



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

January 2, 2001.

Roy Mullins
Senior Administrative Officer
Hamlet of Whale Cove
P.O. Box 120
Whale Cove, NU X0C 0J0

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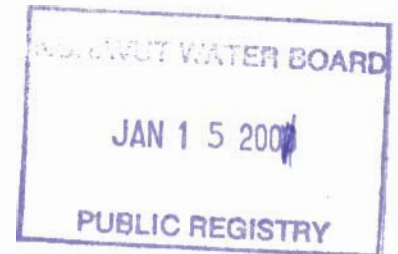
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Your file Votre référence

Our file Notre référence

(unlicensed)



August 29, 2000 Municipal Water Use Inspection - Report

Firstly, I wish to thank Guy Enuapik 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:

- **Sewage waste disposal:** Abundant vegetation growing along the path of discharge (figure 1) seems to enhance the treatment provided by the sewage lagoon (figure 2). In fact, the attached analytical results relating to the discharge from the sewage disposal facility reveal notably low concentrations of tested parameters. Further, the Microtox sample, which constitutes a reliable indicator of the biological toxicity attributed to an associated discharge, came in negative.
- **Solid waste disposal:** Due to the absence of a perimeter fence, a fair quantity of scattered material can be observed in and around the solid waste disposal facility, which is expanding towards the shoreline (figure 3). Also, water has pooled in various areas, including at the toe of the household waste disposal site (figure 4). Hazardous materials are segregated to the bulky metal wastes area, however they are simply discarded and not contained. Waste oil storage is likewise improper, as leaking barrels (figure 5) do not prevent the discharge of waste oil into water (figure 6). In addition, the usefulness of the honeybag pit (figure 7) should be reassessed, now that only one housing unit is reportedly not serviced by trucks. This being said, the attached analytical results relating to the discharge from the solid waste disposal facility (figure 8) indicate that while the Microtox sample once again came in negative, levels of ammonia, arsenic, cadmium, copper, iron, phenols, and zinc lie above the standards put forward under the *Canadian Water Quality Guidelines for the Protection of Aquatic Life*.

As such, the Inspector recommends that the Hamlet fence the facility in order to minimize windblown waste, improve hazardous material management by storing the waste in a sealift container until proper disposal, and ensure that waste oil is stored/disposed of in a way that prevents waste from being discharged into waters. Also, while the burning/compaction and burial of combustible waste is done adequately, it is however hindered by the extent of windblown material, by the quantity of accumulated waste, and by the proximity of the wastepile to water.

On a side note, the Inspector commends the Hamlet for recognizing that reclamation work should be carried out on the abandoned solid waste disposal site (figure 9). As was mentioned during the inspection, the EcoAction community program might be able to provide assistance in the undertaking of such cleanup projects.

- **Non-compliance of Act:** While an application form was provided at the time of the inspection, the Inspector is not aware of the Hamlet submitting a water licence application to the Nunavut Water Board. As has been repeatedly underlined in the past, and again during the inspection, a Water licence is not a mere paperwork formality, but constitutes a legal requirement under both the *Northwest Territories Waters Act* and the *Nunavut Land Claims Agreement*. 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 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): Guy Enuapik / Foreman
Licensee: Hamlet of Whale Cove Licence No.: (unlicenced)

WATER SUPPLY

Source(s): Fish Lake Quantity used: not inspected
Owner:/Operator: Hamlet

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

Comments: Keys to the water supply facility could not be located at the time of the inspection. No concerns noted with the water intake, however the contents of the fuel tank’s catchment basin ought to be sampled and disposed of.

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: 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: none reported
Construction: NA O&M Plan: NA A&R Plan: NA
Periods of Discharge: A Effluent Discharge Rate: not measured

Comments: Abundant vegetation in the discharge area appears to enhance the treatment provided by the sewage lagoon. Unfenced solid waste disposal facility expanding towards the shoreline. Hazardous material dumped with the bulky metal wastes. Water has pooled in the old honeybag pit, where diverse waste is being deposited. Stained ground and oily runoff observed in the vicinity of the waste oil disposal area.

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 required
INAC: sewage discharge, dump leachate
Signs Posted SNP: not applicable Warning: yes @ solid waste disposal facility
Records & Reporting: not applicable
Geotechnical Inspection: not applicable

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

Philippe Lavallée
Inspector’s Name

Inspector’s Signature



figure 1. Discharge area downslope of sewage lagoon; 2000/08/29.



figure 2. Sewage lagoon, with discharge area in background; 2000/08/29.



figure 3. Solid waste disposal facility; 2000/08/29.



figure 4. Household waste disposal, with metal waste in background; 2000/08/29.



figure 5. Waste oil storage, bulky metal wastes area; 2000/08/29.



figure 6. Waste oil runoff from the bulky metal wastes area; 2000/08/29.



figure 7. Honeybag pit, solid waste disposal facility; 2000/08/29.



figure 8. Discharge from the solid waste disposal facility; 2000/08/29.



figure 9. Abandoned solid waste disposal site; 2000/08/29.

TAIGA ENVIRONMENTAL LABORATORY

Dept. Indian Affairs & Northern Development

4601-52 nd Ave., Box 1500

Yellowknife, NT. X1A 2R3

Tel. (867) 669-2788

Fax: (867) 669-2718

To: NUNAVUT

Operations Directorate, DIAND

BOX 100

IQALUIT

X0A 0H0

Att'n: Philippe Lavallee

LAB# 201805

SAMPLE INFORMATION

Our Lab#: 201805

Your Sample ID: sewage discharge

Sample Matrix: sewage

Collection:

Location: Whale Cove Lagoon

Date: 8/29/00

By: Philippe Lavallee

PROJECT:

Received Date: 8/31/00

Report Date: 29-Sep-00

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

Lab#	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
201805	Tot-Suspended-Solids	8	mg/L	3	9/01/2000	EC10406
	NO3-N+NO2-N	0.337	mg/L	0.008	9/15/2000	07110
	Ammonia-N	3.05	mg/L	0.005	9/06/2000	EC7557
	T-Phosphorous	2.46	mg/L	0.004	9/12/2000	EC15411
	Bio-Oxy-Demand	3	mg/L	2	8/31/2000	08208
	Faecal_Coliform	10	CFU/dL	10	8/31/2000	036014

Field Data (00/08/29) lagoon

Temperature: 9.0 °C

Conductivity: 654 µS

pH: 8.4

Time: 10:39

MICROTOX DATA REPORT
Basic Test

FILE: 00091306.K15

Whale Cove Sewage Discharge - collected Aug 29/00 @ 10:35

Test Time: 15 minutes

Osmotic Adjustment: OAS

NUMBER	IO/IT	CONC.	CR/GAMMA	% EFFECT
-----	-----	-----	-----	-----
Control	92.65/ 81.38	0.0	0.8784 //	
1	95.06/ 85.15	5.6250	-0.019 *	
2	98.94/ 88.03	11.2500	-0.013 *	
3	98.64/ 84.43	22.5000	0.026 *	
4	99.10/ 82.73	45.0000	0.052	0 0

CR = Control Ratio

CORRECTION FACTOR = 0.8784

* Invalid data or controls

EC50 IS GREATER THAN HIGHEST CONCENTRATION

Signature *W. B. ...*TEST DATE: Sept 13/00
TIME: _____

PH 7.3

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Operations Directorate, DIAND

BOX 100

IQALUIT

X0A 0H0

Att'n: Philippe Lavallee

LAB# 201806

SAMPLE INFORMATION

Our Lab#: 201806

PROJECT:

Your Sample ID: dump leachate

Sample Matrix: sewage

Collection:

Location: Whale Cove Dump

Date: 8/29/00

By: Philippe Lavallee

Received Date: 8/31/00

Report Date: 29-Sep-00

Approved By: *W. Loeb*

RECEIVED

OCT 11 2000

DIAND
IQALUIT, NT**- SAMPLE ANALYSIS REPORT -**

Lab#	Test	Result	Units	Detection Limit	Analysis Date	Analytical Method
201806	Tot-Suspended-Solids	8	mg/L	3	9/01/2000	EC10406
	Ammonia-N	3.21	mg/L	0.005	9/13/2000	EC7557
	Total Arsenic(w)-GFAA	18	ug/L	1	9/06/2000	GFAA
	Tot-Cadmium(ICP-MS)	0.3	ug/L	.3	8/09/2000	ICP-MS
	Tot-Cobalt(ICP-MS) <	1	ug/L	1	8/09/2000	ICP-MS
	Tot-Chromium(ICP-MS) <	3	ug/L	3	8/09/2000	ICP-MS
	Tot-Copper(ICP/MS)	11	ug/L	2	8/09/2000	ICP-MS
	Tot-Iron(AA)	2.85	mg/L	0.03	9/07/2000	ICP-MS
	Tot-Manganese(ICP-MS)	169	ug/L	1	8/09/2000	ICP-MS
	Tot-Nickel(ICP-MS)	4	ug/L	1	8/09/2000	ICP-MS
	Tot-Lead(ICP-MS)	2	ug/L	1	8/09/2000	ICP-MS
	Tot-Zinc(ICP-MS)	68	ug/L	10	8/09/2000	ICP-MS
	Tot-Mercury(water) <	0.01	ug/L	0.01	9/08/2000	080314
	Phenols	16.7	ug/L	2.00	9/20/2000	006536

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Operations Directorate, DIAND

BOX 100

IQALUIT

X0A 0H0

Att'n: Philippe Lavallee

LAB# 201806

Oil&Grease

spl depleted

mg/L

9/22/2000

006524

Field Data (00/08/29) dump

Temperature: 8.5 °C

Conductivity: 928 μ S

pH: 8.0

Time: 10:59

MICROTOX DATA REPORT

Basic Test

FILE: 00091305.K15

Whale Cove Dump Leachate - Collected Aug 29/00 @ 10:50

Test Time: 15 minutes

Osmotic Adjustment: OAS

NUMBER	IO/IT	CONC.	CR/GAMMA	% EFFECT
-----	-----	-----	-----	-----
Control	93.64/ 75.32	0.0	0.8044 #	
1	91.34/ 75.58	5.6250	-0.028 *	
2	77.48/ 65.00	11.2500	-0.041 *	
3	93.55/ 74.96	22.5000	0.004 *	
4	93.39/ 73.89	45.0000	0.017 *	

CR = Control Ratio

CORRECTION FACTOR = 0.8044

* Invalid data or controls

EC50 IS GREATER THAN HIGHEST CONCENTRATION

Signature

W. RomanoTEST DATE: SEPT 13/00

TIME: _____

PH 7.3