

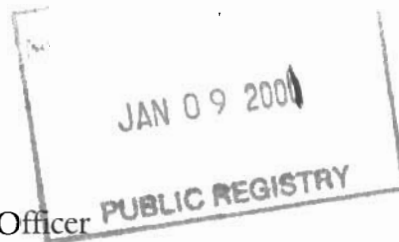


INAC, Nunavut District  
Box 100  
Iqaluit, NU  
X0A 0H0

  
CANADA REMEMBERS  
LE CANADA SE SOUVIENT  
tel.: (867) 975-4275  
fax.: (867) 979-6445

December 7, 2000.

Scott Carle  
Senior Administrative Officer  
Municipality of Clyde River  
P.O. Box 89  
Clyde River, NU X0A 0E0



INTERNAL	
Your file	Votre référence
PC	
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OM	
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CO	
BRD	
WIRB	
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DFD	

Handwritten: 24/01/01

### August 17, 2000 Water Use Inspection - Report

Firstly, I wish to thank Jerry Natanine for the much appreciated time and assistance provided during the tour of the Municipality's water use and waste disposal facilities. Attached for your records is the Municipal Water Use Inspection Report pertaining to the August 17, 2000 inspection; considering the Municipality's fairly limited resources, water use and waste disposal facilities are managed in an overall satisfactory manner. However, the following matters will need to be addressed:

- **Sewage waste disposal:** Several concerns regarding to the structural integrity of the sewage lagoon were noted. At the time of the inspection, the drain valve was still frozen (figure 1), thus postponing the intended decant of the lagoon. Further, it was related that the icing-up of the decant structure was a typical circumstance, although thawing efforts were usually successful earlier in the summer. As such, due to the very limited freeboard remaining before the sewage lagoon's berm was overtopped and a potential breach occurred (figure 2), the Municipality would shortly have to resort to pumping the contents of the sewage lagoon over the berm. In addition, several veins of seepage were evident along a soft and saturated section of the lagoon's toe (figure 3). Such seepage events, which were also underlined in the last municipal water use inspection report, bring forth significant implications as the facility was not designed to be permeable. Consequently, by copy of this letter to Community Government and Transportation (GC&T), the Inspector trusts that the Municipality will be provided with assistance and/or recommendations on the matter.

In parallel, attached are the analytical results relating to effluent sampled from the main seepage vein of the sewage lagoon. While the concentrations of the tested parameters proved generally acceptable, the ammonia level is notably elevated.

- **Solid waste disposal:** Minimal segregation takes place at the solid waste disposal site (figure 4), save for the redirection of bulky wastes towards the nearby metal landfill. In this regards, the use of a sealift container for the isolation and storage of hazardous materials would be advisable. Although combustible waste is burned/compacted and periodically covered, and a snow fence is installed along the prevailing winds, a fair quantity of waste material is nonetheless windblown beyond the disposal site proper. Accordingly, the Inspector would recommend expanding the existing fence so as to fully enclose the solid waste disposal site.

On a side note, it should be pointed out that discarded waste oil inevitably leads hydrocarbon-contaminated soil, and can ultimately imply the deposit of waste into water. Thus, the Municipality ought to prevent leakages at the waste oil storage by the municipal garage, or the partly reclaimed waste oil disposal site, from reaching nearby watercourses. Furthermore, the Municipality should take necessary means to ensure that undisclosed dumping of potentially hazardous waste does not occur within its facilities (figure 6).

- **Records & reporting:** The Inspector wishes to commend the Municipality on its prompt filing of a water licence application since this summer's inspection. In this regards, the Inspector reiterates that INAC, and other implicated agencies, will gladly render further assistance should it be required.

Please feel free to contact me at (867) 975-4298 or [lavallecp@inac.gc.ca](mailto:lavallecp@inac.gc.ca) should any questions/comments arise.

Sincerely,



Philippe Lavallée  
Water Resources Officer  
INAC, Nunavut District

- c.c.
- Nunavut Water Board, Gjoa Haven
  - CG&T, Iqaluit (Doug Sitland)
  - Baffin Health & Social Services, Iqaluit (Bonnie Segal)
  - EC Environmental Protection, Yellowknife (Anne Wilson)



Indian and Northern Affairs Canada  
Affaires Indiennes et du Nord Canada

## MUNICIPAL WATER USE INSPECTION FORM

Date: 2000/08/17 Licensee Rep. (Name/Title): Jerry Natanine / Foreman

Licensee: Municipality of Clyde River Licence No.: unlicensed

### WATER SUPPLY

Source(s): Water Lake

Quantity used: meter @ 28 747 000

Owner:/Operator: Municipality

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected  
Intake Facilities: A Storage Structure: NA Treatment Systems: A Chemical Storage: A  
Flow Meas. Device: A Convey. Lines: NA Pumping Stations: NA

Comments: Intake facility well kept; no water supply concerns noted. Chlorination system in use.

### WASTE DISPOSAL

Sewage: Sewage Treatment System (Prim./Sec/Ter.): primary; lagoon overland to ocean

Natural Water Body:

Continuous Discharge (land or water):

Seasonal Discharge: x

Wetlands Treatment: limited

Trench:

Solid Waste: Owner/Operator: Municipality

Landfill:

Burn & Landfill: x

Other:

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected  
Discharge Quality: sampled Decant Structure: U Erosion: A  
Discharge Meas. Device: none Dyke Inspection: none Seepages: U  
Dams, Dykes: U Freeboard: U Spills: none reported  
Construction: NA O&M Plan: NA A&R Plan: NA  
Periods of Discharge: A Effluent Discharge Rate: not measured

Comments: Intended decant of the sewage lagoon hindered by the freeze-up of the drain valve. Substantial seepage observed along a section of the toe where berm material is soft and saturated. Very limited freeboard atop the face opposite to the lagoon's discharge chute, however signs of overtopping were not discernable. Metal dump is somewhat scattered yet isolated, whereas no segregation occurs at the solid waste disposal site itself. Dump is partly fenced. Leachate pooled immediately downslope of the wastepile, but no active runoff was apparent. Waste oil management deficiencies noted.

### FUEL STORAGE

Owner/Operator:

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected  
Berms & Liners: Water within Berms: Evidence of Leaks:  
Drainage Pipes: Pump Station & Catchment Berm:  
Pipeline Condition: Not Applicable: x Condition of Tanks:

### SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected Hamlet: none

INAC: seepage from the sewage lagoon

Signs Posted SNP: NA

Warning: NA

Records & Reporting: NA

Geotechnical Inspection: May be warranted due to outstanding structural integrity concerns

Non-Compliance of Act or Licence: Municipality is unlicensed.

Philippe Lavallée

Inspector's Name

Inspector's Signature



figure 1. Sewage lagoon's frozen decant structure; 2000/08/17.

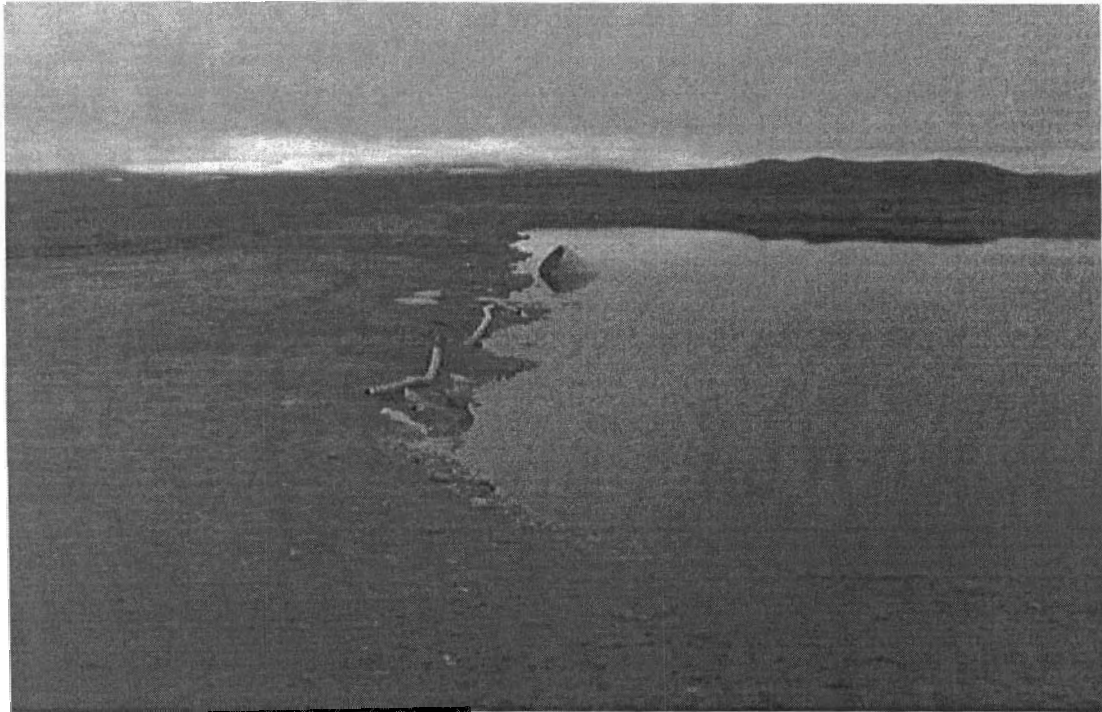
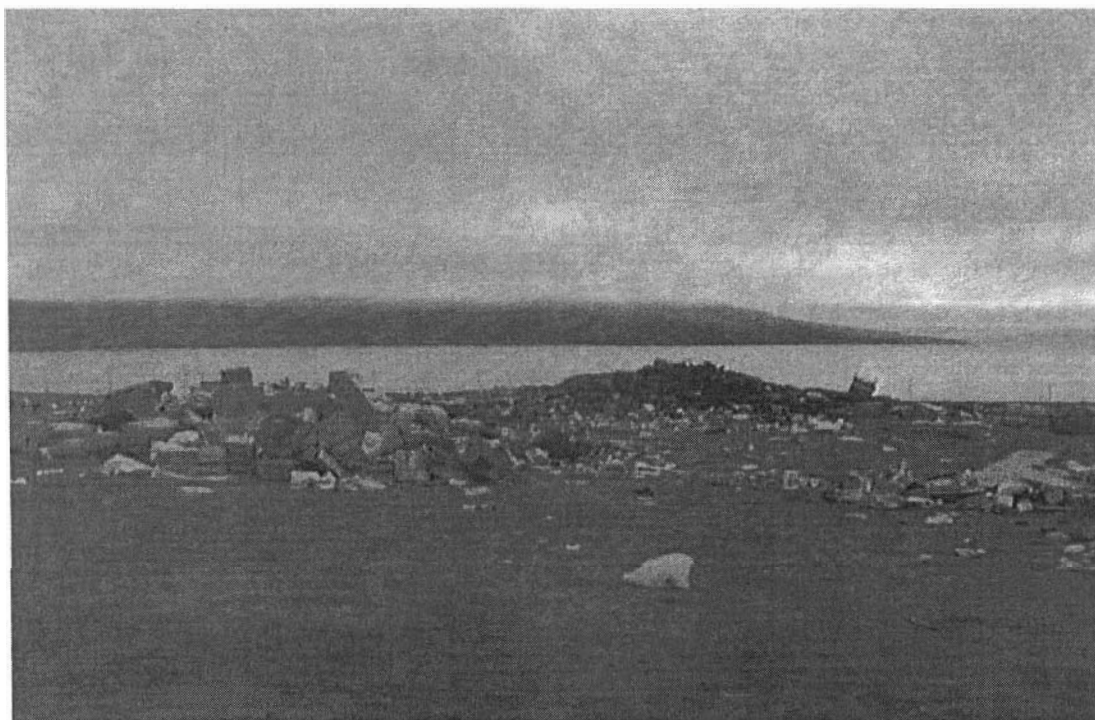


figure 2. Minimal freeboard of the sewage lagoon; 2000/08/17.



figure 3. Veins of seepage along the toe of the sewage lagoon; 2000/08/17.

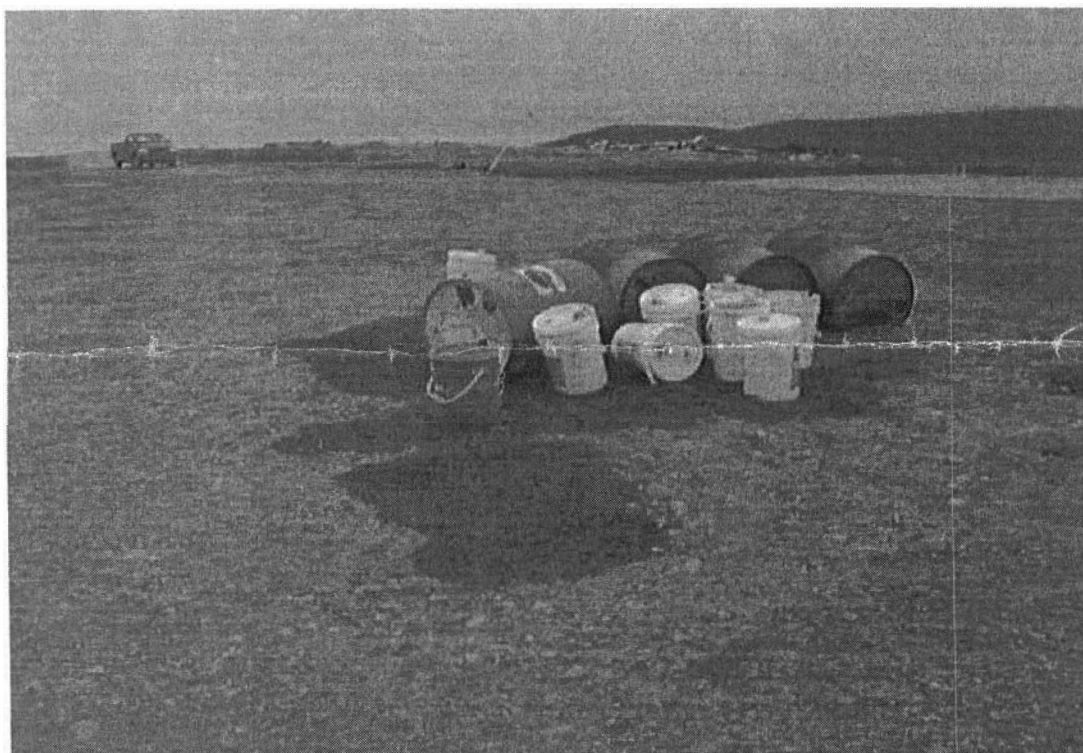




**figure 4.** Solid waste disposal site; 2000/08/17.



**figure 5.** Pooled leachate downslope of the solid waste disposal site; 2000/08/17.



**figure 6.** Various liquid waste dumped by an unknown party; 2000/08/17.

**TAIGA ENVIRONMENTAL LABORATORY**

Dept. Indian Affairs &amp; Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. X1A 2R3

Tel. (867) 669-2788

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To: NUNAVUT

Operations Directorate, DIAND

BOX 100

IQALUIT

X0A 0H0

Att'n: Philippe Lavallee

LAB# 201674

**SAMPLE INFORMATION**

Our Lab#: 201674

PROJECT:

Your Sample ID: Sewage seepage

Sample Matrix: sewage

Collection:

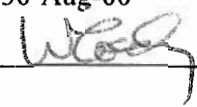
Location: Clyde River

Date: 8/17/00

By: Philippe Lavallee

Received Date: 8/18/00

Report Date: 30-Aug-00

Approved By: **- SAMPLE ANALYSIS REPORT -**

Lab#	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
201674	Tot-Suspended-Solids	64	mg/L	3	8/25/2000	EC10406
	Ammonia-N	67.2	mg/L	0.005	8/24/2000	EC7557
	Bio-Oxy-Demand	200	mg/L	2	8/18/2000	08208
	Faecal_Coliform	18000	CFU/dL	1	8/18/2000	036014

RECEIVED  
SEP 28 2000  
I.A.N.D.  
IQALUIT, NT

Field Data (00/08/17) Sewage lagoon

Temperature: 6.5 °C

Conductivity: 1142 µS

pH: 7.4

Time: 12:44