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Our file: 4782 046

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RE: NWB3GRI – Hamlet of Grise Fiord Water Licence

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. 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*.

The Hamlet of Grise Fiord has applied for a 5-year water license to obtain water for municipal use from a glacial melt water pond, located in the center of the community.

Environment Canada requires the following information in order to facilitate the review of this project:

- When available, more detailed maps indicating the location of the sewage treatment facilities, including the current lagoons, any future planned lagoons, the old honey bag pit, the solid waste area, and the hazardous waste storage area, including their location in relation to water.
- Information regarding the decommissioning of the old honey bag pit and the old sewage lagoon adjacent to the solid waste site, which has since been used for the disposal of bulky metals. Environment Canada requests that a decommissioning and reclamation plan be submitted, which includes a discussion regarding where bulky metals will be disposed of once the old sewage lagoon is backfilled.
- Given the proposal to increase the storage capacity of the hamlet, which will result in increased water usage and sewage generation, EC requests information regarding potential future plans to increase the storage capacity of the existing sewage lagoon. The July 2001 Indian and Northern Affairs (INAC) Inspection Report indicates that prior to decant, very little freeboard remained in the sewage lagoon. Environment Canada recommends that the hamlet begin preparing for the possibility of needing additional sewage treatment capacity.
- More detailed information regarding the water supply improvements to be completed in the Hamlet, including an indication of which of the proposals put forth in the Ferguson Simek Clark tender (dated January 28, 2000) would be accepted by the hamlet.
- When available, information regarding the planned changes to the solid waste disposal area, as indicated in the water license.

- When available, a detailed Spill Contingency Plan, outlining a clear plan of response in the event of a spill, and clearly indicating that all spills are to be documented and reported to the NWT 24 Spill Response Line at (867) 920-8130.

The following recommendations have been included for your consideration and inclusion in the water license:

- Environment Canada recommends that a fence be erected around the perimeter of the solid waste disposal facility to reduce the amount of wind blown refuse.
- Environment Canada recommends that work be undertaken to “clean-up” the solid waste disposal facility, as the application states that if the site were cleaned-up, the life of the facility would be extended.
- Environment Canada recommends that the hazardous wastes and waste oil be segregated from the rest of the metal and wood waste, and kept in a secure area until they can be sent to an approved disposal facility
- According to the application documents, the Hamlet currently has no plans to ship hazardous wastes south for recycling/disposal. The proponent shall ensure that all hazardous wastes, including waste oil, are disposal of at an approved facility. Any hazardous materials currently stored on site could be sent to an approved facility at the same time that the unidentifiable barrels are shipped out on sealift for disposal.
- The 2001 INAC inspection report indicates that veins of seepage were evident along the toe of the downslope berm. In order to prevent further leaching of the sewage treatment lagoon, EC recommends that steps be taken to ensure the integrity of the berms.
- Environment Canada recommends signs be erected indicating the location of past and present solid waste disposal facilities, sewage treatment facility, and honey bag pits.
- If cover material is available, EC recommends that the burned wastes be covered at least annually.
- If not already completed, EC recommends that the Hamlet follow the recommendation of the INAC inspector and restrict the flow of the discharge during decant in order to spread the effluent release over a longer period of time, thereby maximizing aerobic decomposition and secondary biological treatment.
- In order to prevent the potential for the deposition of a deleterious substance into any water body, EC recommends that a berm, or other similar preventative measure, be constructed at the solid waste disposal facility to prevent the path of runoff observed by the INAC inspector in 2001 from entering any water body.

Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 975-4639 or by email at colette.meloche@ec.gc.ca.

Yours truly,

Original signed by:

Colette Meloche
Environmental Assessment Specialist

cc: (Mike Fournier, Northern Environmental Assessment Coordinator, Environment Canada, Yellowknife)