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Department of Environment

Ministère de l'Environnement

Jan. 9, 2008

Richard Dwyer
Licence Administrator
Nunavut Water Board

via Email to: licensingadmin@nunavutwaterboard.org

**RE: NWB FILE # 3BM-KIM – HAMLET OF KIMMIRUT – WATER LICENSE
RENEWAL APPLICATION**

Dear Mr. Dwyer:

The Government of Nunavut, Department of Environment (DOE) has reviewed the renewal water license application (NWB File No.: 3BM-KIM) from the Hamlet of Kimmirut. The terms and conditions outlined in the existing license (NWB3KIM0207) dated September 1, 2002 have not been completely carried out by the applicant, according to the NWB's status report dated Dec. 18, 2007. The status report indicates there is no operation & maintenance manual as required in the license, submitted to date. Additionally, annual monitoring data submitted to the NWB also required in the license, has been incomplete. The DOE therefore, recommends that the information be submitted as required.

In addition to these terms and conditions outlined in the existing license (NWB3KIM0207), the DOE further recommends the following regarding sewage and solid waste treatment, based on the DOE mandate under the *Environmental Protection Act*.

A. SEWAGE TREATMENT

The *Technical report of the Sewage Lagoon of the Hamlet of Kimmirut* states that “wetland is the only sewage treatment facility for this community and regulated under the same license”, and that the sewage lagoon was never used due to a problem with the access road to the sewage lagoon. However, the applicant has not demonstrated whether or not the current treatment is sufficient to comply with the effluent discharge criteria required in the existing water license. The applicant indicates in the application that a new sewage lagoon with a treatment wetland will be proposed to the NWB in the future; however, it is not clear when the amendment application for the new treatment will be submitted, and is not clear how the applicant intends to handle potential non-compliance regarding the effluent discharge criteria in the presence.

If the applicant intends to file an amendment application for the new sewage lagoon with a treatment wetland, the DOE recommends the following information be submitted for review.

- Design drawings for the new lagoon signed off by a professional engineer registered in Nunavut;
- Design details related to the sewage lagoon should be discussed. For example, what technology and methodology will be utilized to construct the lagoon and to ensure integrity of the lagoon so contaminants are contained within the lagoon and do not enter the environment?
- Operation & maintenance procedures;
- Monitoring details for sewage effluent quality should be included, such as monitoring locations, monitoring frequency and timing, and effluent discharge criteria to be used;
- Details related to the treatment wetland proposed as part of the overall sewage treatment should be discussed. Details should include wetland design, and operation & maintenance;
- Details related to treatment and management of sewage sludge;
- A spill contingency plan should be provided for review related to the sewage lagoon and other facilities related to this water license. The applicant is referred to DOE's *Spill Contingency Planning and Reporting Regulations* and *Spill Reporting in Nunavut: a Guide to the New Regulations*;
- A preliminary abandonment & restoration plan.

B. SOLID WASTE TREATMENT

The NWB status report dated Dec. 18, 2007 states that “the Solid Waste Disposal Facility is in very poor operational condition. Waste oil drums were not properly cleaned in an upright position, signs of leakage from waste drums was visible.” In the current application, there is very little information provided regarding the solid waste disposal facilities. For waste oil, it should either be treated appropriately on site or be shipped off site for proper disposal. The applicant is recommended to refer to the Government of Northwest Territories *Use Oil and Waste Fuel Management Regulations* for some guidance. Finally, if open burning of wastes is the current practice, the DOE would like to state that open burning of non-segregated municipal solid waste (MSW) remains a last option for the management of MSW. Continuation of this practice should not be allowed unless a site-specific assessment fails to identify a feasible and practical

alternative. However, the DOE accepts that the practicality of waste disposal in Kimmirut make it one of the only viable options for waste volume reduction and management. Consequently, the DOE recommends the following if open burning is the current practice:

- The principle of source reduction should be utilized to reduce, reuse and recycle materials otherwise bound for landfill.
- Municipal solid wastes that are conditionally suitable for open burning are paper products, paperboard packing and untreated wood wastes only. Other wastes such as hazardous wastes should be contained in a designated area and be managed appropriately.
- The appropriate materials are segregated and burned in a controlled manner and at a controlled site which is separate from the working landfill so that the fire cannot spread. There should be fencing with signage for the landfill.
- Standard burning conditions shall apply, such as burning on days where winds are light and blowing away from the community.
- Materials are burned in manageable volumes so that fires do not get out of control.
- Have applicable permits for burning.

The DOE thanks the NWB for giving us the opportunity to review and provide comments on the Kimmirut Hamlet's renewal water license application. Please contact us if you have any questions or comments.

Yours sincerely,

Original signed by

Helen Yeh
Environmental Assessment Coordinator
Department of Environment
Government of Nunavut