

Environmental Protection Operations
Qimugjuk Building 969
P.O. Box 1870
Iqaluit, NU X0A 0H0
Tel: (867) 975-4639
Fax: (867) 975-4645

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

via email at licensing@nunavutwaterboard.org

RE: De Beer Canada Inc – Prince of Wales, Chartrand Lake, Devon Island Project renewal – 2BE-PCD0607/GA

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*.

De Beers Canada Inc. is applying for a renewal water license for water use and waste disposal associated with exploratory diamond drilling and camp operations for the Prince of Wales, Chartrand Lake and Devon Island Project in the Kitikmeot and Qikiqtani region. Exploration activities will include soil sampling geophysics and airborne geophysics, mapping and diamond drilling.

In support of exploration activities, short-term, mobile fly camps will be set up. Each camp will be comprised of up to 10 personnel, with popup Arctic tents for sleeping and several Weatherhavens that will serve as the kitchen and office. Water use will amount to approximately 0.75m³ per camp per day. Garbage and disposable waste materials will be regularly transported out for proper disposal in the closest authorized community landfill; food scraps and grease will not be deposited in greywater sumps. The camp will be serviced by a twin otter aircraft which will likely be based in Resolute for the Prince of Wales and Devon Island/Cornwallis Island projects and Taloyoak for the Chartrand Lake project.

Environment Canada recommends that the following conditions be applied through out all stages of the project:

DRILLING

- 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, 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 in a properly constructed 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.

CAMPS

- The proponent shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
- The proponent shall ensure that any non-combustible waste and hazardous materials are disposed of appropriately at an approved facility.
- Any sumps, including those created for the disposal of drill cuttings, 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.

FUEL STORAGE

- 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.
- Drip pans, or other similar preventative measures, shall be used when refueling equipment on site.
- All releases of harmful substances, regardless of quantity, are immediately reportable to the 24 hour Spill Line at (867) 920-8130 where the release:
 - is near or into a water body;
 - is near or into a designated sensitive environment or sensitive wildlife habitat;
 - poses an imminent threat to human health or safety; or
 - poses an imminent threat to a listed species at risk or its critical habitat.

MIGRATORY BIRDS

- Environment Canada recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately June 1-July 15. 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 nest). Paragraph 6(a) of the *Migratory Birds Regulations* state that no one shall disturb or destroy the nests or eggs of migratory birds.

Yours truly,

Original signed by

Cindy Parker
Environmental Assessment Specialist

Cc: Carey Ogilvie, Head- EA North, Environment Canada, Yellowknife, NWT