



**Environment Environnement
Canada Canada**

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Our file: 4703 001 073
NWB file: 2BE-NAN0813

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Via email: licensing@nunavutwaterboard.ca

Re: Peregrine Diamonds Ltd. – Nanuq Project – Amendment – Type “B” Water License

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*.

Peregrine Diamonds Ltd. (Peregrine) has applied to amend their current Water License (2BE-NAN0813) with the Nunavut Water Board (NWB) to extend the project for one year, until April 2011, and to add on-ice drilling component to the project proposal.

Comments and recommendations submitted for the project on January 7, 2008 in response to the NWB 2BE-NAN0305 / 3BC-NAN0608 – Renewal Application, would apply to this Water License amendment application (see attached). In addition to these comments, Environment Canada provides the following comments and recommendations for the NWB’s consideration:

- For lake-based winter drilling the proponent may refer to the Interim Guidelines for On-Ice drilling. Return water released to the lake must be non-toxic. Return water release must not result in an increase in total suspended solids in the waters of the lake that exceeds Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).
- Please note on pages 5 and 18 of the Spill Plan lists a 24-Hour Emergency Line for Environment Canada. Please note that this number is no longer in service. Additionally, on these pages Peregrine has incorrectly changed the Government of Nunavut Department of Environment to Environment Canada’s enforcement officer’s phone number. Please note that the contact number for the Environment Canada Iqaluit Enforcement Officer is (867) 975-4644. EC requests that Peregrine provide the NWB with an updated copy of the Spill Plan.

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 by email at carrie.spavor@ec.gc.ca.

Yours truly,

Original signed by

Carrie Spavor
Environmental Assessment Coordinator

c.c: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)
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7 January 2008

Our File 4703 001 073

Richard Dwyer
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Re: NWB 2BE-NAN0305 / 3BC-NAN0608 – Renewal Application – Nanuq Property – Peregrine Diamonds Ltd.

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 states that they want to move their existing exploration camp located at, 65°13'01" N latitude – 91°04'46" W longitude, to a new location one kilometre northwest of the existing campsite. There was no reason given for the move. Environment Canada does not support the move, as it will un-necessarily increase the size of their existing footprint.

Comments submitted by David W. Abernathy on behalf of EC on the, 8 September 2005, for the renewal of NWB2NAN0305 Dunsmuir Ventures, Nanuq Project would still be applicable.

Environment Canada supports the mitigation measures outlined in the above noted renewal application proposed by Peregrine Diamonds Ltd. for their, Nanuq Project, and would like to add the following comments and recommendations.

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 be in compliance, with their existing permits.
- 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 and at drill 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.
- Regardless of the type of drilling conducted, the following conditions will apply:
 - * Drilling wastes from land-based drilling should be disposed of in a sump such that they do not enter any body of water.
 - * For lake-based winter drilling the proponent may refer to the Interim Guidelines for On-Ice drilling. Return water released to the lake must be non-toxic. Return water release must not result in an increase in total suspended solids in the waters of the lake that exceeds Canadian Council of Ministers of the Environment (CCME) Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/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 lake ice unless they are re-circulated, contained such that they do not enter the water, or are demonstrated to be non-toxic.
- The proponent should be aware that the *Canadian Environmental Protection Act* lists 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.

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).

1. The proposed project is approximately 100 km northeast of the Middle Quoiich River area that has been identified as a Key Migratory Bird Site (See attached page from Latour, P.B., J. Leger, J.E. Hines, M.L. Mallory, D.L. Mulders, H.G. Gilchrist, P.A. Smith and D.L. Dickson. 2006. Key migratory bird terrestrial habitat sites in the Northwest Territories and Nunavut. 3rd edition. Canadian Wildlife Service Occasional Paper. In press.). This area is especially important for moulting Canada Geese. Moulting geese are temporarily flightless while they lose their flight feathers and grow new ones, and they are particularly sensitive to disturbance at this time. All moulting flocks should be avoided. Premoulting flocks of geese generally arrive in mid-June and depart after moulting is complete in mid-August. Although the proponent has not indicated that any activities will take place in this area, the proponent should be aware of the special status of this nearby area and that there may also be large flocks of geese found in nearby areas. The proponent should avoid activities during mid-June to late August in the area identified as the Key Migratory Bird Site. This includes no low-level flights over this area at that time.
2. 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).
3. 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).
4. 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.

5. 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.
6. 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.
7. 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.
8. 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.
9. 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
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

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.

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. 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)