



Nunavut Regional Office
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NWB3ARV

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9545-2-3-ARV-G

November 23, 2003

Phyllis Beaulieu
A/Licensing Administrator
Nunavut Water Board
P.O. Box 119
Goa Haven, Nunavut X0E 1J0

Dear Ms. Beaulieu

Re: Hamlet of Arviat Water Licence

Please accept my apologies for not responding to this sooner. As you may have already surmised, I am behind on some of my files.

INAC offers the following comments with regard to this licence application:

Conditions Applying to Water Use:

The Hamlet of Arviat has indicated their needs to be in the amount of 62268.993m³ per year, however, water use projections¹ indicate that by 2009, the community's requirements are expected to be in the realm of 81,000 m³. INAC therefore suggests that the Water Board take this into consideration when writing the licence.

Conditions Applying to Waste Disposal: Solid Waste

INAC has a few concerns in this area; all based on the most recent water licence inspection report dated August 12, 2003. These concerns are as follows:

- Materials in the landfill, and in particular, lead-acid batteries, have not been satisfactorily segregated from the other inert wastes
- There was a considerable amount of ponding on the perimeter of the landfill.

¹Population and Water Use Growth Study for the Hamlet of Arviat. FSC Architects and Engineers. Yellowknife, NWT. May 2003. 21 p.

- Improper storage of used oil. INAC commends the Hamlet for operating a used oil furnace, however, they must be more diligent in storing their used oil supplies. The Water Licence Inspector's report indicates that there is an accumulation of 50 barrels of used oil; some of them upended and in a state of deterioration.
 - I. If the supply of used oil exceeds the furnace's capacity to burn it, the Hamlet should consider purchasing another unit.
 - II. Used oil should be stored in new drums or used drums that are in serviceable condition.
 - III. The drums should be stored in the upright position and stored in such a manner that each can be regularly inspected for leaks and/or damage.
 - IV. The drums should be stored on pallets to prevent the bottoms from rusting out.
 - V. The drums should be stored in a secure, fenced-in area. The area should be clearly identified to prevent damage from heavy equipment in the event that it is buried by drifting snow during the winter months.

In addition to the above, INAC notes that the current landfill facility is expected to reach capacity by the year 2006. The reviewer presumes that the licence for this community will be valid for a period of 5 years, although none of the documentation seems to suggest a time frame.

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 (including waste oil and lead-acid batteries). 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. Establish an 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).
4. Submit a plan to improve drainage at the waste disposal site and prevent the accumulation of standing water.
5. The Hamlet should submit an Abandonment and Restoration plan for the current landfill site which is expected to reach capacity by the year 2006. The Hamlet should also be prepared to submit a plan for the construction of a new landfill site well before the expiry date of the current one. The plan should examine practical alternatives to open burning as a means of volume reduction.

Conditions Applying to Waste Disposal: Wastewater/Sewage

INAC notes that the current sewage lagoon has reached its capacity and the construction of another lagoon is underway with a completion date of the summer of 2004.

1. It is not clear from the material provided, what is to be done with the old lagoon, once the new one is completed. I understand that it will be kept on line and will be part of a two cell treatment system. The hamlet should therefore be required to provide a brief description of the operation of this system.
2. Sample wetland treatment system 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


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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