



DIAND Nunavut District  
Box 100  
Iqaluit, NT  
XOA OHO

June 12, 1995

Mr. Mervyn Ray  
Senior Administrative Officer  
Hamlet of Arctic Bay  
Arctic Bay, NT  
XOA OAO

Your file    Votre référence

Our file    Notre référence

B9545-5-A11

*Arctic Bay  
WB  
MACA*

Dear Mr. Ray;

Water Management Inspection;  
Hamlet of Arctic Bay - June 6, 1995

1. Please find enclosed a copy of the Municipal Water Use Inspection Report, as prepared by our District Water Resources Officer, Paul Smith.
2. There were three main concerns that Mr. Smith identified during his inspection. These concerns relate to the lack of a water licence, an undersized sewage lagoon and an unfenced waste disposal site.
3. Also enclosed is a copy of the required application (Schedule III) for a water licence and an additional document which may aid you in the completion of this application. The completed application may be sent directly to the NWT Water Board. Their address is:

NWT Water Board  
Box 1500  
Yellowknife, NT  
X1A 2R3

4. Should you have any questions relating to the Inspection report or the application of a water licence, please do not hesitate to contact this office.

Sincerely,

IMA Theriault  
District Manager  
Nunavut District

QME



cc. Water Resources, DIAND NWT Region (Municipal Coordinator)

**Canada**



## MUNICIPAL WATER USE INSPECTION FORM

DATE: June 6, 1995 COMPANY REP.: Don White / Manager  
LICENSEE: Hamlet of Arctic Bay LICENCE #: 1000000000

### WATER SUPPLY

Source (s): Marril Lake Quantity Used (to date): N/A  
Owner/Operator: GNWT / Hamlet (estimate or actual)

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable

Intake Facilities: N/A Storage Structure: N/A Treatment Systems: A Chem. Storage: N/A  
Flow Meas. Device: A Convey. Lines: N/A Pumping Stations: N/A

Comments: Trenches to be built this year. Hamlet maintains detailed records of water use deliveries.

### WASTE DISPOSAL

Sewage Sewage Treatment System (primary, secondary or tertiary): basic primary - hypochlorite  
Natural Water body: \_\_\_\_\_ Continuous Discharge (land or water): \_\_\_\_\_  
Seasonal Discharge: ✓ Wetlands Treatment: minimal Trench: \_\_\_\_\_

Solid Waste: Owner/Operator: GNWT / Hamlet  
Landfill: ✓ Burn & Landfill: \_\_\_\_\_ Other: \_\_\_\_\_

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable

Disch. Quality: N/A Decant Structure: U Erosion: N/A  
Disch. Meas. Dev.: N/A Dyke Inspection: N/A Seepages: N/A  
Dams, Dykes: N/A Freeboard: U Spills: N/A  
Construction: N/A O & M Plan: N/A A & R Plan: N/A

Periods of Discharge: Seasonal Effluent Discharge Rate: \_\_\_\_\_  
Comments: Lagoon B unlicensed. Sewage overflows lagoon and discharges below lagoon. Dump is now burned regularly to control blowing garbage (unfenced facility). facility is covered once a year with granular material once a year.

### FUEL STORAGE

Owner: GNWT Operator: local contractor Condition of Tanks: OK  
Berms & Liners: OK Water within berm: Some Evidence of Leaks: N/A  
Drainage Pipes: OK Pump Station and Catchment Berm: OK  
Pipeline Condition: OK Not Applicable: ✓

### SURVEILLANCE NETWORK PROGRAM

Samples Collected: (Hamlet) N/A  
(DIAND) Marril Lake (Miz-AB-01); Caron Lake still frozen (alternat  
Signs Posted: SNP N/A Warning: Protect it - dump / sewage lagoon  
Record & Reporting: N/A

Geotechnical Inspection: N/A

Non-Compliance of Act or Licence: Community B unlicensed dump below Act requires this community to be licensed. License is under the supply of water licence. Licensing requirements were discussed last year with the Senior Administrative Officer (SAO) - Marvin Kay.

Page 2 attached Yes ✓ No

Licensee Representatives Title

Not Available.

Inspectors Name

Inspectors Signature

*File 3 Arctic Bay*

INDIAN & NORTHERN AFFAIRS  
WATER RESOURCES LABORATORY  
Box 1500  
Yellowknife, NT. X1A 2R3  
Tel. (403) 920-8129  
Fax. (403) 873-9300

To: Indian & Northern Affairs Canada  
Water Resources\NAP  
Baffin District Office  
Box 100  
==> Iqaluit NT X0A 0H0  
Paul Smith

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SAMPLE INFORMATION

Our Lab # : 950413  
Your Sample ID: Misc-AB-01  
Sample Matrix : water

Account No.: Baffin

Collection:  
Location: Hamlet of Arctic Bay  
Date: 06/06/95  
By: PSmith

Report Date: 07/06/95

Approved by: W. Wood

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- SAMPLE ANALYSIS REPORT -

| Lab#   | Parameter          | Result Units | Detect Limit | Method Code |
|--------|--------------------|--------------|--------------|-------------|
| 950413 | Alkalinity         | 9.3 mg/L     | 0.300        | 10101       |
|        | Calcium            | 2.54 mg/L    | 0.040        | 20103       |
|        | T.Cadmium ICP-MS   | 0.1 ug/L     | 0.100        | 100133      |
|        | Chloride           | 6.19 mg/L    | 0.080        | 17206       |
|        | Colour             | 35 Colour    | 5.000        | 02021       |
|        | Conductivity       | 57.4 uS/cm   | 0.100        | 02041       |
|        | T.Cobalt ICP-MS    | 0.1 ug/L     | 0.100        | 100115      |
|        | T.Chromium ICP-MS  | 0.6 ug/L     | 0.200        | 100111      |
|        | T.Copper ICP-MS    | 1.7 ug/L     | 0.100        | 100119      |
|        | Filt.Residue       | 40 mg/L      | 10.000       | 10451       |
|        | Tot.Hardness       | 13.7 mg/L    | 0.100        | 10602       |
|        | Potassium          | 0.75 mg/L    | 0.050        | 19106       |
|        | Magnesium          | 1.78 mg/L    | 0.010        | 12102       |
|        | T.Manganese ICP-MS | 5.9 ug/L     | 0.100        | 100113      |
|        | Sodium             | 2.36 mg/L    | 0.040        | 11102       |
|        | Non-Filt_Res.      | 4 mg/L       | 3.000        | 10406       |
|        | T.Nickel ICP-MS    | 0.4 ug/L     | 0.100        | 100117      |
|        | T.Lead ICP-MS      | 2.1 ug/L     | 0.200        | 100145      |
|        | pH                 | 6.45 pH      | 0.050        | 10301       |
|        | T.Iron AAS         | 494 ug/L     | 20.000       | 26004       |
|        | Turbidity          | 7.0 NTU      | 0.100        | 02081       |
|        | T.Zinc ICP-MS      | 15 ug/L      | 5.000        | 100121      |



*Handwritten initials*

DIAND NWT Region  
Box 100  
Iqaluit, NT  
XOA OHO

September 17, 1994

Mr. Mervyn Ray  
Senior Administrative Officer  
Hamlet of Arctic Bay  
Arctic Bay, NT  
XOA OAO

Your file    Votre référence

Our file    Notre référence  
B9545-5-A11

*Arctic Bay.*

Dear Mr. Ray,

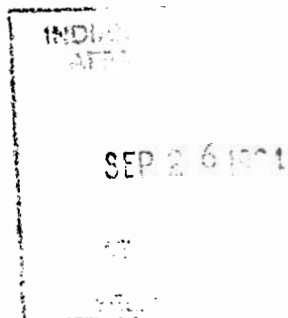
Re: Water Sample Analysis Results

1. Enclosed are the results from the analysis of water samples that were collected during the water management inspection carried out on May 30th, 1994.
2. Also enclosed for your information are some guides, in Inuktitut and english, that provide some explanation to the parameters analyzed.
3. With the exception of turbidity, all parameters analyzed are within the Health and Welfare Guidelines for drinking water. The turbidity level was most likely high due to the time of year that the sample was collected, ie. spring runoff.
4. These results should not pose any concerns as the sample was collected from the truck fill point, prior to chlorination and settling.
5. If you have any further questions, please do not hesitate to contact this office.

Sincerely,

*Handwritten signature of JMA Theriault*

JMA Theriault  
District Manager



*Done.*

Health, BRHB, Iqaluit (D. Paradis)  
Iqaluit (R. Armstrong)  
sources, YK (B. Collins)

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INTELLIGENCE & NORTHERN AFFAIRS  
WATER RESOURCES LABORATORY  
Box 1500  
Yellowknife, NT. X1A 2R3  
Tel. (403) 920-8129  
Fax. (403) 873-9300

To: Hamlet of Arctic Bay  
c/o DIAND  
Baffin District Office  
Iqaluit NT  
==> Paul Smith

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SAMPLE INFORMATION

Our Lab # : 940771  
Your Sample ID: Misc-AB-01  
Sample Matrix : water

Account No.: Arct.Bay

Collection:  
Location: Marcil Lake Truck fill pt  
Date: 05/30/94  
By: PS

Report Date: 08/29/94

Approved by: J. G.

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- SAMPLE ANALYSIS REPORT -

| Lab#   | Parameter          | Result Units | Detect Limit | Method Code |
|--------|--------------------|--------------|--------------|-------------|
| 940771 | Alkalinity         | 10.4 mg/L    | 0.300        | 10101       |
|        | Calcium            | 4.90 mg/L    | 0.040        | 20103       |
|        | T.Cadmium ICP-MS   | LO.1 ug/L    | 0.100        | 100133      |
|        | Colour             | 17 Colour    | 5.000        | 02021       |
|        | Conductivity       | 44.9 uS/cm   | 0.100        | 02041       |
|        | T.Cobalt ICP-MS    | 0.3 ug/L     | 0.100        | 100115      |
|        | T.Chromium ICP-MS  | 2.9 ug/L     | 0.200        | 100111      |
|        | T.Copper ICP-MS    | 2.6 ug/L     | 0.100        | 100119      |
|        | Filt.Residue       | 51 mg/L      | 10.000       | 10451       |
|        | Tot.Hardness       | 20.1 mg/L    | 0.100        | 20103       |
|        | Magnesium          | 1.90 mg/L    | 0.010        | 20103       |
|        | T.Manganese ICP-MS | 7.5 ug/L     | 0.100        | 100113      |
|        | Non-Filt_Res.      | 3 mg/L       | 3.000        | 10406       |
|        | T.Nickel ICP-MS    | 0.7 ug/L     | 0.100        | 100117      |
|        | T.Lead ICP-MS      | 1.7 ug/L     | 0.200        | 100145      |
|        | pH                 | 6.75 pH      | 0.050        | 10301       |
|        | T.Arsenic-Hyd.     | 0.3 ug/L     | 0.300        | 33011       |
|        | T. Iron            | 396 ug/L     | 20.000       | 26004       |
|        | T.Mercury-C/V      | NR ug/L      | 0.020        | 80011       |
|        | Turbidity          | 9.2 NTU      | 0.100        | 02081       |
|        | T.Zinc ICP-MS      | 16.0 ug/L    | 0.500        | 100121      |

# MUNICIPAL WATER USE INSPECTION FORM

DATE: May 30/94 MUNICIPAL REP.: Sam Willie  
 LICENSEE: Hamlet of Arctic Bay LICENCE #: Nil

## WATER SUPPLY

Source(s): Marcil Lake Quantity Used (to date): \_\_\_\_\_  
 Owner/Operator: Hamlet (estimate or actual)

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable

Intake Facilities: U Storage Structures N/A Treatment Systems A (bleach when filling)  
 Flow Meas. Device A Conveyance Lines N/A Pumping Station N/A  
 Comments: No truck fill station. Have been using holes through the ice to get water. Water meter on truck measures (to the litre) all water pumped.

## Waste Disposal

Sewage: Sewage Treatment System (primary, secondary or tertiary) basic primary  
 Natural Water Body \_\_\_\_\_ Continuous Discharge (land or water) \_\_\_\_\_  
 Seasonal Discharge ✓ Wetlands Treatment minimal Trench \_\_\_\_\_  
 Solid Waste: Owner/Operator: GNWT / Hamlet  
 Landfill ✓ Burn & Landfill \_\_\_\_\_ Other \_\_\_\_\_

Indicate: A - Acceptable U - Unacceptable N/A - Not Applicable

Discharge Quality N/A Decant Structures U Erosion N/A  
 Disch. Meas. Dev. N/A Dyke Inspections N/A Seepages N/A  
 Dams, Dykes N/A Freeboard U Spills N/A  
 Construction N/A O & M Plan N/A A & R Plan N/A

Periods of Discharge: Seasonal Effluent Discharge Rate: \_\_\_\_\_

Comments: Lagoon is undersized. Sewage fills and freezes within the lagoon. Additional sewage flows overtop the lagoon berm and a large amount of frozen sewage has accumulated at the base of the lagoon.

Fuel Storage Owner POL / GNWT Operator land contractor Condition of Tanks ok  
 Berms & Liners ok Water within berm: Yes Evidence of Leaks No  
 Drainage Pipes Nil Pump Station and Catchment Berm ok  
 Pipeline Condition ok

## SURVEILLANCE NETWORK PROGRAM

Samples Collected: (Hamlet) N/A  
 (DIAND) Potable water from Marcil Lake  
 Signs Posted: SNP N/A Warning At Marcil Lake + dump.  
 Records & Reporting: Accurate records kept for water consumption.  
No reporting requirements  
 Geotechnical Inspection: N/A

Non-Compliance of Act or Licence: Hamlet of Arctic Bay requires a water licence. Hamlet has not held a water licence previously.

Page 2 attached ✓ Yes No

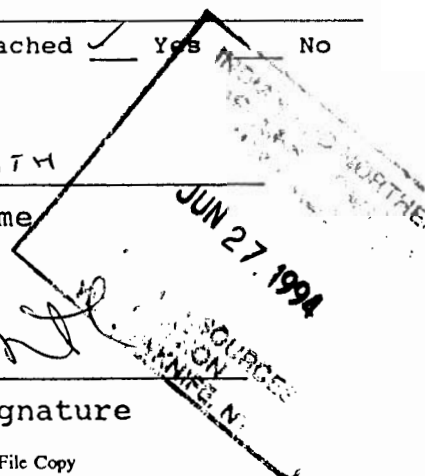
SENIOR ADMINISTRATIVE OFFICER  
 Licensee Representative's Title

Paul Smith  
 Inspector's Name

Licensee Representative's Signature

Inspector's Signature

Arctic Bay  
WB  
MACTA



MUNICIPAL WATER USE INSPECTION FORM  
(continued)

Date: May 30/94

Licence #: NIL

Official Onsite Discussion/Comments:

ARCTIC BAY

Water Supply

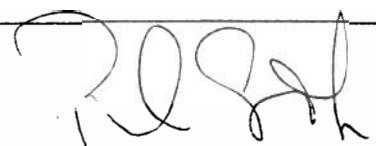
- The winter truck fill station is no longer acceptable. Truck now fills from the shore. A truck fill station is required so that a hole doesn't have to be chopped through the ice each time the truck is filled.

Waste disposal

- Lagoon is undersized.
- domestic waste disposal site should be fenced.
- Sam Willie (Hauled Foreman) would like to get a metal crusher to deal with the large quantity of bulky waste material that has accumulated at the site.
- Only one house remains on barged sewage.
- Most domestic waste is not burned, but rather is landfilled on a regular basis.



Licensee Representative's Signature



Inspector's Signature