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

May 15, 2010

EC file: 4703 001 108
NWB file: 2BE-SLA0814

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

Via email: licensing@nunavutwaterboard.org

RE: 2BE-SLA0814 – Golden Bull Resources Amendment Application

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 the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Golden Bull Resources Corp. (Golden Bull) is applying to amend their Type "B" water license 2BE-SLA0814 to include two 20 to 25 man camps proposed to be located at Penthouse Lake and Contwoyto Lake. The Penthouse Lake camp is proposed to be established in 2010 which, depending on exploration results, may be relocated to the East Arm of Contwoyto Lake in 2011. The proposed location of the Penthouse Lake camp is 66° 53' 46" N, 110° 54' 47" W with secondary locations on Esker Lake or on Hood River. The East Arm of Contwotyo Lake camp location is proposed at 65° 47' 24" N, 110° 43' 33" W, the secondary location proposed is the old Hecla Camp. Exploration activities include prospecting, geologic mapping, geophysical surveys, geochemical surveys, trenching, and diamond drilling programs.

Environment Canada provides the following comments and recommendations for the NWB's consideration:

Camp

- All sumps used for the disposal of greywater 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.
- EC recommends the use of an approved incinerator for the disposal of combustible camp wastes. The proponent is considering onsite incineration a waste disposal option. EC has developed a Technical Document for Batch Waste Incineration, and is available at the following web link: http://www.ec.gc.ca/gdd-mw/default.asp?lang=En&n=F53EDE13-1

The technical document provides information on appropriate incineration technologies, best management and operational practices, monitoring and reporting.

- Refuelling shall not take place below the high water mark of any water body and shall be done in such a manner as to prevent any hydrocarbons from entering any water body frequented by fish.
- Drip pans, or other similar preventative measures, should be used when refuelling equipment on site.
- A spill kit, including shovels, barrels, absorbents, etc. should be readily available at all locations where fuel is being stored or transferred and should accompany ATVs and snowmobiles in order to provide immediate response in the event of a spill
- EC recommends the use of secondary containment, such as self-supporting insta-berms, for storage of all barrelled fuel rather than relying on natural depressions to contain spills.

Wildlife and Species at Risk

- Section 6 (a) of the *Migratory Birds Regulations* states that no one shall disturb or destroy the nests or eggs of migratory birds. If active nests are encountered during project activities, the nesting area should be avoided until nesting is complete (i.e., the young have left the vicinity of the nest).
- Environment Canada recommends that food, domestic wastes, and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) be made inaccessible to wildlife at all times. Such items can attract predators of migratory birds such as foxes, ravens, gulls, and bears. Although these animals may initially be attracted to the novel food sources, they often will also eat eggs and young birds in the area. These predators can have significant negative effects on the local bird populations.
- Section 5.1 of the *Migratory Birds Convention Act* prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
- 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 suggests that species on other Schedules of SARA and under consideration for listing on SARA, including those designated as at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), be considered during an environmental assessment in a similar manner.

Terrestrial Species at Risk potentially within project area [1]	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility [2]
Peregrine Falcon (*anatum-tundrius* complex)[3]	Special Concern	Schedule 1 (*anatum*) Schedule 3 (*tundrius*)	Government of Nunavut
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut

Wolverine (Western population)	Special Concern	Pending	Government of Nunavut

[1] The Department of Fisheries and Oceans has responsibility for aquatic species.

[2] Environment Canada has a national role to play in the conservation and recovery of Species at Risk in Canada, as well as responsibility for management of birds described in the *Migratory Birds Convention Act* (MBCA). Day-to-day management of terrestrial species not covered in the MBCA is the responsibility of the Territorial Government. Thus, for species within their responsibility, the Territorial Government is best suited to provide detailed advice and information on potential adverse effects, mitigation measures, and monitoring.

3 The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundruis* subspecies of Peregrine Falcon were reassessed by COSEWIC in 2007 and combined into one subpopulation complex. This subpopulation complex was listed by COSEWIC as Special Concern.

Environment Canada recommends:

- Species at Risk that could be encountered or affected by the project should be identified and any potential adverse effects of the project to the species, its habitat, and/or its residence noted. All direct, indirect, and cumulative effects should be considered. Refer to species status reports and other information on the Species at Risk registry at www.sararegistry.gc.ca for information on specific species.
- If Species at Risk are encountered or affected, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species, its habitat and/or its residence.
- Monitoring should be undertaken by the proponent to determine the effectiveness of mitigation and/or identify where further mitigation is required. As a minimum, this monitoring should include recording the locations and dates of any observations of Species at Risk, behaviour or actions taken by the animals when project activities were encountered, and any actions taken by the proponent to avoid contact or disturbance to the species, its habitat, and/or its residence. This information should be submitted to the appropriate regulators and organizations with management responsibility for that species, as requested
- For species primarily managed by the Territorial Government, the Territorial Government should be consulted to identify other appropriate mitigation and/or monitoring measures to minimize effects to these species from the project.
- Mitigation and monitoring measures must be taken in a way that is consistent with applicable recovery strategies and action/management plans.

- 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 and Species at Risk, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act*, *Migratory Birds Regulations,* and the *Species at Risk Act*. The proponent must ensure they remain in compliance during all phases and in all undertakings related to the project.

EC has no issues with the amendment provided the proponent follows mitigation measures outlined in the application, address issues listed above, and that they are in compliance with their existing water license. Previous comments and recommendations submitted by C. Parker on 19 October 2007 relating to the "SLAVE" Project would still apply (see attached).

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 Paula.C.Smith@ec.gc.ca.

Yours truly,

Paula C. Smith
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)
Ron Bujold (Environmental Assessment Technician, EPO, Yellowknife, NT)

Environment Canada **Environnement Canada**

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

Oct 19, 2007

Richard Dwyer
License Administrator
Nunavut water Board
Cambridge Bay, NU via e-mail

RE: **Golden Bull Resources Corporation – SLAVE (Contwoyto Lake and Hood River) Project – 2BE-SLA**

On behalf of Environment Canada, 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*.

BACKGROUND

Golden Bull Resources Corporation is proposing to conduct non-diamond base metal and precious metal resource exploration activities in the Kitikmeot region of Nunavut at the Contwoyto Lake and Hood River property. Exploration activities will include ground magnetic surveys, Induced Polarization and Electro Magnetic geophysical surveys, mapping and sampling. Approximately 2000-3000m of land based drilling is planned as well as the potential for on-ice drilling of the east arm of Contwoyto Lake Access to the area will be by charter, float equipped aircraft from Yellowknife to Penthouse Lake/Esker Lake (a small lake east/south of the Zinifex (Wolfden) Ulu Prospect). Fuel will be flown directly to Penthouse Lake/Esker Lake and may, in the subsequent years of the exploration program, be flown (or possibly driven) to the Lupin, Jericho or Ulu airstrip and from there mobilized to the active base camp via charter helicopter.

If the results of the initial geological and geophysical surveys are positive, a short drill program will be undertaken possibly during the 2008 exploration season, the first field season of the program. During the subsequent full exploration season (2009), it is currently proposed that the camp be re-established in the Contwoyto Lake Area on the south shore of the East Arm of Contwoyto Lake; either at 65o 47' 24" North Latitude and 110o 43' 33" East Longitude or at the site of the old Hecla exploration camp (65o 48' 37" North Latitude and 110o 39' 27" East Longitude).

During the program, no permanent structures will be established and all garbage and camp material will be removed at the end of each field season and at the termination of the program. Sewage will be contained using "Pacto-type" toilets and subsequently burned with the ash being buried. Grey water at the camp and at any drill sites will drain into a sump to be filtered. The sump will be remediated after completion of each drill hole or in the case of the camp, at the end of each field season. All refuge will be burnt daily in an approved incinerator and remaining non-combustible solid wastes will be compacted and backhauled for disposal in Yellowknife.

On behalf of Environment Canada, 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*.

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

Regulatory

- 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.

- **All** releases of harmful substances, regardless of quantity, are immediately reportable 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.

Drilling

- Any sumps created for the disposal of grey water, drill cuttings and sewage 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.
- 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.

Waste Management

- 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, 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 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 Specialist

cc: (Carey Ogilvie, Head- EA North, Environment Canada, Yellowknife, NWT)
(Myra Robertson, Environmental Assessment Coordinator, CWS, Yellowknife, NWT)