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

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*.

Triex Minerals Corporation is an emerging exploration company in search of world class uranium deposits. While the properties are held within a 50:50 Joint Venture relationship with Pitchstone Exploration Ltd., Triex Minerals Corp. is the operator of the programs herein summarised.

The proponent has submitted an amendment to their current water license 2BE-KIR0507. Triex will be occupying a temporary exploration camp located on the western side of Kirwan Lake, approximately 100km SW of Kugluktuk from March through September. The camp currently holds a maximum of 20 people. The proponent anticipates that the drill program may result in the need to expand the capacity of the camp to approximately 25 to 30 people during the peak drilling period. The camp consists of insulated tents with a combination of wood and Jutland frames with wood floors.

The 2007 exploration program will involve diamond drilling, airborne and ground geophysics, soil survey sampling and property scale mapping and sampling. The proponent anticipates using 1 diamond drill rig to drill approximately 3,000 to 5,000m at Mountain Lake claim, 1 diamond drill rig to drill approximately 1,500 to 2,000m at Dismal Lake claim and 1 diamond drill rig to drill approximately 1,500 to 2,000m at their Kendall Lake claim.

Environment Canada has reviewed the amendment and recommends that in addition to the original terms and conditions laid out by the NWB in September 2005 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.
- Any sumps, pits or latrines created shall be located above the high water mark of any water body and constructed in such a manner as to prevent the contents from entering any water body

frequented by fish. All sumps shall be backfilled upon completion of the field season and contoured to match the surrounding landscape. EC further recommends that the proponent monitor the receiving water body for BOD, fecal coliforms, and TSS to determine if there have been any impacts to the water body. If the monitoring results indicate impacts are occurring, the proponent should be prepared to have a sewage treatment system in place.

Fuel Storage/Spill Contingency

- Drip pans, or other similar preventative measures, should be used when refuelling equipment on site.
- 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.
- Secondary containment should be of adequate size and volume to contain and hold fluids for the purpose of preventing spills (the worst-case scenario). Appropriate spill response equipment and clean-up materials (absorbents, containment devices, etc) must be on hand during any transfer of fuel or hazardous substances and at vehicle-maintenance areas.
- Transfer operations should be attended by trained personnel at all times.
- Berm areas - Decanting of snow or water from the berm area should proceed only if the appropriate chemical analysis has determined the contents meet the requirements of Section 36.3 of the *Fisheries Act*.
- **All spills** must be documented and reported to the NWT Spill Response Line at (867) 920-8130. The Plan should be revised to list Jim Noble as the EC contact in the event of a spill. Mr. Noble can be reached at (867) 975-4644. Alternately, EC operates a 24-hour pager monitored by Emergencies and Enforcement personnel, which can be reached at (867) 920-5131.

Drilling

- The proponent must identify to EC any drilling additives and mud that will be used for the project as soon as this information becomes available. EC recommends that biodegradable mud and non-toxic additives be used. 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 mud 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, where drill additives are not being used, 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 properly such that the contents do not enter any water body.
- EC recommends that that if artesian flow is encountered, the drill holes be immediately plugged and permanently sealed
- Any sumps created for the disposal of drill wastes 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.
- Any exposed drill casings should be removed or cut off at of below the surface of the ground.
- All drill areas should be kept orderly and any garbage is to be removed daily from the area to an approved disposal site. The proponent shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.

- Drill area should be kept to a minimum and constructed to facilitate minimizing the environmental footprint of the project area.
- Spill kits should be located at each drill site and the drilling staff trained to respond in the event of a spill.

Waste management

As per NWB original Term and Condition Part D, Item 2 & 3, there shall not be any open burning or land-filling on-site. The proponent shall burn all combustible waste in an approved incinerator, and shall ensure that all hazardous waste, waste oil and non-combustible waste generated are backhauled and disposed of in an approved waste disposal site. EC recommends that rather than using a modified 45 gallon drum as proposed by the proponent, an approved incinerator be used on-site in order to ensure complete combustion and compliance with the *Canadian Environmental Protection Act* regulations.

A variety of incineration devices are available and selection of the most appropriate will depend on considerations of technical and economical feasibility for each situation. Installation of an incineration device capable of meeting the emission limits established under the *Canada-wide Standards (CWS) for Dioxins and Furans* and the *CWS for Mercury Emissions* is required (both the Government of Canada and the Government of the Nunavut are signatories to these Standards and are required to implement them according to their respective jurisdictional responsibility). The proponent should review the incineration options available and provide justification for the selected device to the regulatory authority.

The use of appropriate waste incineration technology should be combined with a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of.

The **Waste Management Plan** should consider and include:

- Purchasing policies that focus on reduced packaging,
- On-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling).
- Recycling whenever possible
- If incineration is required, ensure diligent operation and maintenance of the incineration device and ensure appropriate training is provided to the personnel operating and maintaining the incinerator.

The objective should be to ensure that only food waste and food-contaminated waste is burned (the use of paper, cardboard and clean wood as supplementary fuel is acceptable).

- Used absorbent materials, oily or greasy rags, and equipment servicing wastes (such as used engine oil, antifreeze, hydraulic oil, lead acid batteries, brake fluid and other lubricants) should be safely stored and transported in sealed containers and safely transported to a facility that is authorized for the treatment and disposal of industrial hazardous wastes.

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) 975-4631 or by email at cindy.parker@ec.gc.ca.

Yours truly,

Original signed by

Cindy Parker
Environmental Assessment Technician

cc: (Colette Spagnuolo, Environmental Assessment & Contaminated Sites Specialist, Environment Canada, Iqaluit)