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Our File: 4705 037 NANI

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NWB3CAM

Re: Cambridge Bay Municipal Water Licence Renewal - Water Licence ~~NWT2NAN9702~~ NWT2NAN9702

I have reviewed the water licence application and supporting documentation on behalf of Environment Canada (EC). Unfortunately, the application was lacking in detail, with responses checked off but no details provided where requested, and the maps were of such poor quality that they were not useful (a large scale plan drawing would have been helpful). It was difficult to identify whether past problems had been addressed, and no details were provided of changes being considered for the solid waste site.

Past and recent inspection reports from the DIAND inspector, and past site visits by Environment Canada staff have identified a number of operational problems with the waste disposal sites. These include:

- erosion of the sewage lagoon berms in the area of the truck discharge chutes;
- overtopping of the berm which separates the sewage lagoon from the solid waste site;
- presence of solid wastes in the sewage lagoon;
- disposal of bagged toilet wastes to the solid waste site;
- windblown debris from the dump;
- because the sewage lagoon and solid waste site are adjacent (in reality they overlap in some areas) there is a mixing of runoff/effluent from both sites. This makes it difficult to identify sources of contaminants which have been detected in the bay, nor can the sewage effluent quality be isolated to identify treatment efficacy and any problems with that system.
- plans which were required under the expiring licence have not been provided;
- details of hazardous waste management are lacking.

Recommendations for the renewal of this licence are as follows:

Sewage Disposal:

- The Hamlet needs to develop and implement an engineered site improvement plan which will effectively separate the two waste streams, and prevent mixing of sewage and solid waste site effluents.

- This should also address operational issues such as maintenance of the one metre freeboard for the sewage lagoon berms, and modifications to the truck discharge chute such that erosion is prevented.
- Fencing of the solid waste site should be done to prevent the spread of debris.
- The Operation and Maintenance Plan should be developed and must include such matters as removal of solids from the sewage lagoon and construction of a bagged toilet waste facility to receive the estimated 20 bags per year from outpost camps (currently required under licence section D6).
- No details are available on the management of waste oil and hazardous materials, other than that these are handled by a contractor. The O&M plan should include a section on the handling and ultimate disposal of hazardous wastes.
- The expiring licence included the requirement to assess the contaminants in the solid waste site (especially persistent organic pollutants) and identify necessary remedial measures. This is still outstanding, and should be done early in the term of the renewal licence. It is my understanding that there are a number of sources of potential contaminants at the dump (such as full barrels of unknown product, old electronic equipment) which need to be cleaned up.
- A final abandonment and restoration plan needs to be developed for both sites.
- Monitoring requirements under the expiring licence's SNP are currently limited to drinking water. It is recommended that periodic sampling of the sewage and solid waste effluent streams be included under the SNP. Appropriate training in sample collection needs to be provided to those responsible for sampling.

Please do not hesitate to contact me at (867) 669-4735 with any questions or comments regarding the foregoing.

Yours truly,

Anne Wilson
Water Pollution Specialist

cc: Steve Harbicht (Head, Assessment & Monitoring, EPB)
Paula Pacholek (Environmental Assessment Coordinator, EPB)