Environment Canada Environnement Canada

Environmental Assessment North
Environmental Protection Operations (EPO)
Qimugjuk Building 969
PO Box 1870
Iqaluit, NU X0A 0H0
Tel: (867) 975-4631
Fax: (867) 975-4645

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Tannis Bolt
Technical Advisor
Nunavut Impact Review Board
PO Box 1360, 29 Mitik
Cambridge Bay, NU X0B 0C0

Via email: info@nirb.ca

RE: Notice of a Part 4 Screening for Korea Polar Research Institutes "Permafrost Atmospheric Science in Cambridge Bay, Canada" project proposal

Environment Canada (EC) has reviewed the information submitted with the above-mentioned project proposal to the Nunavut Impact Review Board (NIRB). 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*.

Ok-Sun Kim, of the Korea Polar Research Institute is proposing to complete a research project to characterize various ecological data samples and their response to climate change. Project activities include the collection of soil, water, and vegetation samples; the installation of an anemometer to collect wind data; the use of an infrared gas analyzer to measure carbon dioxide concentrations; and the use of an aethalometer to measure black carbon concentrations. Project personnel, five to seven people, will access sites on foot or by vehicle on established roads and all sites are located within the municipal boundaries of Cambridge Bay. The project is proposed to take place from late June to early July, annually from 2012 until 2016.

Based on a review of the proposed project information, EC provides the following comments for the NIRB's consideration:

General

- 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.
- 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 vicinity of the nest). In the northern Arctic region of the Northwest Territories and Nunavut, migratory birds may be found incubating eggs from May 31 until August 4, and young birds can be present in the nest until August 28.
- 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. 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.

Terrestrial Species at Risk potentially within project area [1]	COSEWIC Designation	Schedule of SARA	Government Organization with Primary Management Responsibility [2]
Barren-ground Caribou (Dolphin and Union population)	Special Concern	Schedule 1	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Peregrine Falcon	Special Concern (*anatum-tundrius* complex[3])	Schedule 1 - Threatened (*anatum*) Schedule 3 – Special Concern (*tundrius)*	Government of Nunavut
Wolverine (Western population)	Special Concern	Pending	Government of Nunavut
Red Knot (*rufa* subspecies)	Endangered	Pending	EC
Polar Bear	Special Concern	Schedule 1	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 assessed 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.

- EC notes that the Red Knot (*rufa* subspcies) (a shorebird) was designated as Endangered by COSEWIC in April 2007. The Red Knot (*rufa* subspecies) breeding range overlaps with the location of the proposed project area. Although the major threats to Red Knot relate to habitat degradation in the wintering areas and decreases in food resources during spring migration, the proponent should ensure that extra precautions are taken to avoid any disturbance to the Red Knot or its habitat during the breeding season. Red Knots nest on barren habitats (often less than 5% vegetation) such as windswept ridges, slopes or plateaus. Nest sites are usually in dry, south-facing locations, and may be located near wetlands or lake edges, where the young are led after hatching. Nests are simple scrapes on the ground in small patches of vegetation. Nesting will occur in June with hatching in early July. If an active Red Knot nest is encountered during project activities, or observations of Red Knot in the area suggest that a nest could be nearby, the proponent should avoid all activities in the area until nesting is complete (i.e., likely only resume activities in the area until after mid-July).
- The Canadian Wildlife Service of Environment Canada is interested in observations of birds, especially observations of birds identified as Species at Risk (e.g., Red Knot). Observations can be reported through the NWT/NU Bird Checklist program:

  NWT/NU Bird Checklist Survey
  Canadian Wildlife Service, Environment Canada
  5019 - 52 Street, 4th Floor
  P.O. Box 2310
  Yellowknife NT, X1A 2P7
  Phone: 867.669.4771
  Email: NWTChecklist@ec.gc.ca

  Blank checklist survey forms are available at:
  http://www.ec.gc.ca/reom-mbs/default.asp?lang=En&n=D19D8726-1
- 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 additional 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,

Paula C. Smith
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Environmental Assessment-North, EPO, Yellowknife, NT)
James Hodson (Environmental Assessment Coordinator, CWS, Yellowknife, NT)
Allison Dunn (Sr. Environmental Assessment Coordinator, EPO, Iqaluit, NU)
Ron Bujold (Environmental Assessment Officer, EPO, Yellowknife, NT)