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April 22, 2009

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

**Attn: Mike Harlow, Executive Director**

**RE: Municipal Water Licence (N7L3-0714)**

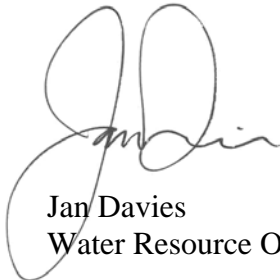
Dear Mr. Harlow,

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 867-777-3662.

Sincerely,



Jan Davies  
Water Resource Officer

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

Enclosure: Water Licence Inspection Report (3 pages)



## WATER LICENCE INSPECTION FORM

<b>DATE:</b>	November 24, 2008	<b>COMPANY REP:</b>	Debbie Raddi
<b>LICENCEE:</b>	Incorporated Hamlet of Tuktoyaktuk	<b>LICENCE #:</b>	N7L3-0714

### WATER SUPPLY

Source:	Kudlak Lake	Quantity Used:	~40, 207 m <sup>3</sup>
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Owner/Operator: Hamlet of Tuktoyaktuk

**Indicate:**      **A - Acceptable**                      **U - Unacceptable**                      **N/A - Not Applicable**                      **N/I - Not Inspected**

Intake Facilities	N/I	Storage Structures	A	Treatment Systems	A	Chem. Storage	A
Flow Meas. Device	A	Conveyance Lines	A	Pumping Stations	A		

Comments:

Concerns:

- Fuel tank and piping - see Fuel Storage Section.

Note:

- Intake Facility located at Kudluk Lake were not inspected.
- New Water Treatment Plant is planned for the Fall of 2009. Discussed the new facility and a better fuel storage system.
- Due to the spill that occurred in 2004 at the Kudluk Lake (Spill #04-572) water intake facility there are a number of measures being used. A propane motor is being used to run the pump and there is a diesel backup. The Raw Water Reservoir is filled over a 3 week period during which time there is a 24hr watch of the pump station a Kudluk Lake and it is checked 3 times a day.

### WASTE DISPOSAL

Sewage	Sewage Treatment System (primary, secondary, or tertiary)	primary lagoon		
	Natural Water Body	✓	Continuous Discharge (land or water)	
	Seasonal Disch.	✓	Wetlands Treatment	Trench
Solid Waste	Owner/Operator:	Hamlet of Tuktoyaktuk		
	Landfill	✓	Burn & Landfill	Conditionally acceptable
			Other	

**Indicate:**      **A - Acceptable**                      **U - Unacceptable**                      **N/A - Not Applicable**                      **N/I - Not Inspected**

Discharge Quality	A	Construction	N/A	Disch. Meas. Dev.	A	Freeboard	N/I
Decant Structures	U <sup>6</sup>	O&M Plan	U <sup>5</sup>	Dams, Dykes	N/I	Seepages	N/I
Dyke Inspections	N/A	A&R Plan	N/A	Erosion	N/I	Spills	U <sup>2</sup>
Periods of Discharge	Late Fall		Effluent Discharge Rate		Equal to pump rate		

Comments:

Concerns:

- Sewage discharge chute knocked off position by vacuum truck and will need to be put back in place. Curbs or tire stop blocks should be installed to prevent truck from hitting chutes or backing up too far.
- There was spillage of sewage from the vacuum truck on the discharge chute turnaround pad at the sewage lagoon. Ensure the operators know to close valve before pulling away. A loader or grader needs to be used to scrape this up and properly dispose of it in the sewage lagoon. Further spillage needs to be reported to ensure timely cleanup.
- Signage was present at the Solid Waste Disposal Facilities(SWDF) however, additional signage is needed to further increase public guidance and waste segregation. Signs should be posted for but not limited to the following areas: domestic garbage, waste tires, waste appliances(washers/dryers, etc.), wood waste, bulky metal wastes, empty drums, honey bag pit, waste animal pit and hazardous waste(waste oil, batteries etc.).
- Very little cover material to cover solid waste. This is required to ensure proper maintenance of the SWDF. This would also assist with controlling windblown debris. (see Figure 2)
- It is apparent that the SWDF and Sewage Disposal Facility Operation and Maintenance Plans(O&M Plan) need to be updated and components of the O&M Plan are not being followed. Ensure that Hamlet Personnel are familiar with the O&M Plan and that it is being properly implemented. It is recommended that a copy of the approved O&M Plan be readily available to Hamlet staff.
- As per the 2007 Water Licence Inspection Report concerning the floating intake (see Part D, section 16) that sinks to the bottom because the line is so heavy once full of water and consequently plywood is used under the intake instead, it will be necessary to apply to the Northwest Territories Water Board for a modification (see Part E) to the Licence.

Note:

- Due to snow there was limited access to the Solid Waste and Sewage Disposal Facilities during the inspection.
- Only the Sewage Disposal Facility decanted this year, Solid Waste Lagoon was not decanted.
- Waste oil collected at Hamlet Maintenance Garage to be later burned with waste oil burner at E-Grubens Transport.
- Batteries collected at Hamlet Four Bay Garage and put on pallet to send out with contractor.
- Continue to control access to northside of SWDF – only for vehicles/ATVs emptied of all fluids, appliances, waste metal etc.
- As per the 2007 Municipal Water Licence Inspection – Ensure that groundwater monitoring wells all around the SWDF are properly maintained such as being covered and locked to prevent contamination of groundwater and future samples.

**FUEL STORAGE**

Owner:	Hamlet of Tuktoyaktuk	Operator:	Hamlet of Tuktoyaktuk	Condition of tanks:	Fair, has rusty connection points <sup>1</sup>
Berms & Liners	N/A	Water within Berm:	N/A	Evidence of Leaks:	None detected during inspection
Drainage Pipes	N/A		Pump Station and Catchment Berm		N/A
Pipeline Condition	Poor, corroded, hose flex connector mis-aligned <sup>1</sup>		Not Applicable:		N/A

Comments:

Concerns:

1. Fuel tank and hose flex connector is out of alignment. The pipeline connection to the tank needs to be repaired. Further movement of the tank and pipeline connection can cause a spill. Fuel tank has rust/corrosion at the connection points and should be replaced. Recommend moving the pipeline so it draws from the top of the tank so as to prevent future spills. (see Figure 1)

Notes

- Since fuel is stored at the intake facilities it is recommended to have spill kits on site to respond to any spills that might occur.

**SURVEILLANCE NETWORK PROGRAM**

Samples Collected		Hamlet	Hamlet collected sample prior to decant of sewage lagoon. <sup>1</sup>	
		DIAND	No samples taken	
Signs Posted:	SNP	Not inspected	Warning	Sewage Lagoon sign present. Need to identify the Solid Waste Disposal Facility and provide signage to ensure proper waste segregation and instructions for batteries and waste oil disposal.
Record & Reporting	2003-2008 Annual Reports not submitted. Annual Reports are due as per Water Licence Criteria. <sup>2</sup>			
Geotechnical Inspection	N/A			


Comments:

Concerns:

1. Hamlet is required to conduct further sampling as per the Surveillance Network Program to monitor water quality annually at the Solid Waste Lagoon and during the decant of the Sewage Disposal Facility.
2. Ensure Annual Reports are submitted as per Water Licence Criteria Part B1.

<b>Non-Compliance of Act or Licence:</b>	<ol style="list-style-type: none"> <li>1. Part B, section 1. 2003-2008 Annual Reports not submitted.</li> <li>2. Part B, section 2. The Licensee shall comply with the “Surveillance Network Program”</li> <li>3. Part D, section 16. Water shall be removed from the Solid Waste Lagoon using a floating intake.</li> <li>4. Part E, section 2. Written approval from the board is needed for a modification to the Decanting Process.</li> <li>5. Part H, section 2. Operation and Maintenance Plan needs to be properly implemented.</li> </ol>
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Inspector’s Signature:





**WATER LICENCE INSPECTION REPORT Pg. 3**  
(Continued)

Date:	November 24, 2008	Licence #:	N7L3-0714
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**Inspection Images:**

**Figure 1**

Fuel Tank has rusted connection points, the flex connector is mis-aligned and piping could leak. The piping system needs to be repaired.



**Figure 2**

Additional cover material is needed to cover solid waste and this will assist with controlling windblown debris.