



**Environment Canada**   **Environnement Canada**

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*Via Email*

**RE: 2BE-ANI – Strongbow Exploration Inc. – Anialik River Project – Licence Renewal**

On behalf of Environment Canada (EC), I have reviewed the above mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Strongbow Exploration Inc. is applying for a licence renewal for water use and waste disposal associated with drilling operations and camp use in its Anialik River Project. The proponent requests that its licence be extended from July 2006 to July 2008 and permit the daily use of 0.2 m<sup>3</sup> of freshwater for domestic purposes and 10 – 15 m<sup>3</sup> to support drilling operations. The project's 2006 exploration season consists of two phases. The first phase is designed to locate lead zinc, diamond, and gold deposits through till sampling and survey work. As many as five fly in camps may be used to conduct this exploration work over a period of four to six weeks. These camps will be within latitudes of 67°21'24"N to 67°36'53"N and longitudes of 111°04'34"W to 111°38'33"W. If the results from this first phase of work are favourable, a second phase will be initiated where drilling operations will be conducted with 9-12 personnel based from the proponent's Rush Lake camp. This phase is anticipated to occur for six weeks between the months of July and September.

The proponent will ensure that all gray water, sewage, and drilling wastes are directed to sumps that will be backfilled prior to exiting the project area at the end of each exploration season. Sumps used for the disposal of drilling wastes will be positioned at least 50 m from the high water mark of any nearby water body. Combustible garbage will be incinerated on-site. Non-combustible wastes and hazardous wastes, including waste oil, will be delivered to Yellowknife for proper disposal. Empty fuel drums will be returned to their Yellowknife supplier.

The proponent project specific Spill Contingency and Abandonment and Reclamation Plans. Liquid fuels will be stored in 205 L steel drums within a cache positioned at the Rush Lake camp. This cache will be at least 100 m from the high water mark of any nearby water bodies and well away from camp facilities. The proponent anticipates having 10,250 L of diesel (50 drums), 10,250 L of JET-B fuel (50 drums), and six (6) 100 lb propane tanks in its project area for each field season.



Environment Canada recommends the following conditions be applied throughout all stage of the project:

#### GENERAL

- The proponent shall not deposit, nor permit the deposit of any fuel, drill cuttings, chemicals, wastes, or sediment 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 other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- Section 35 of the *Migratory Bird Regulations* states that no person shall deposit nor permit to be deposited, oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds. Therefore, Environment Canada recommends that sumps be backfilled or made otherwise inaccessible to migratory birds prior to their arrival in spring and that the proponent ensure that all spills are thoroughly cleaned-up.

#### DRILLING

- Environment Canada would like to inform the proponent that the *Canadian Environmental Protection Act* has listed CaCl as a toxic substance. The proponent shall therefore ensure that if CaCl is used as a drill additive, all sumps containing CaCl are properly constructed and located in such a manner as to ensure that the contents will not enter any water body.
- Drilling additives or muds shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or demonstrated to be non-toxic.
- For 'on-ice' drilling, return water released must be non-toxic, and not result in an increase in total suspended solids in the immediate receiving waters above the Canadian Council of Ministers of the Environment Guidelines for the Protection of Freshwater Aquatic Life (i.e., 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).
- Land based drilling should not occur within 30 m of the high water mark of any water body. Drilling wastes should be disposed of in a sump such that the contents do not enter any water body.
- If an artesian flow is encountered, the drill hole shall be immediately plugged and permanently sealed.

#### CAMPS

- The proponent shall not store materials on the surface ice of lakes or streams, except that which is for immediate use.
- EC recommends the use of an approved incinerator for the disposal of combustible wastes.
- EC recommends that plastic waste material that are unattractive wildlife to the project area (e.g., empty cleaning product containers) be regarded as non-combustible items and be removed from the project area for proper disposal. The burning of plastic materials is a source of air pollution which should be prevented.
- EC recommends that the ashes of burned combustible wastes be raked so as to remove any non-combustible items (e.g., nails and tinfoil). The remaining ashes should be buried within a sump or natural depression as part of the seasonal closure procedures.
- The proponent shall ensure that any-non combustible waste is disposed of appropriately at an approved facility.



- Any sumps, including those created for the disposal of drill cuttings, shall be located above the high water mark of any water body and in such a manner as to prevent the contents from entering any water body frequented by fish. Further, all sumps shall be backfilled upon completion of the field season and contoured to match the surrounding landscape.

#### FUEL STORAGE / SPILL CONTINGENCY / HAZARDOUS MATERIALS

- All fuel caches shall be located above the high water mark of any water body. Further, EC recommends the use of secondary containment, such as self-supporting insta-berms, when storing barreled fuel on location rather than relying on natural depressions.
- The proponent shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved facility.
- EC recommends that the proponent ensure that an appropriate form of secondary containment be made available for the placement of recovered contaminated soils and residue which remains after the burning of such soil. Remaining residue should be properly contained and delivered to an appropriate treatment facility.

#### MIGRATORY BIRDS

- Environment Canada recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately 15 May to 1 August. These dates are approximate, and if active nests (i.e., nests containing eggs or young) are encountered outside of these dates, the proponent should avoid the area until nesting is complete (i.e., the young have left the nest). Paragraph 6(a) of the *Migratory Bird Regulations* states that **no one shall disturb or destroy the nests of migratory birds.**
- In order to mitigate potential effects and minimize disturbance, any aircraft used in conducting project activities should maintain a horizontal distance of 2 km and a vertical distance of 610 m from any observed groups (colonies) of migratory birds.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please contact Colette Spagnuolo at if you have any questions or comments with regards to the foregoing at (867) 975-4639 or by email via [colette.spagnuolo@ec.gc.ca](mailto:colette.spagnuolo@ec.gc.ca).

Sincerely,

David W. Abernethy  
Environmental Assessment Technician

CC. Colette Spagnuolo – Environmental Assessment / Contaminated Sites Specialist, Environment Canada, Iqaluit