

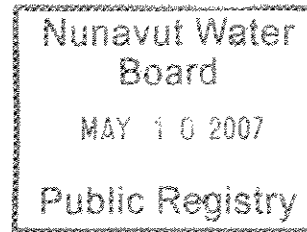
Environment
CanadaEnvironnement
Canada

Environmental Protection Operations
5204-50th Avenue, Suite 301
Yellowknife, NT
X1A 1E2

May 8, 2007

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Attention: Phyllis Beaulieu



Our File: 4703 001 067

Fax: (867) 360-6369

RE: NWB 2BE-QAM0608 -Qamanaarjuk Lake Project Amendment 1, Kivalliq Region - Cameco Corporation

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*.

It is the understanding of Environment Canada that Cameco Corp. is applying to amend their water license from the Nunavut Water Board to use water or the deposit of waste into water for the Qamanaarjuk Lake Project. The amendment includes a proposal to conduct uranium exploration in the Kivalliq region of Nunavut at the Aberdeen and Turqavik properties. The proposed project is a multi year project, with exploratory reverse-circulation and diamond drilling, mapping, prospecting, and ground geophysical survey to occur seasonally (March - August) from March 2007 through to June 2008. The work will be based out of a 20 person camp located at 64° 37' 43" N, and 97° 59' 40" W, consisting of 5 (five) sleeping cabins, an office, a kitchen and dining building, core shack, and generator building. A burn barrel is to be used to dispose of combustibles such as food, paper and wood; non-combustibles will be collected and disposed of in Baker Lake, NU.

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, 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 created for the disposal of camp sewage or grey water shall be located at least 30m 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.
- Environment Canada would like to inform the proponent that the *Canadian Environmental Protection Act* has listed Calcium Chloride (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.
- 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.

The proponent has indicated that they intend to incinerate waste in burn barrels, using waste fuel and oil. Environment Canada recommends the use of an approved incinerator for the disposal of combustible camp wastes. 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. For small, temporary camps the use of a modified burn barrel may be acceptable.

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 (odour free to prevent animal attraction) and safely transported to a facility that is authorized for the treatment and disposal of industrial hazardous 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 has indicated their intended use of an all-terrain vehicle (ATV) and snowmobile for emergencies and general purposes. EC recommends that use of the ATV be limited during spring thaw in order to avoid rutting and surface damage. A designated trail should be used in order to avoid the unnecessary destruction of vegetation. Stream crossings shall be located to minimize approach grades. Bank disturbance is to be avoided, and mechanized clearing should not be done immediately adjacent to any watercourse. Drip pans, or other similar preventative measures, should be used when refueling equipment on site.
- Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. If activities are permitted to occur during the breeding season, which extends from approximately May 15 to July 31, 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).
- 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 and a vertical distance of 1000 m and minimum horizontal distance of 1500 m from any observed concentrations (flocks / groups) of birds.
- 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.

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 that may be encountered	Category of Concern	Schedule of SARA	Government Organization with Expertise on Species
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

Impacts could be disturbance and attraction to operations.

Environment Canada recommends:

- The proponent should identify potential Species at Risk that could be encountered. Refer to the Species at Risk registry at www.sararegistry.gc.ca for information on specific species.
- If Species at Risk are encountered, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species.
- The proponent should consult with the Government of the 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 proponent should record the locations and frequency of any observations of Species at Risk and note any actions taken to avoid contact or disturbance to the species.

If there are any changes in the proposed project, such as the commencement of drilling activities, 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 (780) 951-8942 or by email at jody.klassen@ec.gc.ca.

Yours truly,


Jody Klassen

cc: Carey Ogilvie (Head, Assessment and Monitoring, EPO)
Mike Fournier (Northern Environmental Assessment Coordinator, A&M, EPO)