



Environment Environnement
Canada Canada

Environmental Protection Branch
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May 6, 2005

Licensing Administrator
Nunavut Water Board
P.O. Box 119
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Nunavut Water
Board
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Our file:

Via facsimile

**Re: NWB4TAL – Taloyoak Land Farm, Water License Application
Proponent – Department of Community and Government Services, Government of Nunavut**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned Water License Application request. The following comments are 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*.

The Government of Nunavut has submitted an application for a Water License to the Nunavut Water Board to facilitate the operation of a Biofarm Cell facility located at their Municipal Bulk Fuel Storage Facility in Taloyoak. The Biofarm Cell is approximately 33 m X 33 m, was designed by Dillon Consulting and constructed by Kitnuna Construction. The facility contains approximately 780 m³ of hydrocarbon contaminated soil from repeated gasoline spills and the Operations and Maintenance (O & M) Manual contains guidelines for soil management strategies, snow removal, tillage, irrigation, moisture monitoring, fertilization, pH control leaching control, and hydrocarbon monitoring. I would like at this time to provide comments on the submitted O & M Manual relative to this facility.

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.
2. Environment Canada would like to remind the proponent that any recovered frozen wastewater shall be disposed of such that it does not enter any waters frequented by fish.
3. Environment Canada is very interested in determining the effectiveness of 'landfarming' operations in the Arctic and encourages the proponent to implement a rigorous monitoring program from the onset of operation of this facility. Environment Canada feels it is important to collect extensive and quality data relative to all operations and maintenance associated with this facility in order that quality guidelines be established. We recommend for example that the following parameters be monitored as frequently as possible:
 - a. Frequency and depth of tillage
 - b. Soil profile temperatures, pH, and moisture content data be collected throughout the year
 - c. The quantity and frequency of fertilizer application (e.g., nitrogen, carbon, phosphorus)
 - d. If soil warming is applied to any area within the Biofarm Cell, data would be appreciated?
 - e. If bioaugmentation occurs, detailed data should be kept.
 - f. Any changes in permafrost depth should be recorded.

g. Hydrocarbon content

The Canadian Wildlife Service (CWS) of Environment Canada has reviewed the above-mentioned submission and makes the following comments and recommendations pursuant to the *Migratory Birds Convention Act* (the *Act*) and *Migratory Birds Regulations* (the *Regulations*), and the *Species at Risk Act* (SARA).

2. Please note that 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. If harmful substances do come into contact with bodies of water that are frequented by migratory birds during the open water season, then these must be completely cleaned up following the procedures identified by the proponent and subject to final approval by an Inspector.
3. 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.
4. 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.

If there are any changes in the proposed project, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 669-4708 or by email at ivy.stone@ec.gc.ca.

Sincerely,



Ivy Stone
Environmental Assessment

cc: Steve Harbicht (Head, Assessment & Monitoring, EPB, Environment Canada, Yellowknife, NT)
Mike Fournier (Northern Environmental Assessment Coordinator, EPB, Environment Canada, Yellowknife, NT)