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North Mackenzie  
P.O. Box 2100  
Inuvik, NT X0E 0T0

**Affaires Indiennes  
et du Nord Canada**  
[www.ainc.gc.ca](http://www.ainc.gc.ca)

Telephone: (867) 777-8900  
Fax: (867) 777-2090

December 2, 2009

Northwest Territories Water Board  
P.O. Box 2531  
Inuvik, NT X0E 0T0

**Attn: Mike Harlow, Executive Director**

**RE: Municipal Water Licence (N3L3-0570)**

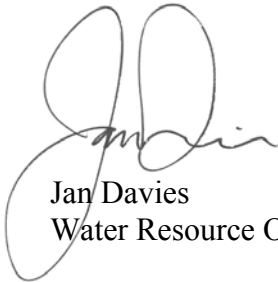
Dear Mr. Harlow,

Please find the enclosed Inspection Report for your review and/or records.

An electronic copy (un-editable Adobe pdf.) has also been provided by e-mail.

If you have any questions or concerns regarding the enclosed, and/or if additional information is required please contact me at 867-777-8909.

Sincerely,



Jan Davies  
Water Resource Officer

Cc: Conrad Baetz, District Manager, North Mackenzie District, Inuvik, NT

Enclosure: Water Licence Inspection Report and Cover Letter (6 pages)



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December 2, 2009

Hamlet of Aklavik  
P.O. Box 88  
Aklavik, NT, X0E 0A0

**Attn: Evelyn Storr**

**RE: Municipal Water Licence (G99L3-003 and N3L3-0570)**

Dear Ms. Storr,

On November 18, 2009 an inspection was conducted of the Municipal Water Supply and Waste Disposal Facilities under the above mentioned Municipal Water Licences. Enclosed is a copy of the Municipal Water Licence Inspection Report.

There have been many improvements in the operation of the Solid Waste Disposal Facilities. The hard work that has been completed to the waste cells, signage and segregation areas in addition to the summer sampling at the Sewage Disposal Facility is commendable. Unfortunately there were some violations as depicted on page three of the Inspection Report. Many of the violations relate to reporting, signage and Surveillance Network Program requirements and can be dealt with promptly. Please review the concerns throughout the Inspection Report.

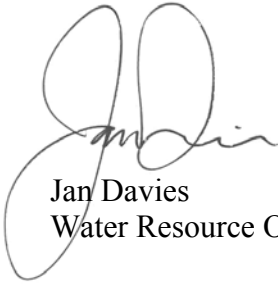
Upon review of previous years Inspection Reports it is apparent that many of the violations and concerns outlined in the Inspection Report are consistent with those in previous years. While it is clear that some great progress is being made on certain issues, there are terms and conditions of your Water Licence that are being neglected resulting in non-compliance/violations. Please continue to address the aforementioned items as INAC considers non-compliance of Water Licences a serious matter.

Please note that it is the Hamlet's responsibility to ensure compliance with all of the terms and conditions of its Water Licence. INAC looks forward to working with you as much as possible to achieve compliance.

A copy of this report will be sent to the Northwest Territories Water Board and the Gwich'in Land and Water Board for their review and/or public records.

If you have any questions, please contact me at 867-777-8909.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jan Davies', with a large, stylized initial 'J'.

Jan Davies  
Water Resource Officer

Cc: Conrad Baetz, District Manager, North Mackenzie District, Inuvik, NT

Enclosure: Water Licence Inspection Report (4 pages)



## WATER LICENCE INSPECTION FORM

<b>DATE:</b>	November 18, 2009	<b>COMPANY REP:</b>	Evelyn Storr
<b>LICENCEE:</b>	Hamlet of Aklavik	<b>LICENCE #:</b>	G99L3-003 and N3L3-0570

### WATER SUPPLY

Source:	Peel Channel - Mackenzie River	Quantity Used:	18,180 m <sup>3</sup>
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Owner/Operator: Hamlet of Aklavik/GNWT-DPW

Indicate:	A - Acceptable	U - Unacceptable	N/A - Not Applicable	N/I - Not Inspected			
Intake Facilities	A <sup>2</sup>	Storage Structures	A	Treatment Systems	A <sup>2</sup>	Chem. Storage	A <sup>1</sup>
Flow Meas. Device	A	Conveyance Lines	A	Pumping Stations	A <sup>2</sup>		

Comments:

Concerns

1. Ensure proper disposal of Alum and Chlorine waste containers.
2. See concerns in Fuel Storage Section.

Notes:

- New Water Treatment Plant (WTP) is on site and being prepared for operation. The new WTP was to be running in October but has been delayed until January by best estimate. The old WTP appears to be in order.
- Chemical storage room is organized.

### WASTE DISPOSAL

Well Waste	Off-Site Removal	N/A	Drilling Sump	N/A	Downhole	N/A	Land spread	N/A
Sewage	Sewage Treatment System (primary, secondary, or tertiary)			Primary				
	Natural Water Body	✓		Continuous Discharge (land or water)		water		
	Seasonal Disch.	N/A		Wetlands Treatment	✓		Trench	N/A
Solid Waste	Owner/Operator:	Hamlet of Aklavik						
	Landfill	✓	Burn & Landfill	Conditionally acceptable		Other	N/A	

Indicate:	A - Acceptable	U - Unacceptable	N/A - Not Applicable	N/I - Not Inspected			
Discharge Quality	A <sup>1</sup>	Construction	N/A	Disch. Meas. Dev.	A	Freeboard	N/A
Decant Structures	N/A	O&M Plan	A <sup>11</sup>	Dams, Dykes	N/A	Seepages	N/A
Dyke Inspections	N/A	A&R Plan	N/A	Erosion	A <sup>2</sup>	Spills	U <sup>9,12</sup>
Periods of Discharge	Continuous		Effluent Discharge Rate		Natural outflow from lagoon		

Comments:

Concerns:

1. It is good to see that Sewage Disposal Facility (SDF) discharge samples were taken by the Hamlet of Aklavik during July 10, 2009. Discharge quality was acceptable from the limited analysis that was completed. To monitor water quality at the outflow from the Sewage Disposal Facility please ensure that sampling is conducted once immediately after breakup and once prior to freeze-up during periods of open water. The Hamlet of Aklavik is required to conduct sampling twice annually as per Surveillance Network Program criteria Part B: General Conditions, Item 2, of the Water Licence. See Surveillance Network Program section.
2. Erosion present at sewage disposal chute. The Hamlet is trying to maintain the area. There are plans to use a cam lock in the future so there is less sewage bypassing the front of the chute.
3. A lot of work has been done to improve the Solid Waste Disposal Facility(SWDF). Amongst the bulky metal waste area vehicles are being separated and crushed to be put in a designated cell, Hamlet foreman said vehicular fluids have been removed (see Figure 1). There is concern over whether the current cell for vehicle disposal is approved by the Board as per the current Operation and Maintenance Plan and this was expressed to the Hamlet. Vehicles will continue to be separated and crushed but the cell will not be closed. Only upon prior approval is confirmed by the Board will closure occur.
4. Signage was present at the SWDF for bulk material, tires, household waste, honeybags, waste appliances and including directions for proper disposal. According to the foreman there was a sign with a map to show where to dispose of various materials. Please ensure additional signage is used to further increase public guidance and waste segregation. Signs should be posted for but not limited to the following areas: wood waste, empty drums, and hazardous waste(waste oil, batteries etc.).
5. Many of the current waste cells have been covered over (see Figure 3 and 4). Continue to operate the SWDF so waste cells continue to be properly maintained and capped. The location where the asbestos is buried needs to be on record and noted for future activities .
6. Some unique looking black sand in sealable plastic bags was found at the SWDF. The Hamlet foreman –Dean Arey

(Manny) mentioned that he will try to identify it and where it's was from. It is thought to be filter sand from the pool or the Water Treatment Plant.

7. Please note that contaminated soil needs to be sent to a proper disposal facility or dealt with properly to ensure adequate remediation. There needs to be a geotextile/liner under the contaminated soil with a berm to minimize the potential for migration of contaminants to the surrounding area. The presence of contaminated soil at the SWDF without proper containment is unacceptable and could lead to further contamination. The Hamlet needs to comply with Part D: Conditions Applying to Waste Disposal, Item 8 of Water Licence N3L3-0570 and provide proper containment for the contaminated soil.

8. In the future please note Part D: Conditions Applying to Waste Disposal, Item 7, in Water Licence N3L3-0570 that "The Licensee shall notify an Inspector when any contaminated soil is deposited at the Solid Waste Disposal Facilities."

9. During the September 24, 2008 Inspection there was a sheen on water in the wetland area and ditch along the road outside of the perimeter road on the east side of the Bulky Metal Waste Area. If there there is a sheen present on site, water samples need to be taken to identify this sheen.

10. Make sure there is an adequate berm for the Honey Bag Pit that is long enough and surrounds to whole pit.

11. It is apparent that the Operation and Maintenance Plan(O&M Plan) needs to be updated and components of the approved Plan are not being followed. Ensure that Hamlet Personnel are familiar with the approved O&M Plan and that it is being properly implemented. A copy of the approved O&M Plan must be onsite and readily available.

12. Hazardous waste is being stored in a specific area at the SWDF but a berm should be constructed around it to provide better containment as per Part D: Conditions Applying to Waste Disposal, Item 9, in Water Licence N3L3-0570. The SWDF should not have permanent storage areas of hazardous waste(waste oil, batteries etc.). Effort should be taken to dispose of this material appropriately. During previous inspections spilled oil was noticed in these areas. When there has been spillage, make sure the soil and used oil is cleaned up, contained and properly disposed of. Ensure that the hazardous waste storage area is organized and materials stored properly. This will ultimately keep the area clean and encourage the public to segregate waste properly.

Notes:

- The SWDF has a gated entrance to control access to the facility. After hours there is a drop off bin that allows the public to leave waste. The bin is then able to be picked up by equipment and taken to the designated areas in the SWDF to properly dispose of the waste (see Figure 2).
- Signs and fencing are being used to direct people where to dispose of various waste including household waste. Tires are being used to direct where to put waste appliances (see Figure 3 and 4).
- Batteries are taken for storage at the Hamlet including any found at the SWDF.
- No evidence of burning occurring at the time of inspection but the Hamlet has designated a burn bin for burning approved materials. Reminder that municipal solid wastes that are conditionally suitable for open burning are paper products, paperboard packaging and untreated wood wastes according to the document from the GNWT Department of Environment and Natural Resources titled "Municipal Solid Wastes Suitable for Open Burning" (see Figure 5).
- **A Sewage Treatment Plan is due June 30, 2011 and an Operation and Maintenance Plan is due June 30, 2012 for the Northwest Territories Water Board.**

**FUEL STORAGE**

Owner:	Hamlet/GNWT-DPW	Operator:	GNWT-DPW	Condition of tanks:	Good <sup>2</sup>
Berms & Liners	N/A	Water within Berm:	N/A	Evidence of Leaks:	None
Drainage Pipes	Good	Pump Station and Catchment Berm	Good		
Pipeline Condition	Fair <sup>1</sup>	Not Applicable:	N/A		

Comments:

Concerns:

1. Flex pipe from old Water Treatment Plant to emergency generator is not straight and is showing signs that movement of buildings and piping is occurring. It is important to observe piping for any further movement that could cause problems/risk of leaks.
2. There was a tidy tank outside the new Water Treatment Plant (WTP) that was being used to supply fuel to the Plant. Safe operation is important as the fuel line is a hose and no secondary containment is present. It is highly recommended that an iced down snow berm be made to include the tank, hose and hook up etc. to allow a proper spill containment (see Figure 6).

Note:

- The new WTP has a new double walled fuel storage tank that has yet to be hooked up.

**SURVEILLANCE NETWORK PROGRAM**

Samples Collected Hamlet	Sewage sample taken once during the year on July 10, 2009. <sup>4</sup>		
Samples Collected DIAND	No samples taken during inspection.		
Signs Posted: SNP	Sign at Sewage Disposal Facility <sup>2</sup> and needed at Water Treatment Plant <sup>5</sup> .	Warning	Sign present for Solid Waste Disposal Facility. Sign needed for Water Treatment Plant <sup>6</sup> and Sewage Disposal Facility <sup>3</sup> .
Record & Reporting	- 2004, 2005, 2006, 2007, 2008 Annual Reports not received. <sup>1</sup> - 2003 Annual Report was received but was deemed incomplete by this office. The report did not include SNP data as required by Water Licence N3L3-0570. Please ensure that all sections of Annual Report requirements as indicated in Part A, section 3 (a through e) are addressed.		
Geotechnical Inspection	N/A		

Comments:

Concerns:

1. Annual Reports are to be submitted as per Part B: General Conditions, Item 1, of the Water Licences. Annual reports from 2004, 2005, 2006, 2007 and 2008 have not been submitted.
2. A map or drawing indicating the location of the SNP sampling location is required by Part B: General Conditions, Item 4, in Water Licence N3L3-0570.
3. A sign needs to be posted to inform the public of the Sewage Disposal Facility as per Part B: General Conditions, Item 5, in Water Licence N3L3-0570.
4. Sewage Disposal Facility (SDF) discharge samples were taken by the Hamlet of Aklavik during July 10, 2009. Total Suspended Solids and pH were the only parameters listed in the Surveillance Network Program (SNP) that results were available for due to hold time exceedences. To monitor water quality at the outflow from the Sewage Disposal Facility please ensure that sampling is conducted once immediately after breakup and once prior to freeze-up during periods of open water. The Hamlet of Aklavik is required to conduct sampling twice annually as per Surveillance Network Program criteria Part B: General Conditions, Item 2, of Water Licence N3L3-0570.
5. To identify SNP stations at the Water Treatment Plant, signage is required by Part B: General Conditions, Item 5, of Water Licence G99L3-003.
6. To inform the public of Water Supply Facilities, signage is required as per Part B: General Conditions, Item 6, of Water Licence G99L3-003.

Note:

- **Spill Contingency Plan is due February 1, 2010 for the Gwich'in Land and Water Board and on June 30, 2010 for the Northwest Territories Water Board.**

**Violations of Act or Licence:**

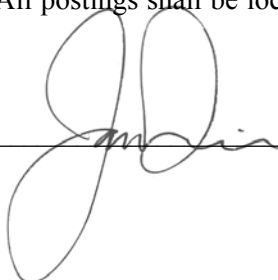
Northwest Territories Water Board Licence - N3L3-0570

1. Part B: General Conditions, Item 1,  
"The Licensee shall file an Annual Report with the Board not later than April 30th of the year following the calendar year reported..."
2. Part B: General Conditions, Item 2,  
"The Licensee shall comply with the "Surveillance Network Program" annexed to this Licence, and any amendment to the said "Surveillance Network Program" as may be made from time to time, pursuant to the conditions of this Licence."
3. Part B: General Conditions, Item 4,  
"The Licensee shall, within 60 days of the issuance of this Licence, submit to the Board for approval a map or drawing indicating the location of all Surveillance Network Program sampling locations."
4. Part B: General Conditions, Item 5,  
"The Licensee shall, within 60 days of issuance of this Licence, post signs in the appropriate areas to inform the public of Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector."
5. Part D: Conditions Applying to Waste Disposal, Item 8,  
"The Licensee shall contain all contaminated soil in such a manner as to minimize the potential for migration of contaminants into any Water, to the satisfaction of an Inspector."
6. Part D: Conditions Applying to Waste Disposal, Item 9,  
"The Licensee shall segregate and store hazardous Waste in a temporary storage area, to the satisfaction of an Inspector."

Gwich'in Land and Water Board Licence - G99L3-003

1. Part B: General Conditions, Item 1,  
"The Licensee shall file an Annual Report with the Board not later than April 30th of the year following the calendar year reported..."
2. Part B: General Conditions, Item 5,  
"The Licensee shall, within sixty (60) days of the issuance of this Licence, post the necessary signs, where possible, to identify the stations of the "Surveillance Network Program". All postings shall be located and maintained to the satisfaction of an Inspector."
3. Part B: General Conditions, Item 6,  
"The Licensee shall, within sixty (60) days of issuance of this Licence, post signs in the appropriate areas to inform the public of Water Supply Facilities. All postings shall be located and maintained to the satisfaction of an Inspector."

Inspector's Signature: \_\_\_\_\_





## WATER LICENCE INSPECTION REPORT Pg. 4 (Continued)

<b>Date:</b>	November 18, 2009	<b>Licence #:</b>	G99L3-003 and N3L3-0570
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**Inspection Images:**

**Figure 1**

Crushed vehicle cell at bulky metal waste area.



**Figure 2**

Gated entrance and after hours drop off bin which allows the public to still leave waste behind.



**Figure 3**

Overall picture of Solid Waste Disposal Facility on south side of access road.



**Figure 4**

Overall picture of Solid Waste Disposal Facility on north side of access road.



**Figure 5**

Burn bin at Solid Waste Disposal Facility to burn segregated waste- paper, cardboard, and untreated wood.



**Figure 6**

Tidy tank connected by a hose the Water Treatment Plant and should have an iced down berm for secondary containment.

