



**Indian and Northern
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February 15, 2008

Gwich'in Land and Water Board
P.O. Box 2018
Inuvik, NT X0E 0T0

Attn: Robert Alexie, Executive Director

RE: Municipal Water Licence (G03L3-001)

Dear Mr. Alexie,

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)
Municipal Solid Wastes Suitable for Open Burning Document



WATER LICENCE INSPECTION FORM

DATE:	October 9, 2007	COMPANY REP:	Deanna Black
LICENCEE:	Hamlet of Fort McPherson	LICENCE #:	G03L3-001

WATER SUPPLY

Source:	Deep Water Lake	Quantity Used:	~37,600 m3 per year
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Owner/Operator: Hamlet/ Dept. of Public Works

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

Intake Facilities	A ^{4,5}	Storage Structures	A	Treatment Systems	A	Chem. Storage	A
Flow Meas. Device	A	Conveyance Lines	A ^{1,2}	Pumping Stations	A ¹		

Comments:

Concerns:

1. At the time of inspection the water intake line was not in use and a replacement pump and line were being used. During pump operation spill pads were under the pump when in use along the lake. Ernie Debastien (Dept. Public Works) said all oil and diesel were contained on spill pads, nothing went through. Spill pads were present that smelled of diesel from when the intake pump was in use. After the pump had been taken away some of the debris such as spill pads and their bag still needed to be removed. Staff were reminded to remove all pads, plastic debris and ice(meltwater under the pump) that smelled of diesel (Figure 1).
2. It was evident that there was subsidence along the water intake conveyance line and repairs had just been completed to repair the line. Ensure that the areas of subsidence along the intake conveyance line are repaired as further erosion and subsidence can occur (Figure 2).
3. Corroded chemical line on pipe going to bottom storage tank at Water Treatment Plant, small amount of it crystalized on cement floor. Please ensure all chemical lines and connections are free from leaks and are in good condition.
4. Hydrocarbon staining was present on the turn around pad next to the Deep Water Lake Water Supply Facility. Leaks from equipment should be repaired as this area is frequently flooded with water and is in close proximity to the Hamlet's water supply.
5. There is significant erosion of the turn around pad next to the the Deep Water Lake Water Supply Facility. This erosion of pad material can not continue as it will lead to further destruction of infrastructure. The cause of the erosion needs to be stopped and a permanent solution to the erosion needs to occur to prevent further damage (Figure 3).

Notes:

- A fish screen was used during the water removal at Deep Water Lake.
- During the Water Licence Inspection recreational use on Deep Wate Lake was asked about. Access around the Water Supply Facilities could be restricted due to safety and to ensure infrastructure is maintained in working condition.
- Since the inspection it is understood that all the spill pads and debris have been removed. It would be recommended for future use of the portable pump that if leaks are present they need to be repaired, a spill/drip mat be used under the pump and that an appropriately sized spill kit be located on site.

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 Lagoon			
	Natural Water Body	✓		Continuous Discharge (land or water)		Water - 2km Lake		
	Seasonal Disch.	Decant - Late Fall and/or Spring		Wetlands Treatment		Trench		
Solid Waste	Owner/Operator:	Hamlet of Ft. McPherson						
	Landfill	✓		Burn & Landfill		Conditionally acceptable		Other N/A

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

Discharge Quality	A ¹	Construction	N/A	Disch. Meas. Dev.	A	Freeboard	A
Decant Structures	A	O&M Plan	U ⁶	Dams, Dykes	A ³	Seepages	N/A
Dyke Inspections	A ³	A&R Plan	N/A	Erosion	A ²	Spills	U ^{4,5}
Periods of Discharge	Late Fall and/or Spring		Effluent Discharge Rate		By volume of water used		

Concerns:

1. When discharging from the Sewage Disposal Facilities(SDF) at SNP-2 please discharge as slow as possible and in a regulated manner: i.e. if possible discharge only for eight to ten hours every two days. This will help allow for high ammonia levels that could affect the immediate discharge area.
2. Some erosion in front of the sewage off load chute. This problem may be resolved by making sure the Sewage Truck is closer to the chute when discharging and/or extend the chute.
3. There is no documentation indicating that dyke and dam inspections are occurring as per conditions applying to operation and maintenance. However, site inspections are conducted by Town Foreman – Ernie Firth.
4. During inspection it was observed that waste oil storage containers with oil had been moved to a staging area by the large contaminated soil storage area to await being sent to disposal facilities. While it is encouraging to see waste oil and oil storage containers being shipped it was observed that there was a large amount of spillage outside the Solid Waste Disposal Facility hazardous wastes/waste oil storage area as some containers were leaking and oil was on the ground (Figure 4). It was mentioned that the oil and contaminated soil needed to be cleaned up. Due to the location of the spillage it would have been appropriate to call in the spillage to the Spill Line.
5. It is clear that waste oil and containers have been removed from the SWDF hazardous wastes/waste oil storage area but work is still required. During the inspection there was obvious evidence of considerable release of oil as the ground is still saturated with oil and/or other materials. This material needs to be removed and disposed of properly.
6. As per Part II of the renewed Water Licence a revised plan for the Operation and Maintenance of the Sewage and Solid Waste Disposal Facilities is required by March 1, 2008. To date an updated O&M Plan had not been received. As per the 2004 Annual Report the latest O&M Plan is dated 1997 and submitted to the board in 1999. The revised plan was due in February 2004.

Notes:

- Please continue to ensure an Inspector is notified when the freeboard is exceeded at the Sewage Lagoon.
- Animal debris in the Waste Animal Pit is being burned with wood (please see enclosed document).
- Signage is needed for the culvert and concrete building debris, and for the contaminated soil in bermed areas.
- The bermed area that stores contaminated soil by the waste oil storage does not appear to be lined.
- It is recommended that the Sewage Disposal Facility be upgraded to effectively address the high ammonia in sewage effluent as mentioned in the Fort McPherson Wetland Study (Ferguson Simek Clark, March 2005).
- As mentioned in the 2004 Annual Report and Study - Performance and Potential Improvements to Anaerobic Lagoon in Fort McPherson (Earthtech, N.W.T. May, 2004) it is suggested that "the sewage treatment "system" for the lagoon discharge could be expanded in the future to include the downstream wetland areas"
- It is also suggested that the system be upgraded to facilitate continuous discharge as opposed to decanting sewage effluent.

FUEL STORAGE

Owner:	Hamlet of Fort McPherson	Operator:	Department of Public Works	Condition of tanks:	Good
Berms & Liners	A	Water within Berm:	U ²	Evidence of Leaks:	Yes ¹
Drainage Pipes	N/A	Pump Station and Catchment Berm		A	
Pipeline Condition	A	Not Applicable:		N/A	

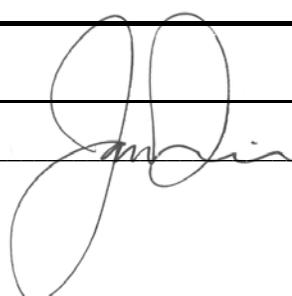
Concerns:

1. At Deep Water Lake Water Supply Facility there is hydrocarbon staining on floor of the Generator Room. Some drip trays are in place with spill pads and some are soaked with hydrocarbons. There are still hydrocarbons along the floor and seeping through the wall and dripping outside on metal skids in the back of the generator shed. Discussed changing pads with Ernie Debastien. Leaks in the Generator Room need to be repaired to prevent further leaking and seepage of hydrocarbons throughout the shed and subsequently to the outside.
2. At the water treatment plant the berm for the Fuel Storage Tank is full of diesel, water, ice and snow. I was informed that the contaminated water is sent to Inuvik one time a year. The problem of water getting into the metal berm for the Fuel Storage Tank should be dealt with permanently by some kind of covering or replacing the tank with a double walled storage tank.

SURVEILLANCE NETWORK PROGRAM

Samples Collected Hamlet	Yes - during decant and as per other SNP requirements.				
Samples Collected DIAND	Yes back in July 31, 2007 Water Resources sampled SNP#1696-2 and 4. And the initial part of 2 km Lake down from SNP#1696-2.				
Signs Posted: SNP	1696-1B, 2, and 5. Signs are still needed for 1696-3 and 6. Sign for 1696-1A was not inspected.	Warning	Yes		
Record & Reporting	2006 Annual Report was submitted.				
Geotechnical Inspection	N/A				
Non-Compliance of Act or Licence:					

Inspector's Signature: _____





WATER LICENCE INSPECTION REPORT Pg. 3 (Continued)

Date:	October 9, 2007	Licence #:	G03L3-001
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Inspection Images:

Figure 1

Area of spill pads which were underneath the pump by Deep Water Lake.



Figure 2

Subsidence along water intake conveyance line.



Figure 3

An example of the erosion on the turn around pad next to the Deep Water Lake Water Supply Facility.



Figure 4

Spillage of used oil from containers at the staging area before being shipped to disposal facilities.

