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Via email: licensing@nunavutwaterboard.org

RE: 110418 8BW-REP---- Hamlet of Repulse – Construction and Operation of Access Road and Quarry – Kivalliq Region

Environment Canada (EC) has reviewed the information submitted with the above-mentioned application to the Nunavut Water Board (NWB). 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*.

The Hamlet of Repulse Bay is applying for a new Type B water license to permit the construction and operation of an access road and quarry development. Six granular deposits have been identified north of the hamlet and the proposed road will be 8.729 km long and measure approximately 11 m wide with additional width for shoulders and culverts in some areas. Construction of the road began in 2007 and continued in 2009 and 2010 with approximately 4.4 km of the road already constructed

Based on the renewal application, EC provides the following comments for the NWB's consideration:

Road Construction and Quarrying

- The proponent shall not deposit, nor permit the deposit of chemicals, sediment, wastes, or fuels associated with the project 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 deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited. All construction materials; gravel fill, bridge components, and miscellaneous tools as well as debris or sediment should be located a minimum of 30 m from the high water mark of, and such they do not enter, any water body.
- EC recommends that an undisturbed buffer zone of at least 100 m be maintained between any quarrying that may occur and the normal high water mark of any water body and should only take place one metre above the summer or high groundwater table.
- The proponent shall not deposit nor permit the deposit of sediment into any water body and appropriate erosion control measures will be implemented, as required, down gradient of any quarrying activities.

- Stream bank disturbances must be minimized and all disturbed areas stabilized upon completion of the project.
- Equipment which will be working in-stream or fording the stream shall be clean and inspected for leaks prior to entering the stream channel.
- Abutment construction materials shall be clean and contaminant free; rock/construction materials are not to be gathered from below the high water mark of any watercourse.
- EC recommends that an Abandonment and Restoration Plan be prepared for the road and borrow sites. This Plan should communicate the proponent's reclamation objectives and procedures for the area affected by the road and through excavation activities.
- The proponent shall ensure that quarry activities do not result in the contamination of groundwater. Excavation and/or removal of material from the quarry should only take place to within one metre of the high water mark above the ground water table.
- All applicable permits must be obtained prior to commencing any in-stream activity.
- On page 15 of the Environmental Screening document, the proponent states that "Studies for acid-generating and metal leaching potential of granular materials in the borrow sources have not been complete". EC recommends that all borrow material be characterized to prevent a violation of Section 36(3) of the *Fisheries Act*.

Spill Contingency Planning

- 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. EC recommends that drip pans, or other similar preventative measures, should be used when refuelling equipment.
- Spills are to be documented and reported to the NWT/NU 24 hour Spill Line at (867)920-8130. EC recommends that all releases of harmful substances, regardless of quantity, are immediately reported 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.

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 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. The Table below lists species that may be encountered in the project area that have been assessed by COSEWIC as well as their current listing on Schedules 1-3 of SARA (and designation if different from that of COSEWIC). Project impacts could include species disturbance, attraction to operations, and destruction of habitat.

Terrestrial Species at Risk potentially within project area ¹	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility ²
Peregrine Falcon	Special Concern (<i>anatum-tundrius</i> complex ³)	Schedule 3 – Special Concern (<i>tundrius</i>)	Government of Nunavut
Polar 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 (EC) 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. Populations that exist in National Parks are also managed under the authority of the Parks Canada Agency.

³ The *anatum* subspecies of Peregrine Falcon is listed on Schedule 1 of SARA as threatened. The *anatum* and *tundrius* 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.

- For any Species at Risk that could be encountered or affected by the project, the proponent should note any potential adverse effects of the project to the species, its habitat, and/or its residence. 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.

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 the undersigned 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,



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Environmental Assessment Coordinator

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