



**Environment Environnement
Canada Canada**

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

9 February 2009

Our File: 4704 004 005

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

licensing@nunavutwaterboard.org

Attention: Richard Dwyer

Re: NWB 2BE CHI0813 – Chidliak Property Amendment Application - Peregrine Diamonds Ltd.'s – South Baffin Island area.

Environment Canada's (EC) contribution to your request for specialist advice is based on the mandated responsibilities under **Section 36(3)** of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA), the *Migratory Birds Convention Act* (MBCA) *Regulations* and the *Species at Risk Act* (SARA).

Comments and recommendations submitted by EC for Peregrine Diamonds Ltd.'s Land Use Permit and Amendment, 08AN008, would apply to the proponent's Water Licence Amendment Application, 2BE CHI0913. I have attached EC comments submitted to the Nunavut Impact Review Board applications. The proponent should be in compliance with their existing permits.

EC should be notified of changes in the proposed or permitted activities associated with this application.

Please do not hesitate to contact me at (867) 669-4744 or ron.bujold@ec.gc.ca with any questions or comments.

Yours truly,

Ron Bujold
Environmental Assessment Technician

cc: Carey Ogilvie (Head, EA-North, EPO)
Anne Wilson (Water Pollution Specialist, EA-North, EPO)
Carrie Spavor (Environmental Assessment Coordinator, EA-North, EPO)
Myra Robertson (Environmental Assessment Coordinator, CWS)



Environmental Protection Operations (EPO)
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9 December 2008

Our File: 4704 004 005

Manager of Environmental Administration
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

lpayette@nirb.ca

Attention: Leslie Payette

Re: NIRB 08AN008 – Amendment Request - Peregrine Diamonds Ltd.'s Chidliak Project - Diamond Exploration – South Baffin Island area.

Environment Canada (EC) contribution to your request for specialist advice is based on the mandated responsibilities under **Section 36(3)** of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA), the *Migratory Birds Convention Act* (MBCA) *Regulations* and the *Species at Risk Act* (SARA). Based on the information provided, EC believes that the above noted project has the potential to affect fish pursuant to the *Fisheries Act*, migratory birds pursuant to the *Migratory Birds Convention Act* and wildlife pursuant to the *Species at Risk Act*.

Peregrine Diamonds Ltd. is proposing to amend their existing land use permit licence to allow for the following activities:

- Establishment of a second field camp and conveying of a piece of heavy equipment

EC has no issues at this time with the establishment of a second field camp or the conveying of a piece of heavy equipment.

- Trenching

The proponent proposes to excavate trenches adjacent to surface waters, within the 30-metre buffer zone, which is normally maintained above the high water mark of lakes and streams. How will the proponent prevent fly-rock, sediments, blasting residues and other substances from entering fish bearing waters when blasting trenches near any waterbody? EC requests that unless effective mitigation measures are identified and provided for review, the 30-meter buffer zone be maintained.

- On ice drilling

Drilling additives or muds should not be used with holes drilled through lake ice unless they are re-circulated or they are contained to ensure that they do not enter the water, or the additives or muds have been demonstrated to be non-toxic.

For “on-ice” drilling where drill additives are not being used, the 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).

EC requests a copy of the results of the water quality data with respect to the on-ice drilling program.

- Use of lake ice as airstrip

EC has no issues with using the lake as an airstrip provided the proponent maintains a spill kit, which is readily available for any spills that may occur on the ice and has a Spill Contingency Plan for the airstrip. The proponent shall not erect camps or store materials other than for immediate use on the surface ice of any water body.

- Increase of water consumption rate from 60 m³ to 95 m³ per day

EC has no issues at this time with increasing the water consumption rate from sixty cubic metres to ninety-five cubic metres per day.

Comments and recommendations submitted for the initial Land Use Permit would still be applicable to the amendment. The proponent should also be compliant with their existing permits.

EC should be notified of changes in the proposed or permitted activities associated with this application.

Please do not hesitate to contact me at (867) 669-4744 or ron.bujold@ec.gc.ca with any questions or comments.

Yours truly,

Ron Bujold
Environmental Assessment Technician

cc: Carey Ogilvie (Head, EA-North, EPO)
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22 February 2008

Our File: 4704 004 005

Manager of Environmental Administration
Nunavut Impact Review Board
P.O. Box 1360
Cambridge Bay, NU X0B 0C0

lpayette@nirb.ca

Attention: Leslie Payette

Re: NIRB 08AN008 – Peregrine Diamonds Ltd's – Chidliak Project Proposal - Diamond Exploration – South Baffin Island area.

EPO's contribution to your request for specialist advice is based on the mandated responsibilities for the enforcement of **Section 36(3)** of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA), the *Migratory Birds Convention Act* (MBCA) *Regulations* and the *Species at Risk Act* (SARA). Based on the information provided, EC believes that the above noted project has the potential to affect fish pursuant to the *Fisheries Act*, migratory birds pursuant to the *Migratory Birds Convention Act* and wildlife pursuant to the *Species at Risk Act*.

The proponent is proposing to conduct exploration activities between June and September 2008. The 2008 activities will consist of both airborne (helicopter and ground geophysics) and possibly sediment sampling. Transportation will be by air only comprising of a Twin Otter and helicopter. A seasonal tent camp to accommodate approximately 15 people will be established at the following coordinates: 64° 14' 00" N – 66° 21' 00" W. The camp will consist of four sleep tents, kitchen, dry, office, first aid shack, core shack, generator shed, latrine, incinerator, helicopter-landing area.

Comments and Recommendations

- The proponent shall insure that any chemicals, fuel or wastes associated with the proposed project do not enter waters frequented by fish. It is a requirement of Section 36(3) of the *Fisheries Act* that all effluent discharged into water frequented by fish, be non-deleterious.
- The proponent should ensure that combustible waste is burned in a device that promotes efficient combustion and reduction of emissions and is capable of meeting the emissions limits established under the Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions. Both the Government of Canada and the Government of Nunavut are signatories to these standards and are required to implement them according to their respective jurisdictional responsibility.
- The proponent should be aware that any spill of fuel or hazardous materials, adjacent to or into a water body, regardless **of quantity**, should be, reported immediately to the NWT/NU 24-hour Spill Line, (867) 920-8130.
- A dedicated area should be used for refuelling equipment with measures taken to ensure capture and containment of drips and spills. Drip pans should be used when refuelling any equipment on site and should also be used at all tent/cabin fuel drum locations. An appropriate spill kit with absorbent material should be located at all fuel transfer sites.
- Spill contingency plans should also include the locations of disposal sites which are approved to accept wastes and the proponent should have a means of proper storage prior to disposal.
- All sumps, spill basins and fuel caches should be located in such a manner that their contents do not enter any water body and are to backfilled and re-contoured to match the surrounding landscape when they are no longer required.

- All fuel caches should be, inspected and documented on a regular basis. All fuel containers must be properly sealed and stacked in an upright position to prevent the possibility of spills and leaks.
- When storing barrelled fuel at a location, EC encourages the use of self supporting insta berms which are available from various suppliers within Canada.
- Fuel containers, including barrels, should be marked with the responsible party's name, product type, and year purchased or filled.
- The decanting of snow or water from any berm area should proceed only if the appropriate chemical analysis has determined that the contents meet the requirements of Section 36.3 of the *Fisheries Act*.

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).

- The proposed area for the project is near or possibly overlaps the area of the Western Cumberland Sound Archipelago that has been identified as a Key Migratory Bird Site (See attached page from Latour, P.B., Leger, J., Hines, J.E., Mallory, M.L., Mulders, D. L., Gilchrist, H.G., Smith, P.A., and Dickson, D.L. 2006. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut (3rd edition). Canadian Wildlife Service Occasional Paper. In press.). This site is an important breeding area for Common Eiders, Black Guillemots, and Iceland Gulls. Several thousand Common Eiders also concentrate along the coasts and fiords in August and September. Birds are particularly sensitive to disturbance at these times. The proponent should avoid activities during June to September in the area identified as the Key Migratory Bird Site. This includes ensuring no low-level flights over this area at the times when birds are present.
- Section 6 (a) of the *Migratory Birds Regulations* states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, Environment Canada recommends that all activities in which there is a risk of disturbing or destroying nests or eggs 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).
- For activities permitted to occur during the breeding season, Environment Canada 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 in the nesting area until nesting is completed (i.e. the young have left the vicinity of the nest).
- In order to reduce disturbance to nesting, moulting, and migrating birds, Environment Canada recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m during horizontal (point to point) flight unless safety or cloud ceiling do not permit. Environment Canada also recommends that aircraft maintain a vertical distance of 1000 m and minimum horizontal distance of 1500 m from any observed concentrations (flocks / groups) of birds.
- Environment Canada 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.
- 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.
- 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, Environment Canada 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.

Species at Risk that may be encountered	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ¹
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3	Government of Nunavut
Polar Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

¹ 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.

Impacts could be disturbance and attraction to operations.

The Canadian Wildlife Service 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. 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.
- 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.
- For species under the responsibility of 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.

EPO should be notified of changes in the proposed or permitted activities associated with this application.

Please do not hesitate to contact me at (867) 669-4744 or ron.bujold@ec.gc.ca with any questions or comments.

Yours truly,

Ron Bujold
Environmental Assessment Technician

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