



**Indian and Northern
Affairs Canada**
www.inac.gc.ca

North Mackenzie District
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**Affaires Indiennes
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Telephone: (867) 777-3362
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October 3, 2005

Your file – Votre référence
XXX-XXXX

Our File – Notre référence
N7L3-1619 (Renewal)

Sent by mail/e-mail:

Incorporated Hamlet of Paulatuk
P.O. Box 98
Paulatuk, NT
Canada X0E 1N0

Attention: Tom Caines, Senior Administrative Officer

Dear Mr. Caines:

**RE: AUGUST 15, 2005 INSPECTION OF WATER LICENCE N7L3-1619
INCORPORATED HAMLET OF PAULATUK**

As you are aware, Kevin Glowa, Water Resources Officer, conducted an inspection at the Hamlet of Paulatuk (the 'Hamlet') on August 15, 2005. Specifically, the Hamlet's water supply and waste disposal facilities were inspected under Water Licence N7L3-1619. Enclosed is a copy of the Inspection Report (4 pages) for your review and records. Also attached are the 2005 sample results from SNP 1619-1 & 2. We apologize for the delay.

Unfortunately there were a number of violations as depicted on page two (2) of the Inspection Report. The violations relate to signage and can be dealt with promptly. Further, please review the concerns as depicted throughout the Inspection Report.

Please note that many of the violations and concerns outlined in the Inspection Report are consistent with violations in previous years (2002, 2004). It is evident that the terms and conditions of your Water Licence are being neglected resulting in non-compliance/violations. As indicated last year please address the aforementioned as INAC considers non-compliance of Water Licences a serious matter.

Pending your review, a copy of this report will be sent to the Northwest Territories Water Board on **October 17** for their review and/or public records. If no response is received by this date we will assume you have no concerns.

If you have any questions/concerns regarding the enclosed, and/or if additional information is required, please do not hesitate to contact Mr. Glowa at (867) 777-3662.

Sincerely,

Rudy Cockney
District Manager

KRG/rc

Enclosure: **Municipal Inspection Report (4 pages)**
 2005 Water/Effluent Sample Results.



MUNICIPAL WATER LICENCE INSPECTION REPORT

DATE:	August 15, 2005	COMPANY REP:	Tom Caines (SAO)
LICENSEE:	Incorporated Hamlet of Paulatuk	LICENCE #:	N7L3-1619 (Renewal)

WATER SUPPLY – Figures 1-4 below

Source:	New Water Lake	Quantity Used:	2004 - ~8000 m ³	Meter Rdg:	22996.1 m ³
Owner/Operator:	Incorporated Hamlet of Paulatuk				

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

Concerns:

- As indicated in the November 26, 2004 Inspection Report SNP 1619-1 is not posted.

Notes:

- No indication of leaks from fuel tank (figure 2).
- All meters and/or devices used to measure water seem to be in good working order (figure 2).
- Total water uptake from New Water Lake was 8033 m³ < permitted 10000 m³.

WASTE DISPOSAL – Figures 5-16 below

Sewage	Sewage Treatment System (primary, secondary, or tertiary):		Primary coupled with rudimentary wetlands treatment.			
	Natural Water Body:	✓	Continuous Discharge (land or water):	✓		
	Seasonal Discharge:		Wetlands Treatment:	✓ (figure 5, 7)	Trench:	

Solid Waste	Owner/Operator:	Incorporated Hamlet of Paulatuk				
	Landfill:	✓	Burn & Landfill:	No longer permitted.	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/A
Decant Structures:	N/A	O&M Plan:	A	Dams, Dykes:	N/A	Seepages:	A
Dyke Inspections:	N/A	A&R Plan:	N/A	Erosion:	A	Spills:	None

Periods of Discharge:	Continuous	Effluent Discharge Rate:	Natural Outflow (figure 5, 7, 8).
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Concerns:

- Please note that burning waste at the Solid Waste Disposal Facilities (SWDF) is no longer permitted in the NWT. There was indication that this was still being conducted.
- Besides the domestic garbage disposal area (figure 16) there is poor to no segregation of waste at SWDF.
- Related to concern 2 above please ensure that the SWDF contains designated and identified areas pertaining to oil/hazardous wastes, waste batteries, waste appliances (washers/dryers), honey bag pit, metal wastes, skidoos/snowmobiles, waste wood, waste vehicles, etc..
- Currently no waste oil/hazardous wastes disposal area. Consequently, this material is located throughout the landfill (figure 11-15) with indication of many containers leaking (figure 15).
- As indicated in previous years Inspection Reports there is no sign identifying and warning the public of the SWDF and Sewage Disposal Facilities (SDF).

Notes:

- The Sewage Lagoon is acting as a continuous discharge system with natural outflow as effluent slowly percolates through rudimentary wetlands (Figure 5, 7, 8) and to the Arctic Ocean (Darnley Bay (figure 7)). One area in the wetland discharge area was found to contain water (figure 8). In the spring there may be observable overland discharge from the Sewage Lagoon.
- No indication of floating sludge mats/algae mats in the Sewage Lagoon.
- Sewage Lagoon green in color at the time of inspection (figure 6).
- Part D2 – Please see first note.
- Part D3 – Freeboard at Sewage Lagoon does not apply as it is a natural Lake with no engineered berms/dykes.
- O&M Plan for the Sewage and SWDF was approved by the NWTWB on September 14, 2005.

FUEL STORAGE – See Water Supply “notes”.

SERVELLANCE NETWORK PROGRAM (SNP) – Figures 5, 7, 8 below

Samples Collected (Hamlet)	No samples collected from SNP 1619-2. Please see notes under “Waste disposal”. If observable water is seen in the spring this SNP location will need to be sampled.		
(DIAND)	SNP 1619-1 and effluent sample collected (1619-2) from the North end (close to the discharge area as identified in figure 5) of the Sewage Lagoon. No concerns, results will be attached with the hardcopy.		
Signs Posted: SNP	SNP 1691-1 & 2 not posted. Licensee was reminded to post signs.	Warning	None
Records & Reporting:	- 2001-2003 Annual Report received by e-mail. - 2004 Annual Report Received March 19, 2005 and was on-time. Part A1 a-j have been addressed and/or commented on.		
Geotechnical Inspection	N/A		

Concerns:

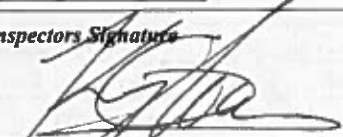
1. SNP Signs not posted.
2. Please make note if overland discharge occurs in the spring months. If observed this effluent will require sampling as per SNP Part B1. No discharge was observed during this inspection (figure 5, 7, 8).

Non compliance / Violations of Act or License:	<ol style="list-style-type: none"> 1. Part B7 – SNP 1619-1 not posted. 2. Part B7 – SNP 1619-2 not posted. 3. Part B7 – As per previous Inspection Reports (2002, 2004) signs not posted to the satisfaction of an Inspector. 4. Part B8 – SWDF not posted. 5. Part D4 – Honey bag pit not identified in SWDF.
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General / Additional Inspection Comments:

1. Copy of new Water Licence was available
2. Water Licence Expires October 30, 2006.

Figures Below:	Yes	✓	No	
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Inspectors Name Kevin R. Glowa (M.Sc., R.P. Bio.) Water Resource Officer	Inspectors Signature 
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LIST OF FIGURES FOR INSPECTION REPORT

Figure 1. Water Supply. WSF at New Water Lake.



Figure 2. Water Supply. WSF water meter.



Figure 3. Water Supply. WSF fuel storage.



Figure 4. Water Supply. WSF water intake.



Figure 5. Waste Disposal. Sewage Disposal Facilities (SDF) Sewage Lagoon and SNP 1619-2.



Figure 6. Waste Disposal. SDF Sewage Lagoon north end at SNP 1619-2.



Figure 7. Waste Disposal. Darnley Bay & SNP 1619-2.



Figure 8. Waste Disposal. Effluent within SNP 1619-2 discharge area.



LIST OF FIGURES FOR INSPECTION REPORT CONTINUED

Figure 9. Waste Disposal. SDF raw sewage discharge culvert.



Figure 10. Waste Disposal. Solid Waste Disposal Facilities hydrocarbon contaminated soil.



Figure 11. Waste Disposal. SWDF.



Figure 12. Waste Disposal. SWDF.



Figure 13. Waste Disposal. SWDF.



Figure 14. Waste Disposal. SWDF.



Figure 15. Waste Disposal. SWDF.



Figure 16. Waste Disposal. SWDF domestic garbage disposal area.



NWT H₂O Board.

Indian & Northern
Affairs
Inuvik, N.W.T.
SEP - 6 2005
North Mackenzie
District



Taiga Environmental Laboratory

4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3

Tel: (867)-669-2788 Fax: (867)-669-2718

- FINAL REPORT -

Prepared For: Inuvik District Office
DIAND, Operations

Address: Box 2100
Inuvik, NT
X0E 0T0

Attn: Kevin Glowa

Facimile: (867) 777-2090

Final report has been reviewed and approved by:

R. Shane Harnish
Quality Assurance Officer

NOTES:

- Test methods and data are validated by the laboratory's Quality Assurance Program. Taiga Environmental Laboratory is accredited by the Canadian Association of Environmental Analytical Laboratories (CAEAL) as a testing laboratory for specific tests registered with CAEAL.
- Routine methods are based on recognized procedures from sources such as
 - Standard Methods for the Examination of Water and Wastewater APHA AWWA WEF;
 - Environment Canada
 - USEPA
- Samples shall be kept for thirty (30) days after the final report is issued. All microbiological samples shall be disposed of immediately upon completion of analysis to minimize biohazardous risks to laboratory personnel. Please contact the laboratory if you have any special requirements.
- Final results are based on the specific tests at the time of analysis and do not represent the conditions during sampling.

ReportDate: Monday, August 29, 2005
Print Date: Tuesday, August 30, 2005



Taiga Environmental Laboratory

4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3

Tel: (867)-669-2788 Fax: (867)-669-2718

- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-1

Taiga Sample ID: 253025

Client Project: N7C1-1619

Sample Type: Freshwater

Received Date: 17-Aug-05

Sampling Date: 15-Aug-05

Location: Paulatuk

Report Status: FINAL

Approved By R. Shane Harnish
Quality Assurance Officer

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifier
<u>Physical/Routine Analysis</u>						
pH	8.40	0.05	pH units	17-Aug-05	SM4500-H:B	
Conductivity, Specific	373	0.4	µS/cm	17-Aug-05	SM2510:B	
Solids, Total Suspended	< 3	3	mg/L	17-Aug-05	SM2540:D	
Alkalinity	122	0.1	mg/L	17-Aug-05	SM2320:B	
<u>Nutrient Analysis</u>						
Ammonia as N	< 0.005	0.005	mg/L	22-Aug-05	SM4500-NH3:G	
Phosphorous, Total	< 0.01	0.01	mg/L	17-Aug-05	SM4500-P:D	
Organic Carbon, Total	10.9	0.5	mg/L	22-Aug-05	SM5310:B	
<u>Major Ions Analysis</u>						
Calcium	43.4	0.1	mg/L	17-Aug-05	SM4110:B	
Magnesium	18.4	0.1	mg/L	17-Aug-05	SM4110:B	
Sodium	3.1	0.1	mg/L	17-Aug-05	SM4110:B	

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-1

Taiga Sample ID: 253025

Potassium	0.5	0.1	mg/L	17-Aug-05	SM4110:B
Hardness	184	0.7	mg/L	17-Aug-05	SM2340:B
Total Metals					
Aluminum	1.8	0.6	µg/L	18-Aug-05	EPA200.8
Antimony	0.6	0.1	µg/L	18-Aug-05	EPA200.8
Barium	42.8	0.1	µg/L	18-Aug-05	EPA200.8
Beryllium	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Cadmium	< 0.05	0.05	µg/L	18-Aug-05	EPA200.8
Cesium	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Chromium	0.2	0.1	µg/L	18-Aug-05	EPA200.8
Cobalt	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Copper	6.5	0.3	µg/L	18-Aug-05	EPA200.8
Lead	0.2	0.1	µg/L	18-Aug-05	EPA200.8
Lithium	0.8	0.2	µg/L	18-Aug-05	EPA200.8
Manganese	3.3	0.1	µg/L	18-Aug-05	EPA200.8
Molybdenum	0.1	0.1	µg/L	18-Aug-05	EPA200.8
Nickel	0.3	0.1	µg/L	18-Aug-05	EPA200.8
Rubidium	0.2	0.1	µg/L	18-Aug-05	EPA200.8
Selenium	0.5	0.3	µg/L	18-Aug-05	EPA200.8
Silver	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Strontium	35.1	0.1	µg/L	18-Aug-05	EPA200.8

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-1

Taiga Sample ID: 253025

Thallium	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Titanium	0.1	0.1	µg/L	18-Aug-05	EPA200.8
Uranium	< 0.1	0.1	µg/L	18-Aug-05	EPA200.8
Vanadium	0.5	0.1	µg/L	18-Aug-05	EPA200.8
Zinc	6.0	0.4	µg/L	18-Aug-05	EPA200.8
Iron	< 50	50	µg/L	18-Aug-05	EPA200.8
Arsenic	0.4	0.2	µg/L	18-Aug-05	EPA200.8

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-2

Taiga Sample ID: 253026

Client Project: N7C1-1619

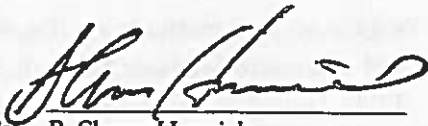
Sample Type: Sewage

Received Date: 17-Aug-05

Sampling Date: 15-Aug-05

Location: Paulatuk

Report Status: FINAL

Approved By 
R. Shane Harnish
Quality Assurance Officer

Test Parameter	Result	Detection Limit	Units	Analysis Date	Analytical Method *	Qualifer
<u>Physical/Routine Analysis</u>						
pH	9.20	0.05	pH units	17-Aug-05	SM4500-H:B	
Conductivity, Specific	1060	0.4	µS/cm	17-Aug-05	SM2510:B	
<u>Nutrient Analysis</u>						
Nitrate+Nitrite as Nitrogen	0.16	0.01	mg/L	17-Aug-05	SM4110:B	
Ammonia as N	0.529	0.005	mg/L	22-Aug-05	SM4500-NH3:G	
Phosphorous, Total	3.15	0.01	mg/L	17-Aug-05	SM4500-P:D	
<u>Major Ions Analysis</u>						
Calcium	56.0	0.1	mg/L	17-Aug-05	SM4110:B	
Magnesium	80.6	0.1	mg/L	17-Aug-05	SM4110:B	
Sodium	53.7	0.1	mg/L	17-Aug-05	SM4110:B	
Potassium	11.4	0.1	mg/L	17-Aug-05	SM4110:B	

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- CERTIFICATE OF ANALYSIS -

Client Sample ID: 1619-2

Taiga Sample ID: 253026

* Taiga analytical methods are based on the following standard analytical methods

SM - Standard Methods for the Examination of Water and Wastewater

EPA - United States Environmental Protection Agency

CCME - Canadian Council of Ministers of the Environment

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