Indian and Northern Affairs Canada
www.inac.gc.ca

Affaires indiennes et du Nord Canada
www.ainc.gc.ca

Water Resources
Nunavut Regional Office
Iqaluit, NU, X0A 0H0
Tel. (867) 975-4555
Email. abernethyd@inac-ainc.gc.ca

Your file - Votre référence
2BE-KIR
Our file - Notre référence
File 6545-2 / CIDMS 126993

January 30, 2007

Richard Dwyer
Licensing Trainee
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Email: licensingtrainee@nunavutwaterboard.org

Sent via email

Re: 2BE-KIR - Triex Minerals Corporation - Kirwan Lake Project - amendment application

On behalf of Indian and Northern Affairs Canada (INAC) I have reviewed the above-mentioned application. The following specialist advice has been provided pursuant to INAC's mandated responsibilities for the enforcement of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NW&NSRT), *Arctic Waters Pollution Prevention Act* (AWPPA), and the *Department of Indian Affairs and Northern Development Act* (DIAND Act).

Triex Minerals Corporation (Triex) has submitted an amendment application to include additional land in its Kirwan Lake Project Area. This project comprises of uranium exploration activities based from a 30-person temporary camp. This camp is situated approximately 100 kilometers southwest of Kugluktuk on the western shore of Kirwan Lake, having a coordinate of 67˚06'N, 117˚56'W.

Indian and Northern Affairs Canada recommends that the following comments be considered when reviewing the submitted licence amendment application.

- The proponent should ensure that all drill cuttings (from both land based and on-ice drilling operations) are placed in a sump or removed from the project area for appropriate treatment. Furthermore, all sumps shall be backfilled and contoured to match the surrounding landscape prior to the end of the project's field program to prevent the collection of precipitation runoff.

- Drill water should conform to the Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Aquatic Life prior to entering any local water sources. The proponent is advised to consult the Government of British Columbia's Ministry of Environment Ambient Water Quality Guidelines (Criteria) for Turbidity, Suspended and Benthic Sediments, referenced by the CCME Guidelines. The Guidelines state that induced suspended sediment

concentration should not exceed background levels by more than 25 mg/L at any given time when background levels are between 25 and 250 mg/L. When background exceeds 250 mg/L, suspended sediments should not be increased by more than 10% of the measured background level at any onetime.

- All fuel caches shall be located above the high water mark of any water body. Further, it is recommended that some form of secondary containment, such as self-supporting insta-berms, be used when storing barreled fuel on-site.

- Spill trays should be used when conducting fuel transfers to minimize the possibility of polluting freshwater with spilled hydrocarbons.

- The proponent shall ensure that all hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.

- The proponent should review the Contingency Planning and Spill Reporting in the NWT document posted on the Nunavut Water Board website when conducting internal evaluations of its Kirwan Lake Spill Contingency Plan.

- The Spill Contingency Plan's cover page should clearly indicate that it is specific to the Kirwan Lake Project.

- The Spill Contingency Plan should include a 24-hour telephone number for Ross McElroy, on-scene coordinator, in section 3.1 (Spill Response Team). This will ensure that employees who discover hazardous material spills can activate a response and provides a point of contact for the INAC Water Resources Inspector.

- INAC assumes that spill kits will be mobilized to all exploration drill sites. This assumption should be confirmed in the Spill Contingency Plan.

- A detailed diagram of the Kirwan Lake Camp should be provided in the Spill Contingency Plan. The intent of this diagram is to illustrate how a spill would impact the project area. The diagram should be to a scale that adequately portrays the exploration camp's location, camp infrastructure, the fuel cache, spill kit locations, catch basins, drainage patterns, and any nearby bodies of water which could be impacted by a spill.

- INAC recommends that the proponent follow the Mineral Exploration Guidelines for Saskatchewan (Saskatchewan Mineral Exploration and Government Advisory Committee, 2005) with regard to uranium exploration best management practices. In particular, the proponent is advised to comply with the following guidelines.
  - Drill mud solids or cuttings with a uranium concentration greater than 0.05 % are to be disposed of down the drill hole and sealed.
  - Any drill hole that encounters mineralization with a uranium content greater

than 1.0% over a length of >1 meter, and with a meter-percent concentration >5.0, should be sealed by grouting for the initial 15 metres below the ground's active surface layer, the entire length of the mineralization zone below the permafrost, and 15 metres above the non-permafrost area if these conditions are encountered. Should the drill hole not go beyond permafrost conditions, there will be no need to place grouting beyond 15 metres below the active surface layer due to permafrost encapsulation.

- Gamma radiation levels measured at 1 metre from the surface of core storage areas should be reduced to 1.0 µSv and in no instance will the level be allowed to exceed 2.5 µSv. When core is found to exceed the levels identified, the Nunavut Water Board should be contacted for review and approval of the handling procedures (INAC requests that it also be notified of such occurrences). Instruments that measure radiation in counts per second must be converted to µS according to the specification of that instrument.

- Should a drill hole penetrate below the permafrost layer, the drill hole should be permanently sealed and capped to prevent induced contamination of groundwater or salinization of surface waters due to an artesian flow.

- If the proponent penetrates below the permafrost layer, INAC requests that the proponent provide notification for permafrost depth information management purposes.

- Incinerated solid wastes should be raked to remove non-combustible items (e.g., iron nails and tinfoil). The ash should either be buried on-site or delivered to an approved waste disposal facility.

- INAC recommends that an Abandonment and Reclamation Plan specific to the Kirwan Lake Project be submitted for review.

Indian and Northern Affairs Canada requests notification of any changes in the proposed project, 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.

Sincerely,
Original signed

David W. Abernethy
Regional Coordinator

Cc. Jim Rogers - Manager of Water Resources, Indian and Northern Affairs Canada, Iqaluit