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June 7, 2007

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Manager of Licensing
Nunavut Water Board

via Email to: licensing@nunavutwaterboard.nunavut.ca

RE: Amendment for Cape Dorset Water License 3BM-CAP0207

On behalf of Environment Canada (EC), I have reviewed the information submitted for the proposed Cape Dorset sewage lagoon system. The following specialist advice has been 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*.

General

- The Hamlet must ensure that any effluent discharged must be in compliance with Section 36(3) of the *Fisheries Act*. The proponent shall not deposit, nor permit the deposit of any wastes, chemicals or sediment into any water body. According to the *Fisheries Act*, Section 36(3), the deposition 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, is prohibited.
- The Proponent is to ensure that all construction activities on the sewage lagoon do not result in sedimentation of any surrounding water bodies. Preventative measures, such as the use of silt curtains/fences should be used to help mitigate any potential impacts.
- Any stockpiled material should be stored above the high water mark of any water body and in such a manner as to prevent sedimentation of surrounding water bodies.
- An updated Operations and Maintenance Manual should be submitted for approval. The O & M Plan should include removal and disposal of sewage sludge. Estimates should be made of the quantities of sludge likely to be produced, the required frequency of extraction from the lagoons; and operational procedures developed for environmentally sound removal and disposal.

Monitoring

- Environment Canada recommends that in addition to the proponent monitoring the quality of the effluent being discharged at the outlet of the wetland treatment area, sampling be completed at the outfall of the lagoon, in order to understand treatment efficiency.
- The Hamlet should be aware of the work being done to develop a Canada-wide Strategy for the Management of Municipal Wastewater Effluents, under the aegis of the Canadian Council of Ministers of the Environment (CCME). The Canada-wide Strategy, which addresses specific parameters and governance, was released in draft form in November 2006 (http://www.ccme.ca/assets/pdf/mwwe_consultation_pkg_e.pdf). As part of the federal government's implementation of the CCME Canada-wide Strategy, it is EC's stated intention to develop a regulation under the *Fisheries Act*. The Canada-wide Strategy will more clearly define regulatory requirements related to the release or discharge of wastewater into surface waters. Environment Canada's goal is to ensure that effluents from wastewater systems are treated before being discharged to the receiving environment so that effluents do not pose unacceptable risks to ecosystem and human health, or to fisheries resources.

The focus is on setting maximum allowable limits for BOD5, residual chlorine and TSS in municipal wastewater effluent. There will be a period of up to five years during which northern issues are examined and practical limits put forth for wastewater quality. For the Hamlet, this may eventually impact the BOD and TSS discharge criteria.

To our knowledge the following issue has not been addressed:

- **All** spills must be documented and reported to the NWT Spill Line at (867) 920-8130.
- EC requests that submission and approval of sewage disposal plan be a condition of the license. The proponent should produce a Spill Contingency Plan which includes the new operations and infrastructure. The plan should facilitate response to spills which might occur during construction and operation of the project. The plan should include a list of available spill response equipment and the names of trained personnel who will be on-site and available in the case of a spill. EC is available to review such a plan with the Hamlet.
- The proponent should provide confirmation the presence of a through talik under P-lake that could result in contamination of groundwater and facilitate the transport of contaminants. If a through talik is present, EC recommends that the bottom of the lagoon be lined with an impermeable liner to prevent contamination of the groundwater. Movement of sewage through ground water is not to be used as a dilution factor for treatment.

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) 975-4631 or by email at cindy.parker@ec.gc.ca.

Yours truly,

Original signed by

Cindy Parker
Environmental Assessment Specialist

cc: (Carey Ogilvie, Manager Environment Canada, Yellowknife, NWT)