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Department of Environment
Ministère de l'Environnement

Dec. 18, 07

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board

via Email to: licensing@nunavutwaterboard.org

RE: NWB FILE # 2BE-NAN & 3BC-NAN – PEREGRINE DIAMONDS LTD. – WATER LICENSE RENEWAL APPLICATION FOR NANUQ PROJECT

Dear Ms. Beaulieu:

The Government of Nunavut, Department of Environment (DOE) has reviewed the water license renewal application for the Nanuq project from Peregrine Diamonds Ltd. for conducting diamond exploration about 120 km north of Chesterfield Inlet. Based on DOE's mandate under the *Environmental Protection Act*, we have the following comments to make, related to spill contingency planning, abandonment & restoration, and waste incineration.

1. SPILL CONTINGENCY PLAN:
Based on DOE's *Spill Contingency Planning and Reporting Regulations*, and *Contingency Planning and Spill Reporting in Nunavut: a Guide to the New Regulations*, DOE recommends a spill contingency plan be submitted as a stand-alone document, and incorporates the following comments:

- A site map that is intended to illustrate the facility relationship to other areas that may be affected by the spill. The map should be to scale and be large enough to include the location of your facility, nearby buildings or facilities, roads, culverts, drainage patters, and any nearby bodies of water; this map should be included within the spill plan.

- A description of the type and amount of chemicals including drill additives normally stored on site should be included.

- All fuel storage containers should be situated in a manner that allows easy access and removal of containers in the event of leaks or spills. Large fuel caches in excess of 20 drums should be inspected daily.

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- Page 22 of the *Spill Contingency Plan* indicates the applicant will "consult with environmental authorities during final disposal." The regulators do not provide disposal instructions for spilled and/or contaminated materials. It is the applicant's responsibility to develop a complete plan which addresses the steps to be taken from the start of the spill, up to and including the final clean up and disposal. Regulators such as DOE can review the final plan to assess its adequacy and provide advice at that time. Regulators can, and have, provided information and advice in emergency situations, however, these regulators should not be included in a spill plan as routine advisors.

- The proponent is recommended to utilize a newly developed spill report form in the case of spills, and to enter spill information electronically so it is legible to recipients such as government agencies. The new form can be obtained at the SPILL LINE.

2. ABANDONMENT & RESTORATION

Based on the DOE's *Guideline for Contaminated Site Remediation*, and *Guideline for the General Management of Hazardous Waste in Nunavut*, DOE recommends the following:

- Page 2 of the abandonment & restoration plan indicates hydrocarbon contaminated soil will potentially be treated by aerating the soil on a tarp. Regarding to this aeration treatment methodology, the applicant should provide further details including but not limited to, estimated quantity of soil to be treated, operation & maintenance procedures, monitoring details to demonstrate efficacy of the treatment, remediation standard at which the treatment can achieve, and disposal methodology for the treated soil.

- Final inspections of the entire site should be conducted by the applicant and lead agency to make sure that all areas of the site have been reclaimed as much as possible to its previous condition. Soil samples and pictures before and after the project would make this process easy on the applicant and leading agencies involved in determining areas of concern.

3. INCINERATION

The Government of Nunavut is signatory to the *Canada-Wide Standards for Dioxins and Furans*, and the *Canada-Wide Standards for Mercury Emissions*; therefore, we DOE recommends the applicant implements the following recommendations to ensure compliance with the standards for incineration emissions.

For camps of 10 to 50 people, the applicant shall apply appropriate technologies to ensure complete combustion of wastes, and the use of a dual chamber, forced-air incinerator is recommended. The applicant shall make determined efforts to achieve compliance with the CWSs. Efforts should include the

implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of. The Waste Management Strategy should consider and include:

- Purchasing policies that focus on reduced packaging;
- On-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling);
- If incineration is required, ensure diligent operation and maintenance of the incineration device and provide appropriate training to the personnel operating and maintaining the incinerator.

Waste wood treated with preservatives such as creosote, pentachlorophenol or heavy metal solutions should not be burned. Additionally, plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans when burned and should be excluded from incineration. Under no circumstance should hazardous wastes be managed through burning or incineration.

DOE thanks NWB for giving us the opportunity to review and provide comments on the water license renewal application for the Nanuq project. Please contact us if you have any further questions or comments.

Yours sincerely,

Original signed by

Helen Yeh
Environmental Assessment Coordinator
Department of Environment
Government of Nunavut