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Department of Environment

Ministère de l'Environnement

June 7, 2011

Tara Arko
Assistant Technical Advisor
Nunavut Impact Review Board

via Email to: info@nirb.ca

RE: NIRB File # 08YN017: Application Acknowledgement for Jennie Rausch’s Amendment Request with the Canadian Wildlife Service for the “Arctic Shorebird Monitoring Program”

Dear Tara Arko
:

The Department of Environment (DOE) has reviewed the project amendment proposal and all supporting documents from Jennie Rausch on behalf of the Canadian Wildlife Service (CWS) in accordance with its mandate under the *Environmental Protection Act* & the *Wildlife Act*.

The DOE notes that the Proponent intends to carry out the following activities as part of their amendment:

- New study areas within the Kitikmeot and North Baffin regions to encompass Bathurst Island, Cornwallis Island especially around Resolute Bay, and Prince of Whales Island;
- Addition of a new three year National Wildlife Area entry permit;
- Constriction of a temporary camp to support activities on the Prince of Wales Island from June 15-30, 2011;
- New water license for camp water requirements.

The following information and recommendations have been provided for the Board's, as well as the Proponent's, information and consideration:

A. WILDLIFE

The project is located in an area where known distributions of Polar Bears (*Ursus maritimus*), Peary caribou (*Rangifer tarandus pearyi*), and Muskoxen (*Ovibos moschatus*) may be encountered. To prevent and minimize project related impacts on wildlife, it is important that the proponent is aware of the types of wildlife species, their distribution and their abundance in the project area, prior to the start of the project. DOE therefore asks the proponent records all wildlife observations in a 'wildlife log', and maps the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests. The timing of critical life history events (i.e., calving, mating, denning and nesting) should also be identified. Additionally, the proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites; the log and maps will be a useful tool to achieve this. Below are wildlife specific recommendations that DOE advises the proponent to implement.

1. Caribou

Presently, the Peary caribou population is known to be at a critically low number and as such they were recently listed as Endangered under the Federal Species at Risk Act (Canadian Gazette Part II, 2011). Every effort should be made to ensure that caribou and their habitat are not impacted.

During the period of May 15 to July 15 when caribou are observed calving in the area, the proponent should suspend all operations, particularly blasting, overflights by aircraft of less than 610 m above ground, and the use of snowmobiles and ATV's (all-terrain vehicles) outside the immediate vicinity of the camp. Furthermore, following July 15 when caribou with new calves are observed in the area, all activities should also be suspended.

Flights of less 610 m above ground should be avoided when caribou are in sight of operation.

During caribou migration, the proponent shall not locate and operate so as to block or cause diversion to migrating caribou. The proponent shall cease activities that may interfere with migration such as airborne geophysics surveys or movement of equipment or personnel, until the caribou have passed.

Between May 15 and Sep. 1, the proponent shall not construct any camp, cache any fuel, conduct blasting or drilling operations, operate ground, air or water based mobile equipment, including geophysics surveys, within 10 km of caribou crossings.

2. Muskoxen

Muskoxen are known to occupy the study area and similar to caribou can be adversely affected by human disturbances. The calving and post calving season occurs April

through August. The same actions taken for caribou should be applied to Muskoxen. Notably when Muskoxen are disturbed (E.g., an over-flight) it can cause animals to stampede, resulting in abandonment or trampling of young. Bull Muskoxen also have the potential to display aggression towards the proponents' activities by charging.

The rutting season extends from early or mid July to early October. This period is particularly challenging for bull Muskoxen as a disturbance can interrupt a vital period for the replenishment of fat and muscle tissue that will be necessary for mating and successful reproduction, but also to survive the winter. Bull Muskoxen also have the potential to display aggression towards the proponents' activities by charging.

Every effort must be taken to avoid muskoxen during the critical calving, post calving and rutting time periods.

3. Human-carnivores conflicts

Inevitably there is always the potential for predator-prey interactions and the field protocol should be in place to avoid wildlife interactions, and to mitigate any predator interactions. Sightings and occurrences, such as wildlife near human activities, close encounters, and attacks, should be recorded. Carnivores may approach humans or disturbances out of curiosity; however, their keen sense of smell can detect food or waste odors from great distances. Potential human-carnivore encounters can result in injury or death to the animal or the humans, all possible efforts to avoid human-carnivore encounters must be made, and negative reinforcement is encouraged. Clean camp standards are essential and deliberate feeding of any wildlife is absolutely prohibited.

Mortality resulting from mismanagement during a proponents activity is not an excuse for an emergency kill and can be a significant loss to the nearest community who can request compensation for the loss (Article 6, NLCA; Wildlife Act, 97 (3)).

The proponent should take all possible measures to avoid wildlife encounters, specifically bears. DOE recommends that the proponent installs an alarmed trip wire around the site perimeter and an electrified fence surrounding the camp and fuel caches.

At the very least a proponent should:

- Ensure appropriate licensing, training, and experience is acquired for firearm use.
- Include non-lethal deterrent rounds (scare cartridges, rubber bullets, and bean bag rounds) for use with a 12 gauge shotgun in bear deterrence plans. Ensure designated personnel are familiar with the appropriate use and storage of these.
- Employ wildlife monitors to assist in the protection of personnel and equipment from wildlife, and to monitor levels of wildlife activity in the area, and work to identify and resolve sources of human-wildlife conflict around camp. They should be equipped and knowledgeable on non-lethal deterrent techniques.

- Be prepared to take lethal action to resolve an imminent or occurring attack by wildlife on a human. Have a suitable caliber firearm and shoot to kill.
- Bears can be disturbed by over-flights. It is recommended that the proponent not fly over any bear, especially if they have made a kill or cubs are present.

The proponent should contact the nearest Conservation Office:

- If a situation occurs where wildlife becomes a nuisance (returning frequently, or unable to deter).
- Immediately if you have killed wildlife (either to resolve a conflict or unintentionally).
- Immediately if you have injured wildlife and have not been able to relocate or destroy.
- Immediately if a human has been attacked or bitten by wildlife. Note: Current policy is for any wildlife that attack humans to be destroyed; only in special circumstances would wildlife not be destroyed. If no further injury or human life is in danger contact the Conservation Officer to report and for further instructions.

Contact the Wildlife Deterrent Specialist, Regional Biologist, or Wildlife Manager indicated below for information and advice on measures which should be taken to minimize wildlife-human conflict.

4. Aircraft Disturbance

Aircraft activities have been shown to affect wildlife such as caribou, muskoxen and birds in behaviour, development and reproductive success as well as subject the wildlife to adverse weather conditions and accidental damage or injury. Furthermore, the timing of activities is during the Peary Caribou and Muskoxen calving season. By raising flight altitudes, studies have shown that it will alleviate some of the negative effects. Therefore, DOE recommends that the following protection measures are taken to reduce aircraft disturbance on wildlife:

DOE asks the proponent to shift their over-flight activities to begin after July 15th to prevent any impact during Peary caribou and Muskoxen calving season. DOE asks the proponent to increase their flight height from 30m to at least 610 meters if wildlife is spotted within their study area to minimize disturbance. In areas where there are observed large concentrations of birds, flight level is restricted to 1,000 meters vertical distance and 1,500 meters horizontal distance from the birds. As a good practice, it is recommended to avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.

5. Recording Wildlife Observations and Critical Habitat

DOE requests the proponent records and reports wildlife observations near the project area annually to a Regional Wildlife Biologist at the end of the operational season. This information will inform workers the kinds of wildlife present on site, prepare them for wildlife encounter, and allow them to modify activities accordingly to avoid wildlife. Additionally, this will assist the government and the applicant with collection of wildlife data. The reports should include location (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible. It is important to record the presence and number of animals as well as any young observed. For example, observations of wolves and their young during the summer will be an indicator of denning in the proximity.

B. SPILL PREVENTION

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 the following:

Caches of drummed fuel are particularly subject to spillage, because they often become buried in snowdrifts and are thus, susceptible to damage from heavy equipment. Furthermore, once buried, leaking containers cannot be detected until after the snow melts, by which time, most, if not all, of the spilled material has escaped off site with the spring melt. Drum cache locations should be clearly defined and marked so that they are visible even during the winter season.

To prevent spreading in the event of a spill, fuel stored in drums should be located, whenever practical, in a natural depression a minimum distance of 31 meters from all streams, preferably in an area of low permeability. All fuel storage containers should be situated in a manner that allows easy access and inspection as well as removal of containers in the event of leaks or spills. For long term storage (> 6 months), it is strongly recommended that drummed fuel be stored on pallets to prevent the bottoms from rusting out. Drum caches should ideally be enclosed in a fenced-in compound to prevent unauthorized access.

Although the proponent is not required to provide a spill plan, DOE recommends that spill kits be placed at all fuel caches and refueling stations. DOE recommends that spill kits include materials such as a shovel, pick-axe, drums, booms, absorbent pads/sheets, disposable protective gloves/coveralls, and disposal bags. Also include in the spill kit a list of local contractors or clean up specialists who may be called upon to assist in responding to spills and a list of emergency numbers such as fire, ambulance and police.

C. ABANDONMENT & RESTORATION

To ensure proper restoration of the project site after project closure, DOE recommends the following:

- Sumps should be located at least 30 m away from high water marks of water bodies.
- Sumps should only be used for inert drilling fluids, not any other materials or substances. If hydrocarbon based drill additives such as rod grease is used, DOE recommends the use of a filtration system aimed towards reduction of harmful substances to the environment.
- Final inspections of the entire site should be conducted by the proponent 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 proponent and leading agencies involved in determining areas of concern.

REFERENCES

Nunavut Tunngavik Inc. January 1993. *Nunavut Land Claim Agreement* (NLCA)

Species at Risk Act, P.C. 2011-42, 4 February, 2011, SOR/2011-8, ch.29, Canada Gazette, Part II, 145(4): 78-457.

Wildlife Act, S.Nu. 2003, c.26

DOE CONTACTS

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The DOE thanks the NIRB for the opportunity to review and provide comments on this submission. Please contact us if you have further questions or comments.

Sincerely,

Original signed by

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