Environment Canada **Environnement Canada**

Environment Canada
Prairie and Northern Region
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Your File: 3BM-COR207
Our File: 4782 058

Richard Dwyer
Licence Administrator
Nunavut Water Board
PO Box 119
Gjoa Haven, NU
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Re: Hamlet of Coral Harbor – Renewal – Type "B" Water Licence 3BM-COR207

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 Coral Harbor is applying to renew their water license for a 10 year term to allow for the municipal use of water and deposit of waste. The current facility was constructed as a primary cell in 2003. The facility is bermed and fenced with effluent being gradually discharged between May and October of each year. The effluent flows through a tundra wetland including several ponds before eventually reaching a larger lake and then the ocean. There have been ongoing issues with effluent seeps through the berms on the east and southeast sides. The current final point of discharge is located at the lagoon base which creates some concern over the unregulated seeps. The Hamlet is proposing to include the wetland as part of the treatment system where the final point of discharge would be at the base of the wetland. This would allow the system to remain as such while meeting its licence requirements at the end of the wetland. The Hamlet is proposing to construct berms on the wetland to direct the flow away from the community and have the wetland facility marked with signs.

Environment Canada recommends that the following conditions be applied throughout the duration of the license:

General

- The Hamlet must ensure that any effluent discharged from the system's final discharge point is in compliance with Section 36(3) of the *Fisheries Act*. 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 and blasting activities on the existing sewage lagoon site 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 as a condition of the water licence. Generally the plan should include:
    - A description of how facilities are operated and maintained;
    - How often these tasks are performed; and
    - Who is responsible for their completion.
- A Closure and Reclamation Plan should be submitted for approval as a condition of the water licence.
- Environment Canada supports the proposed expansion of the sewage treatment facility to include the wetland as part of the treatment, including the addition of the diversion berms to ensure that effluent does not flow towards the community. EC also agrees with the proposal to set up signing delineating the sewage treatment system.

Monitoring and Compliance

- The Hamlet has proposed 5 SNP stations starting in the lagoon and successively reaching the bottom of the wetland for the final SNP station. Environment Canada supports the proposed SNP.
- If the system is expanded to incorporate the wetlands as a managed treatment component, EC suggests that much lower limits than those contained in the expired water licence would be appropriate for the outflow from the wetlands (SNP #5).
- Monitoring frequency should be sufficient to inform how the system can best be managed to optimise treatment. For example, timing of discharge will be a factor in how effectively the wetland can take up nutrients and incorporate solids; discharge should occur gradually over the warmer months to ensure that the effluent has enough treatment time in the wetland system.
- 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 latest draft of the Canada-wide Strategy, which addresses specific parameters and governance, was released in October 2007 (http://www.ccme.ca/assets/pdf/mwwe_cda_wide_strategy_consultation_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 BOD_5 (25 mg/L), residual chlorine and TSS (25 mg/L) 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.

Spill Contingency

- **All** spills must be documented and reported to the **NWT Spill Line at (867) 920-8130.**
- 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 and decommissioning 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.

Sewage Sludge Disposal

- Maintenance should include removal and disposal of sewage sludge if it is generated. 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. These procedures should include characterization to ensure disposal options are appropriate. Environment Canada recommends that prior to sludge removal occurring, the proponent submit for approval a Sewage Sludge Management Plan that clearly outlines the chemical composition of the sludge, and how sludge will be stored, treated and eventually disposed of.

Solid Waste Management

- It is recommended that areas be set up for segregation of waste oil, paints and solvents, old batteries, and any other hazardous materials. A hazardous waste management plan needs to be developed and implemented, and should cover handling and storage, as well as identify ultimate disposal of hazardous wastes.
- An Abandonment and Restoration Plan is needed for the solid waste site if this is not already in place.
- The Solid Waste facility should be fully fenced to ensure that there is no dispersal of windblown debris.
- The most recent INAC inspection identifies that leachate from the solid waste facility is running into the wetland. EC strongly recommends that berms be installed to collect and contain the leachate until drainage management to minimize leachate generation can be implemented.

If there are any changes in the proposed activities, 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) 669-4772 or by email at savanna.levenson@ec.gc.ca

Yours truly,

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