ᐊᕙᑎᓕᕆᔨᒃᑯᑦ

Avatiligiyiit

Department of Environment

Ministère de l'Environnement

April 13, 06

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board

via Email to: licensing@nunavutwaterboard.org

RE: NWB2BE-SIL – STRONGBOW EXPLORATION INC. – SILVERTIP PROJECT

Dear Ms. Beaulieu:

The Government of Nunavut, Department of Environment (DOE) has reviewed the water license application from Strongbow Exploration Inc. for the Silvertip project for conducting precious and base metal exploration approximately 257 km south of Bathurst Inlet. The DOE believes the project will not result in significant adverse effects although the potential for negative environmental impacts exists. The DOE therefore requests that the proponent implements the following recommendations based on the *Environmental Protection Act* and the *Wildlife Act*, regarding wildlife, spill contingency, abandonment & restoration, and air quality.

1. WIDLIFE

To prevent and minimize project related impacts on wildlife, it is important that the proponent is aware of the types of wildlife and their distribution and abundance in the project area. 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.

P. O. Box 1000, Stn. 1360 PH: (867) 975-7733
Iqaluit, Nu X0A 1H0 FX: (867) 975-7747

Caribou

The project is in an area where the Bathurst caribou herd may migrate through in the spring and in the fall. The DOE therefore recommends the proponent implements caribou protection measures as follows.

1. During the period of May 15 to July 15 when caribou is observed calving in the area, the proponent should suspend all operations, particularly blasting, low-altitude overflights by aircraft, and the use of snowmobiles and ATV's (all-terrain vehicles) outside the immediate vicinity of the camp. All personnel should remain quietly in camp or should be removed from the site who are not required for the maintenance and protection of the camp facilities and equipment. The proponent may resume activities prior to July 15 if the caribou cows have ceased to use the area for calving or post-calving.

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

3. The proponent shall not construct any camp, cache any fuel or conduct blasting within 10 km, or conduct any diamond drilling operation within 5 km, of important caribou crossings.

4. Low-level overflights should be avoided, and should maintain an altitude of at least 610 m above ground level when one encounters concentrations of caribou.

Human-Bear Conflicts

The project is in an area where grizzly bears may be encountered. Proper food handling and garbage disposal procedures should be followed to reduce the likelihood that bears will be attracted to the operation. Careful planning and attention to details of camp design and maintenance will decrease the attraction of bears to a camp. The use of an electric fence around the camp site is advised and the proponent should also consider the use of the on site helicopter as a means of deterring bears. The proponent is advised to insure that all staff on site receives the appropriate training in minimizing human-bear conflicts. Any bear sighting or interaction should be reported as soon as possible to the nearest Conservation Officer or the Regional Wildlife Biologist.

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. However, by raising flight altitudes, studies have shown that it will alleviate some of the negative effects. Therefore, we recommend that the following protection measures are taken to reduce aircraft disturbance on wildlife.

Unless there is a specific requirement for low level flights, aircraft activities should maintain a minimum altitude of 610 meters above ground level in places where there are occurrences of wildlife. 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. These guidelines are provided as a general standard, and exceptions may arise on a case-by-case basis. As a good practice, it is recommended to avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.

Recording Wildlife Observations and Critical Habitat

The DOE recommends the proponent documents any wildlife observations (i.e., bears, caribou, muskoxen, foxes, wolves and raptors) in the general vicinity of their operation so workers are aware of the kinds of wildlife present on site, and are prepared to modify activities accordingly to avoid wildlife. It is contrary to the *Wildlife Act* to harass wildlife in any manner.

The DOE requests the proponent reports these observations annually to a Regional Wildlife Biologist and the nearest Conservation Officer at the end of the operational season to assist the government with collection of wildlife data. Documentation 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 useful to record the presence and number of animals and youngs observed. For example, observations of wolves and their youngs in the summer can mean they are denning in the proximity.

DOE Contacts (Wildlife Division)

Manager, Wildlife
- Dustin Fredlund, (867) 982-7441, talwildlife3@qiniq.com

Conservation Officer, Kitikmeot Region
- Allen Niptanatiak (867) 982-7451, kugwildlife2@qiniq.com

Regional Biologist
- Mathieu Dumond, (867) 982-7444, mdumond@gov.nu.ca

2. SPILL CONTINGENCY:

Based on the DOE *Spill Contingency Planning and Reporting Regulations, Contingency Planning and Spill Reporting in Nunavut: a Guide to the New Regulations*, and *Guideline for the General Management of Hazardous Waste in Nunavut*, we have the following comments and recommendations to make:

- Page 7 of the *Spill Contingency Plan* stated that the proponent would "contact Federal and Territorial regulatory agencies to identify appropriate disposal methods before disposing of contaminated material." Regulators such as the DOE do not provide disposal instructions for spilled and/or contaminated materials. It is the proponent'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. The regulators can review the final plan to assess its adequacy and provide advice at that time. Regulatory bodies can, and have, provided information and advice in emergency situations, however, these agencies should not be included in a spill plan as routine advisors.

- It is unclear whether or not the contact number provided is a 24-hour number. The 24-hour number for the persons responsible for activating the contingency plan is required as this ensures the employee discovering the spill can activate a response and provides a 24-hour point of contact for the authority investigating the spill.

- The DOE monitors the movement of hazardous wastes from generators, carriers to receivers, through a tracking document (Waste Manifest). A Waste Manifest must accompany all movements, and all parties must register at DOE with Robert Eno at reno@gov.nu.ca or (867) 975-7748.

- The NWT-Nunavut spill report form has been updated, and can be obtained from the Spill Line. The proponent is advised to enter spill information electronically in the form so the information is legible to regulators inspecting spills.

3. ABANDONMENT & RESTORATION

Based on the DOE's *Guideline for Contaminated Site Remediation,* we recommend the following:

- Page 3 of the *Exploration/Remote Camp Supplementary Questionnaire* stated "drill mud/polymer will be used and calcium (or sodium) chloride may be required for permafrost." It is important that drill additives used be non-toxic and biodegradable, and that sumps be used for disposal of only inert drilling cuttings, not any other materials or substances.

- Soil contaminated by fuel (e.g., soils under an old storage tank) should be treated on site or removed to an approved disposal site, and replaced with new soil. Soils in the vicinity of fuel and/or chemical storage should be tested and disposed off if necessary.

- 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.

4. AIR QUALITY

The Government of Nunavut is signatory to *Canada-Wide Standards (CWS) for Dioxins and Furans*, and Canada-*Wide Standards for Mercury Emissions*. We DOE therefore request the proponent ensures incineration emissions comply with the CWS by implementing the following recommendations.

For a camp of 10 to 50 people, the proponent shall apply appropriate technologies to ensure complete combustion of wastes, and burning wastes in a barrel as indicated in the application, is unacceptable. The DOE recommends the use of a dual chamber, forced-air incinerator. Additionally, the proponent shall implement a 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. Furthermore, hazardous wastes should not be managed through burning or incineration.

The DOE thanks the NWB for giving us the opportunity to review and provide comments on the Strongbow Exploration Inc. water license application. 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
P.O. Box 1000, Stn. 1360

Iqaluit, Nu X0A 0H0
PH: (867) 975-7733
FX: (867) 975-7747
EM: hyeh@gov.nu.ca