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9545-1-3-GJO-G

Our file - Notre référence
9545-1-3-GJO-G

Nunavut Water
Board
Mar 21 2005
Public Registry

Re: Hamlet of Gjoa Haven - Municipal Water Licence Application

Conditions Applying to Water Use:

1. The Hamlet has estimated that they require 121,408 litres per day (approximately 45,000 m³ per year). It is assumed that the Hamlet's engineering consultants have taken into account such contingencies as fire and increased population over the next five years. INAC therefore suggests that this figure be written into the water licence.
2. INAC notes that the water quality from the local reservoir – Water Lake – has diminished over the past two years – primarily due to increased demand and the subsequent draw down of Water Lake to bottom levels, during the winter months. This situation has become a source of concern to both the Fire Marshall and to Public Health Officials.
3. The Hamlet has proposed, through their engineering consultants, to upgrade the 20 year old and nearly obsolete intake pipe at Swan Lake, which is used to replenish Water Lake reservoir. This plan must be effected in order to remedy the problem of diminished water quality and to address the Public Health and Public Safety concerns. INAC supports this effort.

Conditions Applying to Waste Disposal: Solid Waste Disposal Site

INAC has a number of concerns with regard to the manner in which the current landfill site is being operated. These concerns are based on reports submitted by our Water Licence inspectors and are as follows:

- Improperly stored waste oil, solvent and waste fuel drums: missing bungs, leaking containers, open pails of unidentified liquid wastes.
- Lead-acid batteries improperly and haphazardly stored at the waste metal dump.
- According to the table on page 8 of 26 of the Supplementary Questionnaire for Municipalities, erosion has lead to a gap in the berm and decant runoff, yet there are no plans to remedy this situation over the 5 years of the licence.

In consideration of the above, INAC suggests that the following conditions be included in the water licence:

1. Develop and implement a hazardous waste management plan which addresses the safe handling, storage and disposal of waste oil and other hazardous wastes. INAC suggests that the proponent obtain a copy of the Government of Nunavut's *Guideline for the General Management of Hazardous Waste*. INAC is also aware that the GN recently (June 2003) released the *Nunavut Hazardous Waste Management Manual*; the purpose of which is to provide guidance to landfill operators and SAOs in implementing a hazardous waste management program.
2. Designate a suitable and secure, fenced in area for hazardous waste storage.
3. Effect repairs, where necessary, to perimeter fencing to prevent scattering of solid waste, and the perimeter berm to prevent the escape of leachate from the site.
4. Continue with the operation of the SNP station to monitor standing water quality at the landfill site. Metal concentrations should not exceed the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life* (copper-5 µg/L vs 4 µg/L; iron-2.36 mg/L vs 0.3 mg/L, and zinc-130 µg/L vs 30 µg/L).
5. Submit a plan to improve drainage at the waste disposal site and prevent the accumulation of standing water.

Conditions Applying to Waste Disposal: Wastewater

INAC has a number of concerns with respect to the operation of the sewage treatment and disposal facilities:

- INAC water licence inspections indicate that the berm on the sewage lagoon has been raised but without authorization from the Water Board and further, no formal plans or design drawings have been submitted for these works.
- A large spillway has been cut into the berm about 2.5 meters from the top.
- The table on page 8 of 26 of the Water Licence Application Supplementary Questionnaire for Municipalities indicates that the freeboard limit in the sewage lagoon is unacceptable and that a large breach in the berm causes continuous seasonal discharge. The questionnaire specifically indicates that the Hamlet of Gjoa Haven have no plans in place to remedy this situation.
- The proponent was required to decommission the honey bag disposal pit in 2002. According to our Water Licence Inspector, this has not been done.

INAC suggests the following be included as a condition of the water licence:

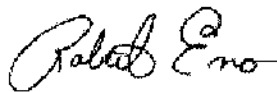
1. The proponent should submit a detailed plan and design drawings to back up the works conducted to raise the berm. The reason for this request is that INAC wants assurances that these works have been designed and engineered properly and will not be subject to failure.
2. The proponent should continue to monitor effluent monthly, during periods of flow, as per the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (1992). The effluent must meet the following criteria:

Total Suspended Solids - 100 mg/L	pH - 6-9
BOD - 80 mg/L	Oil and Grease - no visible sheen
Total Coliforms - 10,000 CFU/100 mL	Ammonia - monitor only
3. Ensure that any solid wastes and litter are removed from the lagoon area on a regular basis.
4. A requirement for the submission of an abandonment and restoration plan for the decommissioning of the honey bag disposal pit should be included in the water licence.

General Comments:

1. Control all activities, including maintenance procedures and refueling, to prevent the entry of petroleum products or other deleterious substances into the water.
2. Prepare and implement a spill contingency plan. INAC suggests using a guideline developed by the Government of the Northwest Territories (and adopted by the Government of Nunavut) entitled: *Guide to Spill Contingency Planning and Reporting Regulations* as a template to the development a plan. INAC is willing to review the proponent's spill plan.
3. Report all spills of oil, fuel, or other deleterious material immediately to the 24-Hour Spill Line at (867) 920-8130.
4. Ensure that appropriate training of municipal staff is completed to ensure quality control in sampling collection and preparation.

Thank you again for providing INAC with an opportunity to comment on this licence. If you have any questions or require clarification on any of the above comments, please do not hesitate to contact me by phone or by e-mail.



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