



Aboriginal Affairs and Northern Development Canada
Nunavut Regional Office
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May 4, 2012

Ms. Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
GJOA HAVEN, NU X0E 1J0

Our reference:
IQALUIT-#526466

Your reference:
1BR-RLF----

Sent via email

Re: Water Licence No. 1BR-RLF---- Transport Canada – Resolute Land Farm Project – New Application – Qikiqtani Region

Thank you for your March 30, 2012 request for written representations on the above referenced water licence application.

A Technical Review Memorandum is provided for the Board's consideration. Comments/ recommendations are provided pursuant to Aboriginal Affairs and Northern Development Canada's mandated responsibilities under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Department of Indian Affairs and Northern Development Act*.

Please do not hesitate to contact me by telephone at (867) 975-4555 or email at David.Abernethy@aandc-aadnc.gc.ca to discuss this submission.

Regards,

David W. Abernethy
Regional Coordinator
Water Resources Division

Encl.

Technical Review Memo

TO	Phyllis Beaulieu Manager of Licensing Nunavut Water Board	OUR REFERENCE File #9545-2-3.1BR.RLF---- IQALUIT-#526466
FROM	David Abernethy Water Resources Regional Coordinator Aboriginal Affairs and Northern Development Canada	YOUR REFERENCE 1BR-RLF---- DATE May 4, 2012
SUBJECT	Water Licence No. 1BR-RLF---- Transport Canada – Resolute Land Farm Project – New Application – Qikiqtani Region	

A. PROJECT DESCRIPTION

On April 4, 2012 the Nunavut Water Board (NWB or Board) distributed the above-referenced water licence application to interested parties for review. Transport Canada have requested a water licence for the maintenance and decommissioning of 2 land farms situated 6 km north of the Hamlet of Resolute within the community airport's restricted infield area. They are not in close proximity to any receiving water bodies. The land farms were constructed and made operational in 2001/02 to support the bioremediation of 5,800 m³ of recovered petroleum hydrocarbon contaminated soils from a former fire training mock-up area and above-ground fuel storage tank site. These land farms were excavated to permafrost, 1-1.5 m below grade, and lined with a 20 mil oil-resistant reinforced polyethylene liner. One of the land farms has outside dimensions of 95 m by 65 m while the other has outside dimensions of 70 m by 40 m. Both were designed with sumps for the collection of effluent and contain soils up to 1 m in depth. Due to competing pressures, Transport Canada has not actively maintained these facilities since 2003/04.

Transport Canada are proposing a monitoring program for soil and water contained within the land farms in addition to downstream monitoring wells. As a minimum, samples will be collected twice annually to monitor progress/developments in the bioremediation process. Composite soil samples will be evaluated against the Canadian Council of Minister's of the Environment (CCME) Canada Wide Standards for Petroleum Hydrocarbon Contaminated Soils Tier 1, coarse grain soil, Industrial site criteria. All sampling procedures will be in accordance with the standards contained in the CCME Guidance Manual on Sampling, Analysis, and Data Management for Contaminated Sites Volume no.'s 1 and 2. Certified laboratory results will subsequently be

compared to the above-referenced CCME Canada Wide Standards, the CCME Interim Canadian Environmental Quality Criteria for Contaminated Sites remediation for industrialized zoned sites, and the Nunavut Environmental Guidelines for Site Remediation. Samples will be collected from leachate that collects within the land farms sumps and downstream monitoring wells and evaluated against proposed maximum allowable concentrations for Oil & Grease, Lead, Benzene, Toluene, and Ethylbenzene that were derived from the CCME Environmental Quality Guidelines for Freshwater Aquatic Life and consistent with the conditions of similar water licences

Transport Canada plan to operate their 2 land farms up to the summer of 2016. They intend to close these facilities in the summer/ early fall of 2016 provided that the contaminated soil meets remediation criteria. The soils will be removed to allow for the disposal of the polyethylene liners in Resolute's municipal landfill and will then be used to re-contour the immediate impacted area.

Included in Transport Canada's application are a Spill Contingency Plan, an Operations and Maintenance Plan, and an Abandonment and Restoration Plan (all dated January 2012).

B. RESULTS OF REVIEW

On behalf of Aboriginal Affairs and Northern Development Canada (AANDC), the following comments/ recommendations are submitted for the Board's consideration,

1. Time Schedule

AANDC recommends that Transport Canada be issued a water licence for a minimum period of 5 years, expiring after the receipt of monitoring well data collected in the summer of 2017 for post-closure monitoring purposes (refer to p.10 of the submitted Operations and Maintenance Plan). Although Transport Canada have applied for 5 year licence, they have requested that this authorization expire in October 2016.

2. Release of Land Farm Effluent

Consistent with similarly licensed operations, Transport Canada should provide at least 10 days written notice to an AANDC Inspector (designated by the Minister under Section 85(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*) prior to any planned discharges of effluent that collect within the land farm sumps. The notice should include the volume proposed for discharge and acquired monitoring results.

3. *Monitoring Well Stations*

The submitted Operations and Maintenance Plan does not identify where the downstream monitoring wells are situated (e.g., a schematic or map) or provide their design details (e.g., diameter, depth, casing). Transport Canada should revise this plan accordingly and submit a new version to the NWB.

4. *Disposal of Polyethylene Liners*

Prior to disposing of the land farm polyethylene liners in the Hamlet of Resolute's municipal landfill Transport Canada should provide the NWB with a letter from appropriate Hamlet representatives confirming their willingness to accept these materials.

5. *Material Safety Data Sheets (MSDS)*

AANDC recommends that Transport Canada revise their Spill Contingency Plan to include all applicable MSDS sheets for hazardous materials that will be handled during project activities (e.g., fuel and fertilizers).

6. *Abandonment and Restoration Plan*

AANDC are satisfied that the above-referenced plan and have no further comments at this time.

Prepared by David Abernethy