



Water Resources Division
Nunavut Regional Office
Iqaluit, NU X0A 0H0

July 31, 2009

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
PO Box 119
Gjoa Haven, NU X0A 1J0

Re: 3BM-PON0409 – Hamlet of Pond Inlet – Renewal Application

Please be advised that Indian and Northern Affairs Canada (INAC) has completed a review of the above noted renewal application.

The Nunavut Water Board (NWB) distributed the notification for comment on July 7, 2009.

In conducting this review, I have referred to all documents on the Nunavut Water Board FTP site as it relates to 3BM-PON0409. Attached is a Technical Review Memorandum for your consideration.

Please feel free to contact me should you have any questions or comments. I can be reached at (867) 975-4566 or by email at tanya.trenholm@inac.gc.ca.

Sincerely,

Original signed by

Tanya Trenholm
Pollution Policy Specialist



Technical Review Memorandum

To: Phyllis Beaulieu, Manager of Licensing - Nunavut Water Board
Peter Kusugak, Manager, Field Operations Division – Indian and Northern
Affairs Canada

From: Tanya Trenholm, Pollution Policy Specialist - Indian and Northern Affairs
Canada – Water Resources Division

Re: 3BM-PON0409 – Hamlet of Pond Inlet – Renewal Application

Existing Water Licence # 3BM-PON0409

Background:

Wastewater at Pond Inlet is treated by an aerated lagoon that was built in 2005. The lagoon is used for annual storage and partial treatment of wastewater, before finally being treated in the wetlands.

The landfill is located next to the sewage lagoon (1.6 km from the community). Combustible wastes are incinerated each summer, and the land fill is also compacted and covered on a yearly basis. Bulky metal wastes are segregated from the land fill, and a sealift container is also on site for the containment of hazardous wastes.

Recommendations / Comments

Abandonment and Restoration (A&R) Plan:

The application notes that the existing, old sewage lagoon is being planned for decommissioning 'soon'. An A&R Plan will be developed along with the decommissioning plan for the old sewage lagoon when funding becomes available.

As per Part G of the licence, the licensee shall submit to the Board for approval, an A&R Plan at least 6 months prior to abandoning any facilities, and the construction of new facilities to replace existing ones.

As such and in addition to an A&R Plan for the restoration of the old lagoon, A&R Plans should also be developed for the land farm facility and the new sewage lagoon facilities.

Quality Assurance / Quality Control (QA/QC) Plan:



The application states that a QA/QC Plan will be developed with the restoration plan for the old sewage lagoon once funds are available.

The Applicant should provide firm timetables for the expected development of the outstanding Plans.

Monitoring Wells:

The existing licence was amended in September, 2007 to include provisions for the land farm facility. Monitoring provision Part H, item 13, requires the Licensee to install groundwater monitoring wells downstream of the solid waste disposal facility, and the land farm facility (at least 2 monitoring wells) for background data collection.

The application did not state whether this activity had been undertaken.

The Licensee should note that failure to install these monitoring wells is a contravention of the water licence terms and conditions.

Land farm Monitoring Requirements (Part H, Items 12-15):

As per the existing licence, monitoring requirements related to the land farm are to be submitted with the annual report. (i.e Part H, item 15; the licensee shall sample at Monitoring Station PON-8 prior to any discharge of treated effluent from the land farm facility. Samples shall be analyzed for all parameters outlined in Part H, item 14.). It is unclear from the application when the land farm was commissioned. If the land farm was commissioned in 2008, the applicant should submit any results from the monitoring program as an addendum to the 2008 annual report.

Land farm Operations & Maintenance (O&M) Plan:

A review of the land farm O&M plan revealed the following deficiencies and concerns:

- The Applicant should identify what parameters will be analyzed.
- A site overview should be provided to the NWB, including water balance for the facility, maps and a description of the distance to the nearest water body, drainage pathways, etc.
- INAC recommends that an independent consultant with expertise in soil sampling techniques obtain samples after the remediation process is complete to ensure that any reuse of treated soils will not impact the surrounding environment including any waters and that the soil meets current CCME criteria for re-use.
- A contingency and mitigation plan must be provided to address the possibility of seepage from the land farm. One consideration would be to



dig a trench around the land farm with an HDPE liner to collect any seepage.

- The proponent should identify the type(s) of contaminated material (fuels) transferred to the land farm. Soil or snow contaminated with heavy metals, glycols and/or heavy oils should not be placed in the land farm
- The recommended depths for contaminated soil should range between 30 and 45 cm. Thicker soil depths require more tilling to provide aeration of the contaminated soils. This could potentially affect the time (lengthen) required for proper remediation.
- Proper equipment and appropriately trained personnel must be employed when tilling the contaminated soil and care should be taken when using the equipment. Any misuse could cause tears to any liner which may result in seepage outside of the land farm. As such, the O&M Manual should be updated to include the information of properly trained individuals, and the date on which they received their training.
- The O&M Manual should include a plan to address how the Hamlet intends to store the Ammonium Nitrate and Superphosphate (as it is noted in the O&M Manual that it is critically important that these materials not be left outdoors, but rather stored in a dry environment, preferably off the ground on wooden pallets and separated from each other).

This information has been forwarded to an INAC Water Resources Officer for consideration and / or further actions.

Please feel free to contact me at your convenience should you wish to further discuss any part of this submission to the Board. I can be reached at 867-975-4566 or via email, tanya.trenholm@inac.gc.ca.

Cc. Kevin Buck, Manager, Water Resources Division – Indian and Northern Affairs Canada;
Bernie MacIsaac, Director, Operations – Indian and Northern Affairs Canada
Andrew Keim, Water Resources Officer, Field Operations Division – Indian and Northern Affairs Canada