



**Indian and Northern  
Affairs Canada**

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**Affaires Indiennes  
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December 1, 2009

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

**Attn: Mike Harlow, Executive Director**

**RE: Municipal Water Licence (N7L3-1525)**

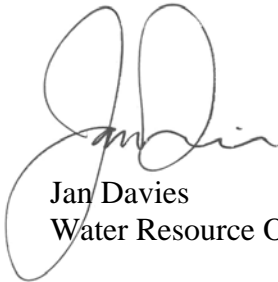
Dear Mr. Harlow,

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 1, 2009

Hamlet of Ulukhaktok  
Box 157  
Ulukhaktok, NT, X0E 0S0

**Attn: Lena Egotak**

**RE: Municipal Water Licence (N7L3-1525)**

Dear Ms. Egotak,

An inspection was conducted of the Municipal Water Supply and Waste Disposal Facilities on October 27, 2009. Enclosed is a copy of the Municipal Water Licence Inspection Report.

The covering of the landfill to control waste and the work that was done on the sewage lagoon berms is a visible improvement. Unfortunately, there were a number of violations as depicted on page three of the Inspection Report. Please review the concerns throughout the Inspection Report.

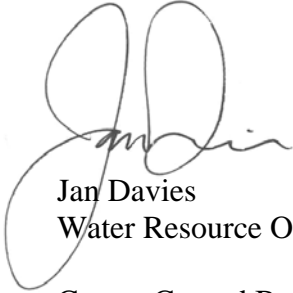
Upon review of previous years Inspection Reports it is apparent that many of the violations and concerns outlined in the Inspection Report are consistent with those in previous years. While it is clear that progress is being made on certain issues, there are terms and conditions of your Water Licence that are being neglected resulting in non-compliance/violations. Please 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 for their review and/or public records.

If you have any questions or concerns, and/or if additional information is required 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>	October 27, 2009	<b>COMPANY REP:</b>	Lena Egotak
<b>LICENCEE:</b>	Hamlet of Ulukhaktok	<b>LICENCE #:</b>	N7L3-1525

### WATER SUPPLY

Source:	RCAF Lake	Quantity Used:	~11,000m <sup>3</sup>
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Owner/Operator: GNWT-DPW/ Hamlet of Ulukhaktok

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

Intake Facilities	A <sup>2,3</sup>	Storage Structures	A	Treatment Systems	A <sup>1,2</sup>	Chem. Storage	A
Flow Meas. Device	A	Conveyance Lines	A	Pumping Stations	A		

Comments:

Concerns:

1. New Water Treatment Plant (WTP) has problems with water treatment system. Current issues are expected to be remedied shortly by supplier. In the meantime the Hamlet is batch chlorinating using the intake system of the new plant (see Figure 1).
2. Building was not secure at the time of inspection. Extra keys are being ordered and the plant is being locked at night.
3. It is evident that ATVs are in the vicinity of the WTP. Once the new WTP is fully operational and the old plant etc is taken away it is planned that boulders and/or a barricade will be installed to protect the intake line from damage. To prevent ATVs from being in the immediate area and/or on the lake it might be prudent to control access by instituting a bylaw to protect the Water Intake Facility infrastructure. This would also protect against potential spills that could damage the Hamlet's water supply.

Note:

- During the September 11, 2008 Inspection there was a crack on the insulation for the intake line outside the Water Treatment Plant. To prevent damage to the intake line always ensure it is well covered and protected from the elements.

### 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	N/A		Continuous Discharge (land or water)		✓ land		
	Seasonal Disch.	N/A		Wetlands Treatment	N/A		Trench	N/A
Solid Waste	Owner/Operator:	Hamlet of Ulukhaktok						
	Landfill	✓		Burn & Landfill	conditionally acceptable		Other	N/A

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

Discharge Quality	U <sup>1</sup>	Construction	N/A	Disch. Meas. Dev.	A	Freeboard	A
Decant Structures	A	O&M Plan	U <sup>13</sup>	Dams, Dykes	U <sup>3</sup>	Seepages	N/A
Dyke Inspections	N/A	A&R Plan	N/A	Erosion	U <sup>4</sup>	Spills	U <sup>6, 10</sup>
Periods of Discharge	Continuous. No decant.		Effluent Discharge Rate		N/A. System is currently operating as a continuous discharge system caused by exfiltration through the berm.		

Comments:

Concerns:

1. Sewage Disposal Facility (SDF) discharge quality is unknown as no sampling has been conducted by the Hamlet.
2. Better waste segregation is needed as waste appliances were mixed with domestic waste. Signage is needed to warn the public in addition to further increase public guidance and better waste segregation. Signs should be posted for but not limited to the following areas: domestic garbage, tires, waste appliances (washers/dryers, etc.), wood waste, bulky metal wastes, empty drums, honey bag pit, animal waste and hazardous waste (waste oil, batteries etc).
3. At the Sewage Disposal Facility (SDF) the dyke has been subsiding around the lagoon in violation of Part D: Conditions Applying to Waste Disposal, Item 3, in the Water Licence. Additional material is needed to ensure a similar elevation for the dyke around the lagoon, it is understood that the top of the sewage lagoon dyke was levelled this summer but time ran out to add new material to the dyke. The instability of the dyke needs to be repaired or this can lead to further problems in which the dyke could fail and the SDF will no longer function properly. It is recommended that an engineer do a dyke inspection on the SDF.

4. The Sewage Lagoon Discharge chute is damaged and requires repair. The areas to either side of the discharge chute are being utilized for sewage discharge. Boulders are present to control erosion, however there is still a migration of fill material into the lagoon and as the lagoon fills up this decreases the effectiveness of the lagoon at treating sewage. It is highly recommended to use the sewage discharge chute to be in compliance with Part D: Conditions Applying to Waste Disposal, Item 4, as per the Water Licence. Tire stops/curbs for the sewage truck are present but need to be maintained to ensure a safe distance from the lagoon edge. Further eroded areas should be filled in with material/boulders to prevent slumping into the lagoon and equipment from falling in from the turnaround pad.
5. Large buildup of frozen sewage on turnaround pad at discharge area of sewage lagoon and needs to be cleaned up. Proper sewage disposal procedure will prevent further buildup.
6. The batteries, waste oil and fuel at the Solid Waste Disposal Facility (SWDF) in addition to other hazardous wastes need to be properly stored in a designated bermed area to ensure proper containment. Consequently this material is located throughout the SWDF and the Hamlet. These materials need to be collected and shipped out for proper disposal at an approved facility. There is a clear indication that many containers are leaking (see Figure 2). Ensure that leaking drums and other containers are repaired and/or properly stored to prevent further leaks and spillage. Contaminated soil needs to be cleaned up and taken to a proper disposal facility.
7. Waste metal is located throughout the SWDF and needs to be collected and stored in the same area which would also assist in encouraging proper waste segregation from the public.
8. There is visibly more material covering the waste at the SWDF but windblown debris is still present. Higher berms on all sides with fencing and continued regular cover material will prevent exposure to the wind and control windblown debris (see Figure 3).
9. Honey bags and other garbage are all around the Sewage Disposal Facility (SDF) and need disposal in proper designated areas. It is apparent that residents and industry still need a honey bag pit and one should be built as per Part D: Conditions Applying to Waste Disposal, Item 5, in the Water Licence. Ensure the SDF is kept clean and tidy.
10. Hamlet's Mechanic Shop wash water from the sink going through a pipe outside and no waste water containment is present (see Figure 4). It is unacceptable for wash water from the shop to be disposed of on the ground. Proper waste containment needs to be installed as soon as possible. This has been occurring for a number of years.
11. A sewage lagoon losses its effectiveness overtime when it is slowly filled in with sludge from sewage. The SDF should be assessed for how deep the lagoon is and whether maintenance should occur such as sludge removal. Any floating scum and algae mats need to be broken up and dispersed and/or removed for regular maintenance.
12. Waste oil barrels and batteries are being stored at the Hamlet's Mechanic Shop. These hazardous wastes need to be shipped out for disposal at a proper facility. Any oil staining present around the waste oil drum storage needs to be cleaned up and properly disposed of.
13. 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 as per Part I: Conditions Applying to Operation and Maintenance, Item 2, of the Water Licence. 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.

#### FUEL STORAGE

Owner:	GNWT- DPW	Operator:	Hamlet of Ulukhaktok	Condition of tanks:	Excellent, brand new <sup>1</sup>
Berms & Liners	Double Walled tank inside generator shed	Water within Berm:	N/A	Evidence of Leaks:	None
Drainage Pipes	N/A	Pump Station and Catchment Berm		Excellent, brand new	
Pipeline Condition	Excellent, brand new	Not Applicable:		N/A	

Comments:

Concerns:

1. Ensure equipment including lower fuel tank is kept clean when generator maintenance is done. Waste oil spilled on lower tank could cause operation issues.

Note:

- Generator is apart of the new Water Treatment Plant. Generator is above a double walled fuel tank and the whole facility has a bathtub floor which will prevent against contamination of the outside environment from any spills.

#### SURVEILLANCE NETWORK PROGRAM

Samples Collected Hamlet	No. Sampling is not occurring. <sup>1</sup>				
Samples Collected DIAND	None were collected at the time of inspection.				
Signs Posted: SNP	1525-2 (Sewage Disposal Facility) needs repair; signage is needed at 1525-1,3 (Water Treatment Plant and Solid Waste Disposal Facility ) <sup>3</sup>	Warning	Signage is needed at the Water Supply Facility and the Solid Waste Disposal Facility. Sewage Disposal Facility sign needs to be put back upright. <sup>4</sup>		
Record & Reporting	2007 and 2008 Annual Reports have not been submitted and are past due. <sup>2</sup>				
Geotechnical Inspection	N/A But recommended due to the previous instability issues.				

Comments:

Concerns:

1. Hamlet of Ulukhaktok is required to conduct sampling as per Surveillance Network Program criteria Part B: General Conditions, Item 2, of the Water Licence to monitor water quality at the outflow from the Sewage Disposal Facility in addition to any run-off from the Solid Waste Disposal Facility during periods of open water.
2. 2007 and 2008 Annual Reports are to be submitted as per Part B: General Conditions, Item 1, of the Water Licence.
3. Signage is required by Part B: General Conditions, Item 4, of the Water Licence for the Surveillance Network Program to ensure consistent sampling locations.
4. To promote awareness and warn the public signage is required at the Water Supply Facility and the Solid Waste Disposal Facility as per Part B: General Conditions, Item 5, of the Water Licence.

**Violations of Act of Licence:**

Part B: General Conditions, Item 1,

"The Licensee shall file an Annual Report with the Board not later than March 31st of the year following the calendar year reported..."

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."

Part B: General Conditions, Item 4,

"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."

Part B: General Conditions, Item 5,

"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 and Waste Disposal Facilities. All postings shall be located and maintained to the satisfaction of an Inspector."

Part D: Conditions Applying to Waste Disposal, Item 3,

"The sewage lagoon shall be maintained and operated in such a manner as to prevent structural failure."

Part D: Conditions Applying to Waste Disposal, Item 4,

"The Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of an Inspector."

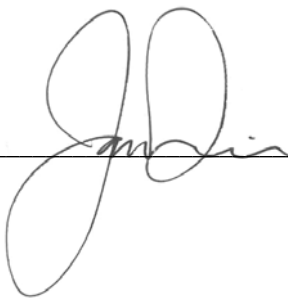
Part D: Conditions Applying to Waste Disposal, Item 5,

"All bagged toilet wastes (honey bags) shall be disposed of at the Bagged Toilet Waste Disposal Facilities to the satisfaction of an Inspector."

Part I: Conditions Applying to Operation and Maintenance, Item 2,

"The Licensee shall implement the plans specified in Part 1, Item 1 as and when approved by the Board."

Inspector's Signature:

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke, positioned above a solid horizontal line that serves as a signature line.



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

Date:	October 27, 2009	Licence #:	N7L3-1525
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**Inspection Images:**

**Figure 1**

New Water Treatment Plant at RCAF Lake. Old plant is next door to the left.



**Figure 2**

One of many barrels at the Solid Waste Disposal Facility. There are many barrels leaking and needing proper disposal.



**Figure 3**

The added cover material on the Solid Waste Disposal Facility. Higher berms and fencing is needed all around to control windblown debris.



**Figure 4**

The Hamlet's Mechanics Shop with no waste water containment present. Proper waste containment is needed.

