Environment Canada **Environnement Canada**

Environmental Protection Operations
Qimugjuk Building 969, P.O. Box 1870
Iqaluit, NU X0A 0H0
Tel: (867) 975-4631
Fax: (867) 975-4645

Our file: 4703 001

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Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Tel: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb.nunavut.ca

Via Email

Re: NWB8THE – Titanium Uranium Inc. – Thelon Project – Type B Water Licence Application

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*.

Titanium Uranium Inc. is applying for a Type B water licence for water use and waste disposal associated with exploratory drilling and camp operations for its Thelon Project. The proponent plans to conduct general prospecting, geological mapping, geophysical surveys, and diamond drilling operations in its project area. The time schedule proposed for the water licence is 1 April 2006 to 1 April 2008 and exploration activities will occur on a seasonal basis between April and September. A 20 person temporary camp will be established in a flat sandy area near Itza Lake, 150 km northwest of the Hamlet of Baker Lake. The coordinate of this site is 65˚03'N, 98˚21'30"W.

The proponent anticipates that the project's freshwater demand for domestic use will be 100 L per person per day. This water will be acquired from Itza Lake. Drilling operations will require 15,000 L of freshwater from nearby water bodies on a daily basis. Sewage and camp gray water will be discharged into sumps that will be inspected, marked, and properly covered when the camp is not in use. Drill cuttings and gray water will be directed to sumps positioned at a minimum distance of 35 m from any water body. These sumps will be backfilled and contoured to match their surrounding landscapes upon completion of drilling operations.

Combustible solid wastes will be incinerated in a modified 205 L steel drum. Non-combustible and hazardous wastes will be delivered to an approved waste disposal facility. Empty fuel drums will be barged to a southern recycling facility.

A fuel cache will be established nearby the camp on a relatively flat, elevated area that is at least 100 m from the high water mark of any nearby water bodies. Liquid fuels will be stored in 205 L steel drums. The Thelon Project's 2006 exploration program's fuel cache will have 28,700 L of Jet-B fuel (140 drums), 10,250 L of diesel fuel (50 drums), 205 L of gasoline, and four 45 kg tanks of propane. The project's Spill Contingency Plan provides spill response procedures, a chain of command, a list of contacts, and an inventory of response equipment. A spill kit along with

additional absorbent materials will be present at the camp's main fuel cache, drill rig, and temporary camp. The 24-hour Spill Report Line will be contacted to report and document hazardous material spills. Federal and Territorial regulatory agencies will be consulted to determine appropriate disposal methods for retrieved contaminated material.

Titan Uranium Inc. has provided an Abandonment and Restoration Plan for its Thelon Project which presents both final abandonment and seasonal shutdown procedures.

It is recognized that the Nunavut Planning Commission has determined that the Thelon Project conforms to the Keewatin Regional Land Use Plan. However, due to the reality that uranium exploration and development activities are a major concern to the people of the Keewatin Region, Environment Canada recommends that the proponent engage in community consultations with the residents of Baker Lake regarding the nature of the Thelon Project before conducting exploration activities.

Environment Canada recommends that the Thelon Project's Spill Contingency Plan be revised to include response measures for spills on water.

The Spill Contingency Plan should clearly indicate that all hazardous material spills are reported and documented using the 24-hour Report Line at (867) 920-8130. The plan currently states that only spills in excess of 100 L will be reported using this line.

Environment Canada requests that its Enforcement Officer based in Iqaluit, Jimmie Noble, be included in the spill contingency plan's contact list. Noble can be reached by office telephone at (867) 975-4644, cell phone at (867) 975-1925, and secure fax-line at (867) 975-4594.

Environment Canada recommends that the following conditions be applied throughout all stages 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.

DRILLING

- Environment Canada would like to inform the proponent that the Canadian Environmental Protection Act lists 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.
- 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 camp wastes.

FUEL STORAGE / SPILL CONTINGENCY / HAZARDOUS MATERIALS

- Environment Canada recommends the use of secondary containment, such as self-supporting insta-berms, when storing barreled fuel on location rather than relying on natural depressions.
- Drip pans, or other similar preventative measures, shall be used when refueling equipment on site.

The Canadian Wildlife Service (CWS) of Environment Canada has reviewed the above-mentioned submission and makes the following comments and recommendations pursuant to the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations)*, and the *Species at Risk Act* (SARA).

- Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, CWS recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately May 15 to July 31. 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 vicinity of the nest).

- If activities are permitted to occur during the breeding season, CWS recommends that the proponent confirm there are no active nests (i.e., nests containing eggs or young) in the vicinity of their operations before activities commence. If active nests of migratory birds are discovered, the proponent should halt all activities until nesting is completed (i.e., the young have left the vicinity of the nest).

- The proposed project area is less than 50 km southeast of the Middle Back River/Garry Lakes area and less than 50 km northeast of the Thelon River/Beverly Lake/Aberdeen Lake area. Both these areas have been identified as Key Migratory Bird Areas (Alexander, S.A., R.S. Ferguson and K.J. McCormick. 1991. Key migratory bird terrestrial habitat sites in the Northwest Territories. 2nd edition. Canadian Wildlife Service Occasional Paper no. 71) and are especially important areas for moulting Canada Geese. Moulting geese are temporarily flightless while they lose their flight feathers and grow new ones, and they are particularly sensitive to disturbance at this time. All moulting flocks should be avoided. Pre-moulting flocks of geese generally arrive in mid-June and depart after moulting is complete in mid-August.

- In order to reduce disturbance to nesting birds, CWS recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m during horizontal (point to point) flight.

- In order to reduce disturbance to resting, feeding, or moulting birds, CWS recommends that aircraft used in conducting project activities maintain a vertical distance of 1,000 m and minimum horizontal distance of 1,500 m from any observed concentrations (flocks / groups) of birds.

- CWS recommends that camp waste be made inaccessible to wildlife at all times. Camp waste can attract predators of migratory birds (e.g., foxes and ravens) to an area if not disposed of properly. Incineration of camp waste is a recommended option.

- Section 35 of the *Migratory Birds Regulations* states that no person shall deposit or 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.

- All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. Environment Canada recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.

- Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations (*the *Regulations)*. The proponent must ensure they remain in compliance with the *Act* and *Regulations* during all phases and in all undertakings related to the project.

The following comments are pursuant to the *Species at Risk Act* (SARA), which came into full effect on June 1, 2004. Section 79 (2) of SARA, states that during an assessment of effects of a project, the adverse effects of the project on listed wildlife species and its critical habitat must be identified, that measures are taken to avoid or lessen those effects, and that the effects need to be monitored. This section applies to all species listed on Schedule 1 of SARA. However, as a matter of best practice, EC asks that species listed on other Schedules of SARA and under consideration for listing also be included in this type of assessment.

Species at Risk	Category of Concern	Schedule of SARA
Grizzly Bear	Special Concern	Pending
Wolverine (Western Population)	Special Concern	Pending
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3
Short-eared Owl	Special Concern	Schedule 3

Impacts to these species could be disturbance and attraction to operations. Environment Canada recommends:

- The primary mitigation measure for each species should be avoidance. The proponent should avoid contact with or disturbance to each species.
- The proponent should consult with the Government of Nunavut and appropriate status reports, recovery strategies, action plans, and management plans to identify other appropriate mitigation measures to minimize effects to these species from the project.
- The proponents should develop monitoring plans for each species in accordance with any applicable status reports, recovery strategies, action plans, and management plans and in consultation with Government of Nunavut and Environment Canada.

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 – Environment Canada, Iqaluit
Myra Robertson – Environmental Assessment Coordinator – Canadian Wildlife Service, Yellowknife