Kitikmeot residents, the proponent delayed its drilling operations and participated in community consultations in 2005 to discuss its uranium exploration activities.

The Kirwan Lake Property is within latitudes of 67°12'N to 67°20'N and longitudes of 116°48'W to 117°W. Project activities will be supported by a temporary camp that is capable of accommodating 30 people. This camp will be established on the western shore of Kirwan Lake in an area that is 100 km southwest of Kugluktuk. The proponent has requested the daily use of 20 m³ of water to support its project activities, of which 15 m³ will support drilling operations and 5 m³ will be used for domestic purposes. The drilling rig will acquire water from sources nearby the drilling sites and the camp will obtain its water from Kirwan Lake. Land-based drill cuttings and drill water will be directed to a sump positioned at least 31 m from the normal high water mark of any water body. All drill sumps will be backfilled and contoured to match the surrounding landscape upon completion of the field season. Sewage and gray water will also be deposited in sumps that will be made inaccessible to wildlife when the camp is not occupied and be backfilled when no longer required.

Liquid fuels used to support project activities will be stored in 205 L steel drums. Seasonal project activities are expected to require 8,200 L of diesel (40 drums), 205 L of gasoline, 6,355 L of aviation fuel (31 drums), and thirteen 100 lb propane tanks. The project's spill contingency plan indicates that a chain of command will be respected when responding to fuel spills. The Plan provides a list of emergency contacts, spill response measures for a variety of environmental conditions, and spill response kit information. Five spill response kits will be made available, one at the main camp and one at each fuel cache (main and temporary fuel caches). All spills will be documented and reported to the 24 hour Spill Line at (867) 920-8130.



Combustible camp wastes will be incinerated and non-combustible wastes will be removed from site for proper disposal at an approved landfill. Any hazardous wastes, including waste oil, will be delivered to an appropriate disposal facility. The proponent will remove empty fuel drums from its project area on a regular basis.

The project's Final Abandonment and Restoration Plan indicates that all wooden structures will be burned or removed from the project area. Should large combustible materials be burned, Environment Canada recommends that care be taken to avoid any unnecessary scaring of ground material or creating a tundra fire. Incineration of materials should take place within an approved incinerator.

It is suggested that the location of the project's main fuel cache be clearly identified in the Spill Contingency Plan. The inclusion of a map which presents the camp lay-out and the fuel cache location would be a useful addition to this Plan.

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

GENERAL

- The proponent shall not deposit, nor permit the deposit of any fuel, 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.**
- Section 35 of the *Migratory Bird Regulations* states that **no person shall deposit nor permit to be deposited, oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds.** Therefore, Environment Canada recommends that sumps be backfilled or made otherwise inaccessible to migratory birds prior to their arrival in spring and that the proponent ensure that all spills are thoroughly cleaned-up.

DRILLING

- Environment Canada would like to inform the proponent that the *Canadian Environmental Protection Act* has 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 of the Environment Guidelines for the Protection of Freshwater Aquatic Life (i.e., 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).
- Land based drilling should not occur within 30 m of the high water mark of any water body. Drilling wastes should 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.



CAMPS

- 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 wastes.
- The proponent shall ensure that any-non combustible waste is disposed of appropriately 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.

FUEL STORAGE / SPILL CONTINGENCY / HAZARDOUS MATERIALS

- 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.

MIGRATORY BIRDS

- Environment Canada recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately 15 May to 1 August. 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 Bird Regulations* states that **no one shall disturb or destroy the nests of migratory birds.**
- In order to mitigate potential effects and minimize disturbance, any aircraft used in conducting project activities should maintain a horizontal distance of 2 km and a vertical distance of 610 m from any observed groups (colonies) 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 if you have any questions or comments with regards to the foregoing at (867) 975-4631 or by email via david.abernethy@ec.gc.ca.

Sincerely,

David W. Abernethy
Environmental Assessment Technician

cc. Colette Spagnuolo – Environmental Assessment / Contaminated Sites Specialist, Environmental Protection Operations of Environment Canada, Iqaluit