



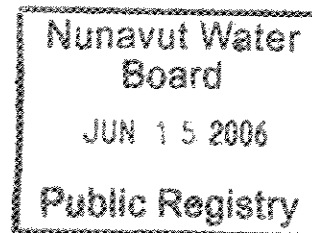
Environment Canada
Environnement Canada

Environmental Protection Branch
Suite 301, 5204 - 50th Avenue
Yellowknife, NT X1A 1E2
tel: (867) 669-4700

June 21, 2006

Our File: 4703 001 063

Phyllis Beaulieu
Manager of Licencing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0



Attention: Ms. Beaulieu

Re: Renewal Type "B" – 2BE-REG Regan Lake Project

On behalf of Environment Canada, I have reviewed the information submitted with the above application, received June 15, 2006. Environment Canada's (EC) contribution to your request for specialist advice is based primarily on the mandated responsibilities for the enforcement of Section 36(3) of the *Fisheries Act*, the *Canadian Environmental Protection Act* (CEPA) the *Migratory Birds Convention Act* (MBCA), and the *Species at Risk Act* (SARA).

It is the understanding of Environment Canada that Strongbow Exploration Inc. is applying for a renewal of their water licence from the Nunavut Water Board to use water or the deposit of waste into water for the Regan Lake Project. The project is located approximately 170 kilometres south of Bathurst Inlet and 430 kilometres southeast of Kugluktuk. The proposed project is a multi year project, with exploratory drilling, mapping, prospecting, sampling and possible ground geophysical survey to occur in July through to September, 2006 and 2007. A second season may occur in 2007, dependent upon the results of 2006. The program is scheduled to run for approximately 6 weeks, comprised of 14-16 individuals who will use existing camp infrastructure. The camp is located at 65° 19' 26" N, and 107° 38' 07" W. A burn barrel is to be used to dispose of combustibles such as food, paper and wood and non-combustibles will be collected and disposed of in Yellowknife, NT. Sewage and grey water will be disposed of in pits which will be buried at the completion of the program. Fuel caches will be located a minimum of 100 metres from any waterbody/watercourse, and their locations will be registered with the authorities. A maximum of 19 drums will be stored in the fuel caches at any one time. Drill cuttings will be disposed of in sumps that will be backfilled upon completion. Additives to be used include "Poly Drill" and CaCl₂. Sumps will be located a minimum of 50 metres from any high water mark from waterbodies.

Comments and Recommendations

1. Meeting the requirements of the *Fisheries Act* is mandatory, irrespective of any other regulatory or permitting system. Section 36(3) of the *Fisheries Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit 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. The legal definition of deleterious substance provided in subsection 34(1) of the *Fisheries Act*, in conjunction with

court rulings, provides a very broad interpretation of deleterious and includes any substance with a potentially harmful chemical, physical or biological effect on fish or fish habitat. Deleterious substances include, but are not limited to glycol, fuel, and cement.

2. All pits, sumps, spill basins and fuel caches shall be located above the high water mark of any waterbody or watercourse and in such a manner as to prevent the contents from entering any waterbody or watercourse frequented by fish.
3. Environment Canada recommends the use of secondary containment with an impervious liner, such as self-supporting inst-berms, for storage of all barreled fuel rather than relying on natural depressions to contain spills.
4. It is recommended that drip pans are utilized when refueling to capture any spilt fuel or lubricants.
5. The fuel caches shall be inspected on a regular basis.
6. A spill kit including shovels, barrels, sorbents, pumps, etc. shall be consistently maintained and readily available onsite.
7. Fuel containers, including barrels, should be marked with the responsible party's name, product type, and year purchased or filled.
8. The proponent shall ensure that all hazardous wastes, including waste oil, receive proper treatment and disposal at an approved facility.
9. The Spill Contingency Plan included in the land use application could be improved in the following areas:
 - o Clearly defined responsibilities of specific company staff (by individual or job title) and/or contractors on site, and a clear path of response.
 - o List(s) of equipment available at each site where fuel storage and/or transfer will occur within the project area, and a clear path of response.
 - o Copies of the spill plan should be readily available at all work sites and fuel storage and transfer locations.
10. The permittee shall not erect camps or store materials other than for immediate use on the surface ice of any waterbody or watercourse.
11. Environment Canada requests that Strongbow Exploration Inc. supply confirmation that they have received permission from City of Yellowknife to transfer proposed waste types and quantities to community waste handling facilities.
12. If artesian flow is encountered, drill holes shall be plugged and permanently sealed upon project termination.
13. If ice-based drilling occurs, the Interim Guidelines for On-Ice Drilling will apply. Return water released to the lake must be non-toxic. Return water released must not result in an increase in total suspended solids in the waters of the lake that exceeds Canadian Council of Ministers of the Environment (CCME) 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.)

14. Drilling additives or muds shall not be used in connection with holes drilled through lake ice unless they are re-circulated, contained such that they do not enter the water, or are demonstrated to be non-toxic.
15. Drilling waste from land-based drilling should be disposed of in such a manner that it does not enter any body of water.
16. Section 6 (a) of the Migratory Birds Regulations states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, CWS recommends that all activities be conducted outside the migratory bird breeding season, which extends from approximately May 15 to July 31. 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 vicinity of the nest).
17. If activities are permitted to occur during the breeding season, CWS recommends that the proponent confirm there are no active nests (i.e. nests containing eggs or young) in the vicinity of their operations before activities commence. If active nests of migratory birds are discovered, the proponent should halt all activities until nesting is completed (i.e. the young have left the vicinity of the nest).
18. In order to reduce disturbance to nesting birds, CWS recommends that aircraft used in conducting project activities maintain a flight altitude of at least 610 m during horizontal (point to point) flight.
19. In order to reduce disturbance to resting, feeding, or moulting birds, CWS recommends that aircraft used in conducting project activities maintain a vertical distance of 1000 m and minimum horizontal distance of 1500 m from any observed concentrations (flocks / groups) of birds.
20. CWS recommends that camp waste be made inaccessible to wildlife at all times. Camp waste can attract predators of migratory birds (e.g., foxes and ravens) to an area if not disposed of properly. Incineration of camp waste is a recommended option.
21. Section 35 of the *Migratory Birds Regulations* states that no person shall deposit or 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.
22. 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.
23. Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations*). The proponent must ensure they remain in compliance with the *Act* and *Regulations* during all phases and in all undertakings related to the project.

24. 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 asks that species listed on other Schedules of SARA and under consideration for listing also be included in this type of assessment.

Species at Risk that may be encountered	Category of Concern	Schedule of SARA	Government Organization with Expertise on Species
Short-eared Owl	Special Concern	Schedule 3	Government of Nunavut
Peregrine Falcon (subspecies tundrius)	Special Concern	Schedule 3	Government of Nunavut
Grizzly Bear	Special Concern	Pending	Government of Nunavut
Wolverine (Western Population)	Special Concern	Pending	Government of Nunavut

25. Impacts could be disturbance and attraction to operations.

26. Environment Canada recommends:

- The proponent should identify potential Species at Risk that could be encountered. Refer to the Species at Risk registry at www.sararegistry.gc.ca for information on specific species.
- If Species at Risk are encountered, the primary mitigation measure should be avoidance. The proponent should avoid contact with or disturbance to each species.
- The proponent should consult with the Government of the Nunavut and appropriate status reports, recovery strategies, action plans, and management plans to identify other appropriate mitigation measures to minimize effects to these species from the project.
- The proponent should record the locations and frequency of any observations of Species at Risk and note any actions taken to avoid contact or disturbance to the species.

27. Please note that any spill of fuel or hazardous materials, adjacent to or into a water body, **regardless of quantity**, shall be reported immediately to the NWT 24-hour Spill Line, (867) 920-8130.

28. EPB should be notified of changes in the proposed or permitted activities associated with this land use permit application.

Please Note: Environment Canada recognizes that timely disposal of camp waste - specifically food waste - is of critical importance to minimize safety risks associated with wildlife attraction. Timely disposal is usually achieved through burning. However, burning of waste products releases numerous contaminants to the air, many of them persistent, bioaccumulative and toxic (e.g. polycyclic aromatic hydrocarbons - PAH's - heavy metals, chlorinated organics - dioxins and furans). These contaminants can result in serious impacts to human and wildlife health through direct inhalation and they can also be deposited to land and water, where they bioaccumulate through food chains affecting wildlife and country foods. Therefore, burning should only be considered after all other alternatives for waste disposal have been explored.

A variety of incineration devices are available and selection of the most appropriate will depend on considerations of technical and economical feasibility for each situation. For large, permanent camps and/or operational facilities (e.g. diamond mines), installation of an incineration device capable of meeting the emission limits established under the Canada-wide Standards (CWS) for Dioxins and Furans and the CWS for Mercury Emissions is required (both the Government of Canada and the Government of the Nunavut are signatories to these Standards and are required to implement them according to their respective jurisdictional responsibility). For small, temporary camps the use of a modified burn barrel may be acceptable. The proponent should review the incineration options available and provide justification for the selected device to the regulatory authority.

If burning is the only alternative available, the proponent should ensure that the waste is burned in a device that promotes efficient combustion and reduction of emissions, and that the amount of waste burned is reduced as much as possible. The use of appropriate waste incineration technology should be combined with a comprehensive 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 Plan Waste should consider and include:

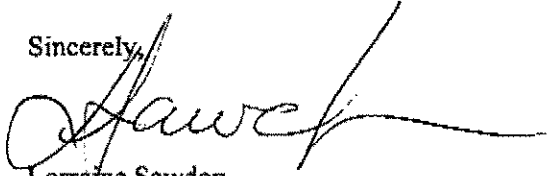
- Purchasing policies that focus on reduced packaging,
- On-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling).
- If incineration is required, ensure diligent operation and maintenance of the incineration device and ensure appropriate training is provided to the personnel operating and maintaining the incinerator.

The objective should be to ensure that only food waste and food-contaminated waste is burned (the use of paper, cardboard and clean wood as supplementary fuel is acceptable).

Used absorbent materials, oily or greasy rags, and equipment servicing wastes (such as used engine oil, antifreeze, hydraulic oil, lead acid batteries, brake fluid and other lubricants) should be safely stored and transported in sealed containers (odour free to prevent animal attraction) and safely transported to a facility that is authorized for the treatment and disposal of industrial hazardous wastes.

Please do not hesitate to contact me at (867) 669-4782 or lorraine.sawdon@ec.gc.ca with any questions or comments with regards to the foregoing.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lorraine Sawdon', with a long horizontal flourish extending to the right.

Lorraine Sawdon
Environmental Protection Branch

cc: Stephen Harbicht (Head, Assessment & Monitoring, EPOD)
Mike Fournier (Northern Assessment Coordinator, EPOD)
Colette Spagnuolo (Environmental Assessment, EPOD, Iqaluit)
Dave Fox (Air Issues Specialist, EPOD)
Myra Robertson (Environmental Assessment Coordinator, CWS)