



INAC, Nunavut District  
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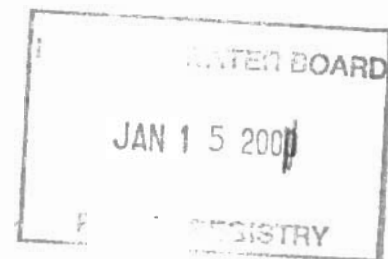
tel.: (867) 975-4275  
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Your file    Votre référence

Our file    Notre référence  
**(unlicensed)**

January 3, 2001.

Darren Flynn  
Senior Administrative Officer  
Hamlet of Arviat  
P.O. Box 150  
Arviat, NU    X0C 0E0

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**August 29, 2000 Municipal Water Use Inspection - Report**

Firstly, I wish to thank Mike Gibbons for the much appreciated time and assistance provided during the tour of the Hamlet's water use and waste disposal facilities. Attached for your records is the Municipal Water Use Inspection Report pertaining to the August 29, 2000 inspection; generally, the facilities are managed in an satisfactory manner. However, the following considerations were noted:

- **Water supply:** At the time of the inspection, the expansion work on the smallest of the water reservoir's holding cells was practically completed (figure 1). However, the older holding cell, which was previously drained and cleaned, had yet to be refilled (figure 2).
- **Sewage waste disposal:** Seepage from the permeable berm of the sewage lagoon (figure 3) flows down through abundant vegetation along the discharge path (figure 4), thus likely enhancing the treatment of the effluent. As such, the attached analytical results relating to the discharge from the sewage disposal facility reveal acceptable concentrations of most tested parameters. However, the recorded ammonia level exceeds recommended guidelines for the protection of both freshwater and marine aquatic life. As a side note, the green tinge of the sewage lagoon's contents (figure 5) can reportedly be attributed to a seasonal algal bloom.
- **Solid waste disposal:** A substantial amount of waste has accumulated at the solid waste disposal facility (figure 6). Although the Inspector acknowledges that the Hamlet intends to burn/compact and cover the waste as soon as prevailing winds become favourable, such a quantity of scattered waste is nonetheless far from ideal. Indeed, as the perimeter fence is partly dismantled and as the wastepile is encroaching upon a marshy area, concerns relating to windblown material and leachate respectively arise. In this regards, while pooled water was observed at the toe of the solid waste disposal facility (figures 7-8), no leachate was noted actively flowing from the site.

In parallel, the bulky metal wastes disposal site also covers an extensive area (figure 9). Accordingly, the Hamlet was planning to bulldoze the waste into a more compact and confined site. In addition, the Hamlet was planning to install a form of containment for hazardous material at the solid waste disposal facility, and was considering to acquire an incinerator in order to manage the waste oil presently handled by a contractor.

• **Non-compliance of Act:** The status of the Hamlet's water licence has been outstanding for a number of years. In fact, although the Hamlet is currently unlicensed, a water licence application was previously submitted to the Northwest Territories Water Board and has for various reasons remained on hold ever since. In consequence, while the Hamlet recognizes the Water licence requirements, it also does not wish to needlessly produce information and/or documents which may already be filed with the Nunavut Water Board (NWB). Therefore, by copy of this letter, the Inspector notifies the NWB that the water licence application process would be eased considerably if the NWB provided the Hamlet with details of both the already filed, and ultimately needed, information relating to the application. In this regards, INAC and/or other implicated agencies can provide assistance should it be required.

Please feel free to contact me at (867) 975-4298 or [lavalleep@inac.gc.ca](mailto:lavalleep@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, Rankin Inlet (Don Forsyth)  
- Keewatin Health & Social Services, Rankin Inlet (Wanda Poirier)  
- EC Environmental Protection, Yellowknife (Anne Wilson)



## MUNICIPAL WATER USE INSPECTION FORM

Date: 2000/08/29 Licensee Rep. (Name/Title): Mike Gibbons / Foreman  
Licensee: Hamlet of Arviat Licence No.: unlicenced

### WATER SUPPLY

Source(s): Wolf Creek / Reservoir Quantity used: top meter @ 168 857 500  
Owner:/Operator: Hamlet bottom meter @ 286 918 700

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

Comments: Smaller of the 2 holding cells of the water reservoir recently expanded. Other holding cell has been drained and cleaned; was to be filled shortly. No concerns with the facility.

### WASTE DISPOSAL

Sewage: Sewage Treatment System (Prim./Sec/Ter.): primary; discharge overland to ocean  
Natural Water Body: Continuous Discharge (land or water):  
Seasonal Discharge: x Wetlands Treatment: moderate Trench:  
Solid Waste: Owner/Operator: Hamlet  
Landfill: Burn & Landfill: x Other:

Indicate: A - Acceptable U - Unacceptable NA - Not Applicable NI - Not Inspected  
Discharge Quality: sampled Decant Structure: NA Erosion: A  
Discharge Meas. Device: none Dyke Inspection: NA Seepages: A  
Dams, Dykes: A Freeboard: A Spills: 00-042 (fuel oil @ dump)  
Construction: NA O&M Plan: NA A&R Plan: NA  
Periods of Discharge: A Effluent Discharge Rate: not measured

Comments: Sewage lagoon's contents and effluent of a green tint. Abundant vegetation growth along the path of discharge from the sewage lagoon. Significant quantity of waste accumulated at the solid waste disposal site. Perimeter fence partly dismantled. Pooled water present at toe of the solid waste disposal site, but no active seepage observed. Bulky metal wastes disposal site is considerably scattered. No containment structure for hazardous materials. Waste oil storage/disposal handled by a contractor.

### 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: node required  
INAC: sewage discharge  
Signs Posted SNP: not applicable Warning: none  
Records & Reporting: not applicable  
Geotechnical Inspection: none required

Non-Compliance of Act or Licence: Community is unlicenced.

Philippe Lavallée

Inspector's Name

Inspector's Signature





**figure 1.** Recently expended holding cell, water reservoir; 2000/08/29.



**figure 2.** Older holding cell, water reservoir; 2000/08/29.



**figure 3.** Seepage from the sewage lagoon; 2000/08/29.





**figure 4.** Path of discharge from the sewage lagoon; 2000/08/29.



**figure 5.** Sewage lagoon; 2000/08/29.



**figure 6.** Solid waste disposal facility; 2000/08/29.





**figure 7.** Pooled water at the toe of the solid waste disposal facility; 2000/08/29.



**figure 8.** Pooled water at the toe of the solid waste disposal facility; 2000/08/29.



**figure 9.** Bulky metal wastes disposal site; 2000/08/29.

**YIGA ENVIRONMENTAL LABORATORY**  
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To: NUNAVUT

Operations Directorate, DIAND  
BOX 100

IQALUIT

X0A 0H0

Att'n: Philippe Lavallee

LAB# 201807

### SAMPLE INFORMATION

Our Lab#: 201807  
Your Sample ID: Sewage discharge  
Sample Matrix: lagoon seepage

PROJECT:

Collection:

Location: Arviat  
Date: 8/29/00  
By: Philippe Lavallee

Received Date: 8/31/00

Report Date: 06-Oct-00

Approved By: W. Lavallee

### - SAMPLE ANALYSIS REPORT -

Lab#	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
201807	Calcium	1.79	mg/L	0.05	9/05/2000	EC20003
	Magnesium	3.90	mg/L	0.01	9/05/2000	012102
	Sodium	79.9	mg/L	0.02	9/03/2000	011102
	Potassium	22.0	mg/L	0.03	9/03/2000	EC19102
	Sulphate	19	mg/L	3	9/27/2000	016306
	Tot-Suspended-Solids	124	mg/L	3	9/01/2000	EC10406
	NO3-N+NO2-N	0.095	mg/L	0.008	9/15/2000	07110
	Ammonia-N	76.5	mg/L	0.005	9/13/2000	EC7557
	T-Phosphorous	17.5	mg/L	0.004	9/12/2000	EC15411
	Bio-Oxy-Demand	23	mg/L	2	8/31/2000	08208
	Faecal_Coliform	4000	CFU/dL	1	9/01/2000	036014

Field Data (00/08/29) lagoon  
Temperature: 10.5 °C  
Conductivity: 1122 µS  
pH: 7.6 Time: 15:24