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February 18, 2011

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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February 18, 2011

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 September 2, 2010 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.

The efforts to better the operations of the Waste Disposal Facilities have been recognized and appreciated. Waste segregation and signage improvements to the Solid Waste Disposal Facility are commendable. Unfortunately there were some violations as depicted on page three of the Inspection Report. Many of the violations can be dealt with promptly as they relate to reporting, signage and Surveillance Network Program requirements. Please review and address the concerns throughout the Inspection Report.

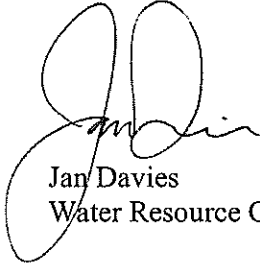
It is apparent that many of the violations and concerns outlined in the Inspection Report are consistent with those in previous years. It is clear that progress is being made on certain issues, however, there are terms and conditions of your Water Licence that are being neglected resulting in non-compliance/violations. 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', written over a large, stylized circular flourish.

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

| | | | |
|-----------|-------------------|--------------|-------------------------|
| DATE: | September 2, 2010 | COMPANY REP: | Evelyn Storr |
| LICENCEE: | Hamlet of Aklavik | LICENCE #: | G99L3-003 and N3L3-0570 |

WATER SUPPLY

| | |
|--|--------------------------------------|
| Source: Peel Channel - Mackenzie River | Quantity Used: 20,372 m ³ |
|--|--------------------------------------|

Owner/Operator: Hamlet of Aklavik/GNWT-DPW

| Indicate: | A - Acceptable | U - Unacceptable | N/A - Not Applicable | N/I - Not Inspected | | | |
|-------------------|----------------|--------------------|----------------------|---------------------|----------------|---------------|------------------|
| Intake Facilities | A | Storage Structures | A | Treatment Systems | A ² | Chem. Storage | A ^{1,2} |
| Flow Meas. Device | A | Conveyance Lines | A | Pumping Stations | A | | |

Comments:

Concerns:

1. At the time of inspection they were building a pad of earth next to the chemical handling portion of the WTP to able to receive chemical barrels when doing change outs. Ensure this pad is adequate and not a risk for things to fall off as there were no side rails etc.
2. See concerns in Fuel Storage Section.

Notes:

- New Water Treatment Plant (WTP) is operational and looks good. Pump house and fuel tank are new additions with the new WTP. The old WTP has been removed.
- Continue to ensure proper disposal of empty Alum and Chlorine containers.
- Chemical storage room continues to appear 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 | U ³ | Construction | N/A | Disch. Meas. Dev. | A | Freeboard | N/A |
| Decant Structures | N/A | O&M Plan | U ¹¹ | Dams, Dykes | N/A | Seepages | N/A |
| Dyke Inspections | N/A | A&R Plan | N/A | Erosion | N/A | Spills | U ^{1,2} |
| Periods of Discharge | Continuous | | Effluent Discharge Rate | | Natural outflow from lagoon | | |

Comments:

Concerns:

1. Spill of used oil next to waste metal area. Mentioned to Senior Administrative Officer (SAO) and Hamlet Foreman. This needs to be cleaned up, absorbents suggested to be used (see Figure 1).
2. A lot of work was done by the Hamlet to improve the Solid Waste Disposal Facility (SWDF). Of the bulky metal waste area an effort was made to separate vehicles, crush them and put them in a designated cell. Waste vehicle cell filled with water, clear evidence of hydrocarbon contamination from vehicles and 2 new additions to waste vehicle cell area (see Figure 2). Water samples were taken to find concentrations in water in amongst waste vehicle cell. Waste vehicles need to be removed from water as this is furthering contamination of the area. This was mentioned to the SAO during our site visit to SWDF during the inspection. Vehicles need to be above the water and it was discussed about them being on a gravel pad.
3. At the time of inspection the discharge quality was unknown due to no samples being taken. Discharge quality was acceptable from the limited analysis that was completed from the sampling of the Sewage Disposal Facility (SDF) in July 10, 2009. Sampling of the outflow of the SDF needs to occur once immediately after breakup and once prior to freeze-up during periods of open water, twice annually, as per Surveillance Network Program criteria Part B: General Conditions, Item 2, of the Water Licence. See Surveillance Network Program section.
4. Signage is present for different waste streams and thus waste segregation is occurring and has improved but further work is needed to sustain the site operation. Maintain current signage and ensure additional ones are used to further increase public guidance and waste segregation. For example sewage bag (honey bags) signage needs to be refurbished. Signs should be posted for but not limited to the following areas: honey bag pit, waste animal pit, empty drums and tanks, wood waste, bulky metal wastes, waste vehicles/ATVs/ skidoos, waste appliances(washers/dryers, etc.), domestic garbage, waste tires, and hazardous waste(waste oil, batteries etc).

5. Many of the current waste cells have been covered over. 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. Hamlet needs to collect oil/glycol to send out for proper disposal.
7. Should be a berm around the waste oil storage to provide containment as the pails etc. are in various stages of being secure (see Figure 3). Berm around sewage bags needed to contain this material.
8. Good to see signage, continue notifications - Warning signage needed throughout water and waste facilities. This will inform the public of what these facilities are.
9. Hamlet going to re-install culvert under access road to landfill/sewage lagoon - estimated to be in vicinity of waste vehicle pit, check into location risk to surrounding water.
10. Ensure hazardous waste is stored in an area at the SWDF with a berm constructed around it to provide better containment as per Part D: Conditions Applying to Waste Disposal, Item 9, in Water Licence N3L3-0570 (see Figure 4). Hazardous waste (waste oil, batteries, barrels, etc.) should be temporarily stored and then disposed at approved and designated facilities. Spilled oil was noticed around the SWDF. 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.
11. The Operation and Maintenance Plan (O&M Plan) needs updating and to be followed as there are components of the approved Plan that are not being adhered to as per Part E: Conditions Applying to Operation and Maintenance, Item 4, of the Water Licence N3L3-0570. Hamlet Personnel need to be familiar with the approved O&M Plan and ensure it is implemented properly. A copy of the approved Plan needs to be onsite and readily available.

Notes:

- 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. Please note Part D: Conditions Applying to Waste Disposal, Item 7 and 8, of Water Licence N3L3-0570.
- Hamlet to be commended for the repairs to the sewage disposal chute w/erosion issues and trying to maintain the area.
- The Solid Waste Disposal Facility (SWDF) gated entrance is present with after hours drop off bin that allows the public to leave waste. The bin waste is then properly disposed of.
- Signs and fencing continues direct people where to dispose of various waste streams
- Hamlet uses a designated burn bin for burning approved materials such as paper products, paperboard packaging and untreated wood wastes in accordance with the guideline Municipal Solid Wastes Suitable for Open Burning, developed by the GNWT Department of Environment and Natural Resources.
- A Sewage Treatment Plan is due June 30, 2011 and a Municipal Solid Waste Operations 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 |
| Berms & Liners | WTP day tank inside | Water within Berm: | N/A | Evidence of Leaks: | None |
| Drainage Pipes | N/I | Pump Station and Catchment Berm | Good | | |
| Pipeline Condition | A ^{1,2} | Not Applicable: | N/A | | |

Comments:

Concerns:

1. Flex pipe for the chemical storage building fuel tank is showing signs of movement. Continue to monitor for spill prevention (see Figure 5).
2. The new Water Treatment Plant's fuel tank has a set up for the pipeline that is a concern. The flex pipe appears to be supported with pipe hangers attached to the main building but on the fuel tank's side of the flex pipe. It is questionable if this is appropriate because it does not appear that either the main building or the fuel tank are now fully independent of one another (see Figure 6).

Notes:

- Newer fuel tank from old Water Treatment Plant will be used somewhere else in the community
- The new WTP has a new double walled fuel storage tank

SURVEILLANCE NETWORK PROGRAM

| | | | | | |
|--------------------------|--|---------|---|--|--|
| Samples Collected Hamlet | - It is noted that sampling occurred on July 10, 2009, results appear in 2009 Annual Report. Not all parameters were sampled for, some samples were received past hold times according to lab reports. Ensure samples are taken, get to the lab in time so holding times are not exceeded. - At the time of inspection it did not appear samples had been taken in 2010. ¹ | | | | |
| Samples Collected DIAND | Yes, from the standing water in the waste vehicle pit that had a sheen on it. | | | | |
| Signs Posted: SNP | No map submitted. ³ No signs observed. ⁵ | Warning | Sign at SWDF gated entrance. Warning signs needed at Waste Disposal Facilities to inform the public. ^{4,6} | | |
| Record & Reporting | - 2004, 2005, 2006, 2007, 2008, 2009 Annual Reports not received. ² 2009 Annual Report sent in for Water Licence N3L3-0570 but not for Water Licence G99L3-003. | | | | |
| Geotechnical Inspection | N/A | | | | |

Comments:

Concerns:

1. To monitor water quality, 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. Sampling is to be conducted once immediately after breakup and once prior to freeze-up during periods of open water from the outflow of the Sewage Disposal Facility.
2. Annual reports are still required for 2004 – 2008 as per Part B: General Conditions, Item 1, of Water Licence N3L3-0570. In addition annual reports are still required for 2004, 2005, 2007-2009 as per Part B: General Conditions, Item 1, of Water Licence G99L3-003. If data is limited, Annual Reports should be sent with what information is known so there are records available.
3. A map or drawing indicating the location of the SNP sampling location has not been submitted and is still required by Part B: General Conditions, Item 4, in Water Licence N3L3-0570.
4. At the time of inspection a sign still needed to be posted to inform the public of the Solid Waste Disposal Facility and the Sewage Disposal Facility as per Part B: General Conditions, Item 5, in 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. During inspection it was noted a sign was still required to inform the public of Water Supply Facilities, as per Part B: General Conditions, Item 6, of Water Licence G99L3-003.
7. A Spill Contingency Plan was due on February 1, 2010 for the Gwich'in Land and Water Board as per Part F: Conditions Applying to Contingency Planning, Item 1, of Water Licence G99L3-003.
8. A Spill Contingency Plan was due on June 30, 2010 for the Northwest Territories Water Board as per Part E: Conditions Applying to Operation and Maintenance, Item 1, of Water Licence N3L3-0570.

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 stations."

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 9,

"The Licensee shall segregate and store hazardous Waste in a temporary storage area, to the satisfaction of an Inspector."

6. Part E: Conditions Applying to Operation and Maintenance, Item 1,

"The Licensee shall submit to the Board for approval by June 30, 2010 a Spill Contingency Plan in accordance with the Guidelines for Spill Contingency Planning, April 2007 developed by INAC-Water Resources Division."

7. Part E: Conditions Applying to Operation and Maintenance, Item 4,

"The Licensee shall implement the Spill Contingency Plan, the Sewage Treatment Plan, and the Municipal Solid Waste Operations and Maintenance Plan as and when approved by the Board."

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."

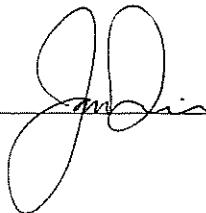
3. Part B: General Conditions, Item 6,

"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."

4. Part F: Conditions Applying to Contingency Planning, Item 1,

"The Licensee shall submit to the Board, within six (6) months of the issuance of the Licence, a Spill contingency Plan in accordance with the Guidelines for Spill Contingency Planning, April 2007 developed by INAC Water Resources Division."

Inspector's Signature: _____





WATER LICENCE INSPECTION REPORT Pg. 4
(Continued)

| | | | |
|-------|-------------------|------------|-------------------------|
| Date: | September 2, 2010 | Licence #: | G99L3-003 and N3L3-0570 |
|-------|-------------------|------------|-------------------------|

Inspection Images:

Figure 1

Spill of used oil next to waste metal area and needed to be cleaned up.



Figure 2

Waste vehicle cell filled with water, evidence of hydrocarbon contamination from vehicles.



Figure 3

Berm needed around the waste oil storage for containment, the pails etc. are in various stages of being secure.



Figure 4

Ensure hazardous waste is stored in an area at the Solid Waste Disposal Facility with a berm constructed around it.



Figure 5

Flex pipe for the chemical storage building fuel tank is showing signs of movement. Continue to monitor.



Figure 6

WTP Pipe hangers from main building attached to fuel tank's side of flex pipe, both not fully independent of one another.



