Environment Canada / Environnement Canada
Environmental Protection Branch
Suite 301, 5204-50th Avenue
Yellowknife, NT X1A 1E2
fax (867) 873-8185

INTERNAL

PC	SP
LA	Aug14
OM	
TA	✓
BS	
ED	
CEO	
BRD	

NUNAVUT WATER BOARD
AUG 0 9 2000
PUBLIC REGISTRY

August 9, 2000

Our File: 4703 000

Gladys Joudrey
Environmental Assessment Officer
Nunavut Impact Review Board (NIRB)
P.O. Box 2379
Cambridge Bay, NT X0E 0C0.
By Facsimile: (867) 983-2574

Rita Becker
Licensing Administrator
Nunavut Water Board
P.O. Box 119,
Gjoa Haven, NT X0E 1J0
By Facsimile: 867 360-6369

Attention: Gladys Joudrey and Rita Becker

Re: NWB Water Permit Application (NWB2MCG00) (NIRB 00WR050) - Muskox Holdings Ltd. - Mineral Exploratory Drilling - McGregor Lake in the Kitikmeot Region, NU.

On behalf of the Environmental Protection Branch (EPB), Environment Canada I have reviewed the information submitted with the above application, and recommend the following conditions for inclusion in the water licence. This advice is provided pursuant to Section 12(3) of the *Canadian Environmental Assessment Act* (CEAA), and is based primarily on EPB's mandated responsibilities for the enforcement of the *Canadian Environmental Act* (CEPA) and Section 36 of the *Fisheries Act*. It is a requirement of Section 36 of the *Fisheries Act* that all effluent discharge into water frequented by fish be non-deleterious.

Current Undertakings

The applicant has described the following undertakings in the application:

- a 15 - 20 person exploration camp located at the North End of McGregor Lake.
- for camp purposes the use of 250 gallons of fresh water daily, pumped from McGregor Lake
- containment of 1000 liters/day of grey water in a natural depression /manmade sump, at least 30 m from high water mark.
- the lack of adequate on-site sewage disposal, and the consideration of the erection of an outhouse.
- for drilling purposes, the use of 3000 gallons of water daily.
- containment of drilling wastes in a natural depression at least 30 m from the high water mark of the nearest lake.
- incineration of food waste, cardboard boxes, paper and wood in a 45 gallon drum cut in half with a metal grill.
- removal of non-combustible wastes to Yellowknife.
- transportable spill kits, one for base camp, and the other with the drill.
- the storage of Jet B, P-50 and gas in 45 gallon sealed drums, Torqueless and Ultravis (muds for drilling), Polydrill 133X and OBX (muds for drilling), Calcium Chloride (salt for drilling) and DD 2000 (mud for drilling).

The following items require clarification:

- what is the total number of days that the camp is in operation?
- has there been any consideration of using biolets or incinerating toilets, instead of removing sewage?
- is there a spill contingency plan that can be reviewed? The location of fuel storage is not defined and the spill clean-up capabilities of the kits is not certain.
- Section 10 of the Application form was not completed. Please advise - were there any environmental impacts identified in the original permit application? If so, what were they and how were they mitigated? Were there

followed up - telephone Aug 24, 2000

Canada

any changes made during the project duration which alleviated environmental impacts?
- what is the likelihood that lake-based drilling will be done and what are the procedures intended to be used for the lake-based targets?
- what are the details for site abandonment and restoration?

Comments and Recommendations

- The proponent shall ensure that any fuel or wastes associated with the proposed project do not enter waters frequented by fish. All sumps, spill basins, and fuel stores should be located a minimum of thirty (30) metres from the normal high water mark of, and such that they do not enter any water body. It is likely that there are nutrients, oils and cleaning agent residues which may travel into McGregor Lake from this depression and with prolonged use of the camp, it is unknown as to how much this natural depression can hold.

- The use of environmentally-friendly or biodegradable detergents in camp.

- For the burning of wastes, an enclosed, approved incinerator should be used .

- Utilize portable, self-contained fuel berms to minimize soil contamination in sites used for long-term fuel storage.

- The proponent shall not deposit nor permit the deposit of slash, debris or sediment into any water body. These materials shall be disposed of above the high water mark in such a fashion that they do not enter the water.

- If an artesian flow is encountered, core-drill holes shall be plugged and permanently sealed upon project termination. Poor quality ground water from one aquifer may contaminate another or in some cases flowing conditions at the surface can create large washouts or quicksand conditions.

- Drilling wastes from land-based drilling shall be disposed of in a sump such that they do not enter any waterbody at a distance greater than 30 m from the high water mark.

- For on-ice drilling, return water released to the lake must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters of the lake above Canadian Council of Ministers for the Environment Guidelines for the Protection of Freshwater Aquatic Life (ie. 10mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).

- Drilling additives or mud shall not be used in connection with holes drilled through the lake ice unless they are re-circulated or contained such that they do not enter the water, or demonstrated to be non-toxic.

- EPB shall be advised of any material changes to plans or operations associated with this project.

If the camp and associated mineral exploration program are likely to be extended into the winter, the applicant should provide greater detail.

Please do not hesitate to contact me at (867) 669-4743 or Paula.Pacholek@ec.gc.ca with any questions or comments regarding the foregoing.

Sincerely,

Paula Pacholek
Environmental Assessment Coordinator

cc: Sid Bruinsma (EPB Inspector/Investigator)