



November 25, 2003

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

Dear Ms. Beaulieu

Re: Hamlet of Chesterfield Inlet Water Licence

I apologize for the delay in getting these comments to you. As indicated in previous letters, I am behind on my files.

Conditions Applying to Water Use:

The total water consumption required by the Hamlet is unclear. Page 4 of the Supplementary Questionnaire seems to indicate 31,176 m³ (unless I have confused litres for cubic meters), however, page 21 seems to indicate (based on how much water is required to re-charge the reservoir) 8,253 m³.

Conditions Applying to Waste Disposal: Solid Waste:

The solid waste disposal facility seems to be, on the whole, well managed. INAC commends the Hamlet for coming up with the innovative idea of using an old water truck to store discarded lead-acid batteries. There are, however, few concerns of note:

- Drummed waste oil storage: rusted/leaking drums; drums missing bung lids. The drums are stored in proximity and uphill from a pond.
- Uncontrolled access and dumping by construction companies, which, in their submission, the Hamlet has described as a problem.
- The natural sloping of the landfill to the adjacent lake may cause excessive runoff¹

¹Municipal Water Use Inspection Report. INAC. Letter to Roy Mullins. September 4, 2002.

INAC suggests that the following be incorporated into 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 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.
 - i. Drummed used oil and other liquid wastes should be stored in new drums or used drums that are in serviceable condition.
 - ii. 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.
 - iii. The drums should be re-located away from the pond and any other body of water; preferably in a natural depression or a properly bermed area.
 - iv. The drums should be stored on pallets to prevent the bottoms from rusting out.
 - v. The drums should be stored in a secure, separate and 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.
 - vi. INAC suggests that lead-acid batteries should be stored on pallets and preferably inside of a dedicated container such as a sea can. Batteries should be stacked no more than two tiers high and separated by a layer of plywood or other non-conductive material.
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 ug/L vs 4 ug/L; iron-2.36 mg/L vs 0.3 mg/L, and zinc-130 ug/L vs 30 ug/L).
4. The Hamlet should investigate the option of re-contouring the slope of the dump so as to prevent or minimize excessive runoff as described in the September 2002 INAC Inspector's report.

Non-Regulatory Suggestions:

- i. The Hamlet has indicated that they are experiencing problems with contractors' uncontrolled dumping of construction debris into the landfill. The reviewer believes that the Hamlet is within their right to enact and enforce bylaws that would compel contractors to segregate their wastes and place these into designated areas within the landfill. The Hamlet has the authority to control and monitor commercial waste if they choose to exercise that authority. The Hamlet can also strictly regulate and if necessary, refuse, to accept hazardous waste (such as batteries and waste oil) from commercial interests. If the Hamlet chooses to accept commercial wastes, it would be in their best interest to levy additional fees to offset the costs associated with the added burdens – on their staff and facilities – required to manage commercial/industrial waste.
- ii. INAC suggests that the Hamlet investigate the possibility of obtaining a used oil furnace as a means of managing their used oil. These appliances have an excellent track record and have improved significantly over the years in terms of efficiency, performance and ease of maintenance.

Conditions Applying to Waste Disposal: Wastewater/Sewage

As with the landfill, the sewage treatment facilities appear to be well-managed. INAC notes two concerns:

- Debris within the lagoon and metal debris and the accumulation of metal waste adjacent to the discharge point.
- The old honeybag/sewage area

INAC suggests that the following be included in the water licence:

1. 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
2. Garbage and other debris should be regularly removed from the sewage lagoon and wetlands treatment area.
3. The Hamlet should submit an abandonment and restoration plan for the decommissioning of the old honeybag disposal area. Having said that, the former honeybag storage area may not be an issue. If such is the case, the

Hamlet should provide documentation indicating why this is so and why an A&R plan is not required.

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 submit a spill contingency plan for review. The Government of the Northwest Territories' Environmental Protection Service developed a very useful set of spill planning and reporting guidelines to complement their *Spill Contingency Planning and Reporting Regulations*; both of which have been adopted by the Government of Nunavut. INAC suggests that the Hamlet will find these guidelines to be helpful in developing a spill plans. INAC is willing to review the Hamlet's spill plan and provide advice.
3. Report all spills of oil, fuel, or other deleterious material immediately to the 24-Hour Spill Line at (867) 920-8130. Collect calls are accepted.
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.



Robert Eno
Kitikmeot/Kivalliq Regional Water Resources Coordinator
(867) 975-4548
e-mail:
enor@inac.gc.ca