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INAC, Field Operations

P.O. Box 100

Iqaluit, NU, X0A 0H0

August 8, 2003

Greg Morash

Senior Administrative Officer

P.O. Box 253

Pangnirtung, NU, X0A 0R0

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Tel.: (867) 975-4298

Fax.: (867) 979-6445

Your file - Votre référence

**NWB3PAN0207**

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**Nunavut Water  
Board**

APR 28 2004

**Public Registry**

**RE: June 30, 2003 Municipal Water Licence Report**

The Water Resources Officer (WRO) appreciates the assistance provided during the tour of the Hamlet's Water use and Waste Disposal Facilities. Enclosed for your records is a copy of the Municipal Water Use Inspection Report performed on June 30, 2003. During the inspection the following observations were noted.

**Part B: General Conditions**

Pangnirtung has been instructed by the WRO as to the placement of the Surveillance Network Program (SNP) stations at the Water Supply Intake (PAN-1), Solid Waste Disposal Facility Seepage (PAN-2) and the Sewage Truck Discharge (PAN-3). The Sludge Disposal Runoff SNP station (PAN-4) will be located once the Sewage Treatment Plant becomes operational. As a condition of the Water Licence the Municipality of Pangnirtung is required to submit a Annual Report detailing all Water Supply and Waste Disposal Facility modifications, a summary of all data generated under the Monitoring Program and any other information as described in Part B General Conditions of the Licence. Installation of a metre at the Water Intake Facility will assist in tabulating community monthly and annual water consumption as required for the Annual Report. There was evidence of disposal of industrial waste (waste oil, solvent and fuel). The WRO has informed the SAO, currently Pangnirtung is not authorized under it's Water Licence to store hazardous waste from any commercial sources, to do so would be in direct violation of the Water Licence and *Nunavut Water and Nunavut Surface Rights Tribunal Act*.

**Part C: Conditions Applying to Water Use**

The Water Intake Facility is well maintained (photo 2 & 3). The chlorination pump has not received any maintenance since Inspected in 2002 (photo 6). Some damage was observed to the fence surrounding the potable water reservoir (photo 1 & 2). This damaged section of the fence should be repaired as soon as possible to prevent unwanted access to the drinking water supply. It was observed that the water depth at the Duval River recharge line intake was less than 1 metre (photo 5). This limited depth

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may increase the silt load to the reservoir. The water recharge line should be plugged to stop unwanted entrance of animals (photo 3). No water metre was observed at the Water Intake Facility.

#### **Part D: Conditions Applying to Waste Disposal**

The Solid Waste Disposal Facility was in poor operational condition. There was a section of fence that required maintenance. The creek adjacent to the Solid Waste Disposal Facility and the ditch on both sides of the dump road are highly contaminated with garbage from the dump (photo 19). Any and all solid municipal waste within the Municipal boundaries shall be transported and contained within the Solid Waste Disposal Facilities. The Municipality is required to remove all garbage in the creek and ditch adjacent to the Solid Waste Disposal Facility. There are currently 3 culverts that breach the Solid Waste Disposal Facility berm (photo 16, 20, 21). All 3 culverts shall be filled with aggregate to reduce dump seepage. All fish processing waste shall be contained at the Solid Waste Disposal Facility with no effluent seepage visible (photo 18). The Sewage Treatment Plant schedule to be operational in 2003 has to date not operated in accordance with design specifications (photo 7-12). The Old Sewage Truck Discharge Pit is currently in use (photo 13). The Inspector requires the Municipality to place aggregate material at the lagoon discharge to impede the uninhibited sewage effluent flow from entering the Pangnirtung Fjord (photo 14 & 15). The waste oil storage area requires remediation of all open drums and containment or land farming of all contaminated soil (photo 23 & 24).

#### **Part E: Conditions Applying to Modifications and Construction**

The Licencee shall submit to the NWB prior to completion of modifications plans for the Sewage Truck Pit and Solid Waste Disposal Facility culvert construction as required by the WRO. At the time of writing this report the municipality had not commissioned the new Sewage Treatment Plant. The municipality shall submit to the NWB and the WRO plans/ drawings of any modifications made to the original Sewage Treatment Plant design.

#### **Part F: Conditions Applying to Operation and Maintenance**

The Water Intake Facility was fairly well maintained however the following deficiencies were noted. The WRO noted a logbook in place at the Water Intake Facility, however a more detailed Building Log Sheet would be beneficial to the maintenance of the Facility and to the Inspector. The chlorine pump at the Water Intake Facility was in poor operational condition and requires maintenance (photo 16). The Licencee shall before December 1, 2003 submit to the NWB a plan for the Operation and Maintenance of Sewage and Solid Waste Disposal Facilities in accordance with *Guidelines for the preparing an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities* (October 1996).

### **Part: G Conditions Applying to Abandonment and Restoration**

Given the inability of the municipality of Pangnirtung and Community Government & Transportation (CG&T) to maintain the Sewage Truck Decant Pit to the satisfaction of the Inspector. The WRO requests the Municipality decommission the Sewage Truck Decant Pit once the new Sewage Treatment Plant meets operational design. A plan will be submitted to the NWB, and authorization will be requested prior to the decommissioning of the Sewage Truck Decant Pit. All fish processing waste shall be contained within the Solid Waste Disposal Facility in a pit below the active - permafrost layer, treated with lime and buried prior to the spring.

### **Part H: Conditions Applying to the Surveillance Network Program**

The WRO has identified the placement of the SNP stations at the Water Supply Intake (PAN-1), Solid Waste Disposal Facility Seepage (PAN-2) and the Sewage Truck Pit Discharge (PAN-3). The Sludge Disposal Runoff SNP station (PAN-4) will be located once the Sewage Treatment Plant becomes operational. SNP Sewage Facility Discharge PAN-3 will be relocated to the Sewage Treatment Plant discharge once the facility becomes operational. Data from the Monitoring Program will be provided in the Water Licence Annual Report as required in Part B: General Conditions.

### **Non-Compliance of Act or Licence**

At the time of Inspection, the Hamlet of Pangnirtung was in breach of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* for the use of water and the disposal of waste Part B: General Conditions Item 6. The Licencee shall immediately report any spill to the 24-Hour Spill line.

If there are any concerns or questions in regards to this inspection please contact me at (867) 975 4298 or [bodykevichc@inac.gc.ca](mailto:bodykevichc@inac.gc.ca)

Sincerely,



Constantine Bodykevich  
Water Resources Officer (WRO)  
INAC, Nunavut District

- cc.
- Nunavut Water Board, Gjoa Haven (Jim Wall)
  - CG&T, Iqaluit (Doug Sitland)
  - Baffin Health & Social Services, Iqaluit (Bruce Trotter)
  - EC Environmental Protection, Yellowknife (Anne Wilson)
  - INAC Water Management, Iqaluit (Michelle Mc Christie)



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INAC, Nunavut District

P.O. Box 100

Iqaluit, NU, X0A 0H0

[www.ainc.gc.ca](http://www.ainc.gc.ca)

September 15, 2003

Greg Morash  
Senior Administrative Officer (SAO)  
Pangnirtung  
P.O. Box 253  
Pangnirtung, NU X0A 0R0

Faxed to: (867) 473-8832

**Deposit of Waste in Contravention of Water Licence NWB3PAN0207**

**- Inspector's Direction -**

I, Constantine Bodykevich; duly designated Inspector pursuant to subsection 85 (1) *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, conducted an inspection on June 30, 2003 of Pangnirtung.

At the time of the drafting of this letter Pangnirtung was in contravention of subsection 12 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. The Water Resources Officer observed drums of waste at Pangnirtung with markings consistent with those used for industrial purposes. These drums were not stored in accordance with Hazard Waste Guidelines.

As stipulated in subsection 12 (1) Except in accordance with the conditions of a Licence, no person shall deposit or permit the deposit of waste in any other place under conditions in which the waste, may enter waters in Nunavut.

As stipulated in subsection 12 (3) Where waste is deposited in contravention of this section, every person who owns or has the charge, management or control of the waste, or who caused or contributed to the deposit, shall, subject to the regulations, without delay report the deposit to an inspector.

As such, under the authority vested in me pursuant to subsection 87 (1) (ii) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, I hereby direct, Greg Morash SAO of Pangnirtung to immediately:

- ☐ Immediately insure that any 45 gallon drums of oil, fuel and solvent are consolidated and properly stored in an upright position with all bungs in place on level ground with no visible signs of leakage. All drums are to be stored within the municipal solid waste disposal facilities in Pangnirtung.
- ☐ Insure that no drums of waste oil, waste fuel or other associated waste products from industrial sources ( Nunavut Power Corporation ) are deposited to the municipal waste facilities of Pangnirtung.

Failure to comply fully or in part with an **Inspector's Direction** constitutes a offence under subsection 90 (1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and entails, upon summary conviction, a fine of \$100,000 or to imprisonment for a term of one year, or both. Further pursuant to subsection 90 (4) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, each day on which the **Inspector's Direction** is not complied with shall be considered a separate offence.

If you have any questions or concerns, please do not hesitate to contact me at (867) 975-4298 or [bodykevichc@inac.gc.ca](mailto:bodykevichc@inac.gc.ca).

Sincerely,



Constantine Bodykevich  
Water Resources Officer,  
INAC - Nunavut District  
P.O. Box 100, Iqaluit, NU, X0A 0H0

cc. -Nunavut Water Board, Gjoa Haven

## Pangnirtung Inspection 2003

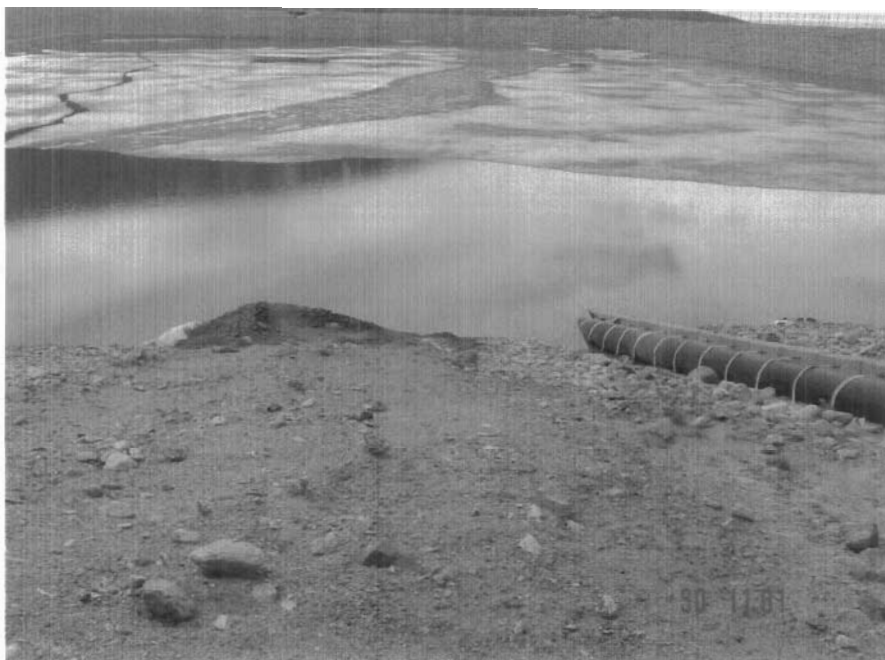


Photo 1. Water Intake Facility reservoir intake,  
water sample N 66.0858.7 W 65.4038.9.



Photo 2. Water Reservoir fence damage.



Photo 3. Water Reservoir recharge line.



Photo 4. Water Treatment plant truck fill station.



Photo 5. River recharge line area.

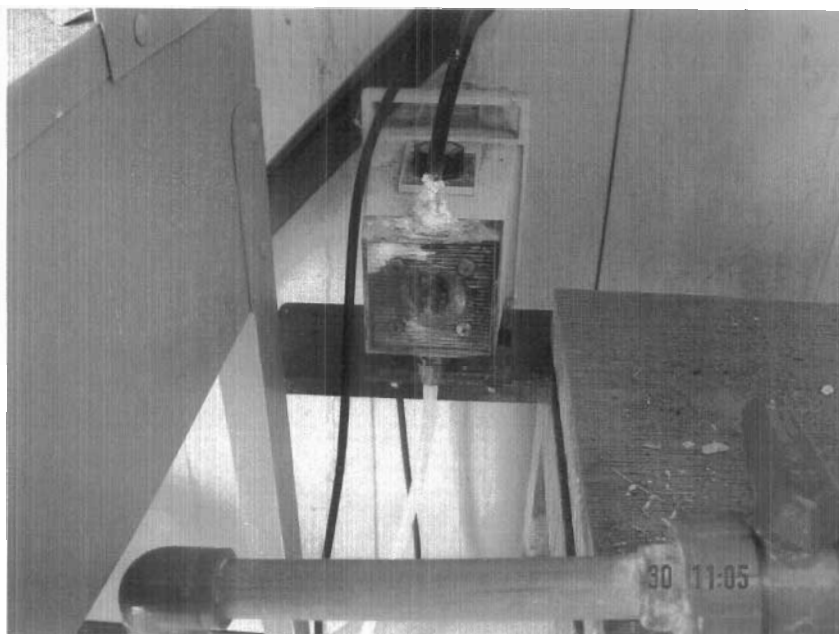


Photo 6. Corroded chlorine pump in Water Treatment Facility.

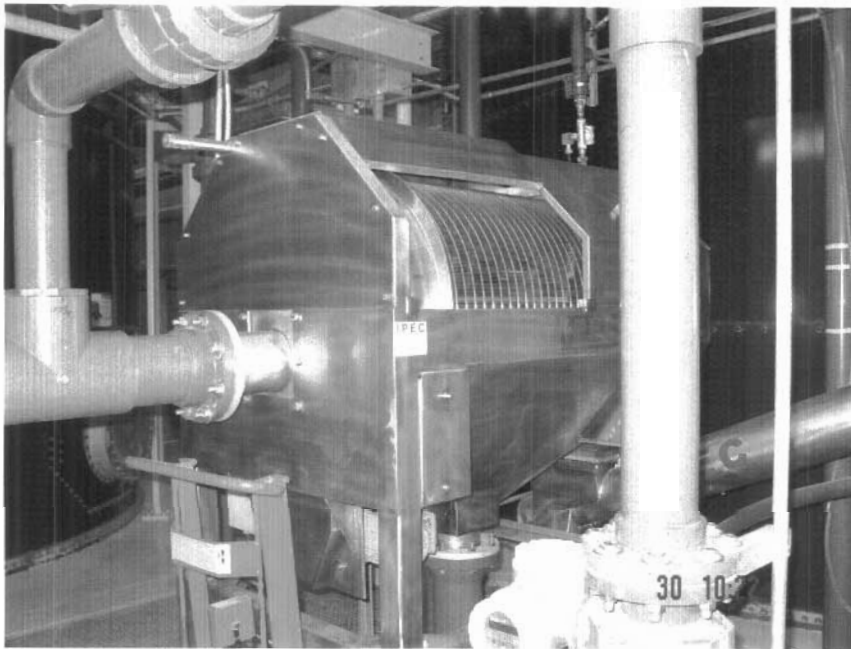


Photo 7. Screen for new sewage Treatment Plant.



Photo 8. Production chemical used in new Sewage Treatment Plant.

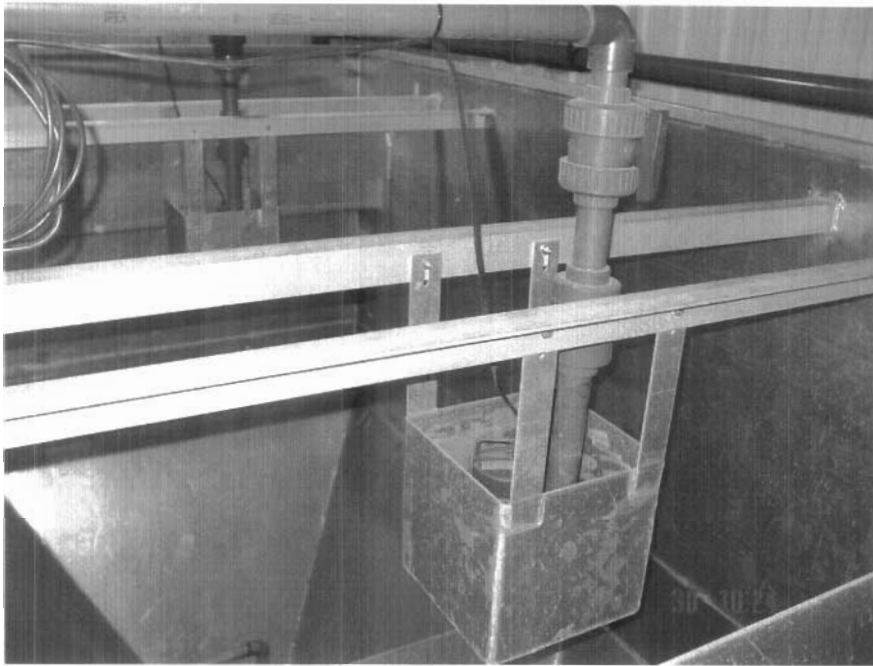


Photo 9. Mixing tank in new Sewage Treatment Plant.

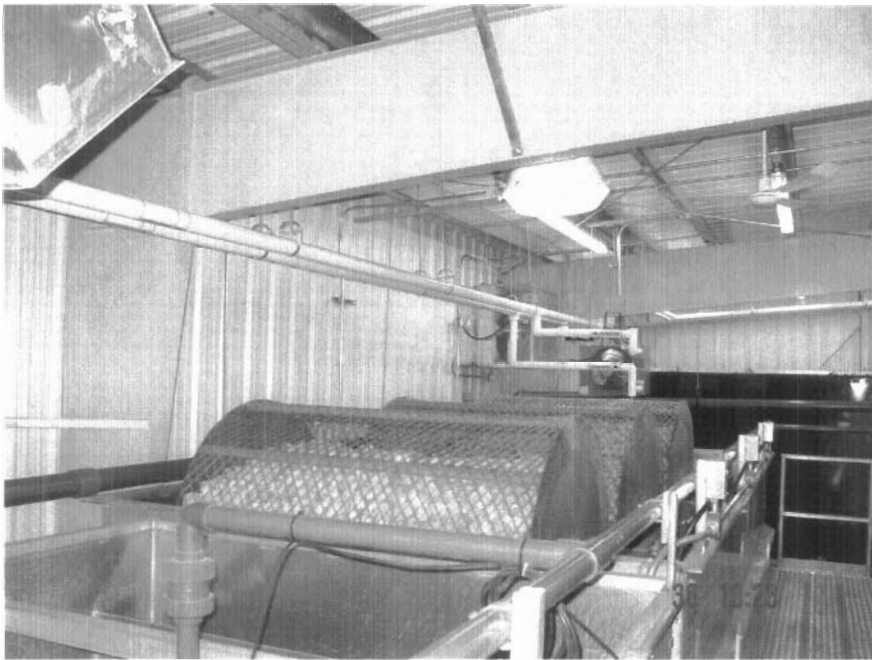


Photo 10. Rotating Biological Contactors in new Sewage Treatment Plant.



Photo 11. Flow metre on Sewage System out flow.



Photo 12. Sewage Facility discharge structure.



Photo 13. Sewage truck discharge pit



Photo 14. Sewage truck discharge pit.



Photo 15. Sewage truck discharge pit effluent,  
sewage sample N 66.0924.9 W 65.4016.8.



Photo 16. Solid Waste Disposal Facility,  
seepage sample N 66.0925,7 W 65.4014.8.



Photo 17. Tipping face at Solid Waste Disposal Facility.



Photo 18. Fish plant waste pit in Solid Waste Disposal Facility.



Photo 19. Creek adjacent to Solid Waste Disposal Facility full of dump waste.



Photo 20. Effluent seepage path from Solid Waste Disposal Facility.



Photo 21. Solid Waste Disposal Facility seepage path and refuge at back of dump.



Photo 22. Metal waste in photo foreground and background.



Photo 23. Waste oil storage area.



Photo 24. Waste oil storage in improper containers.



## MUNICIPAL WATER USE INSPECTION REPORT

Date: June 30, 2003

Licensee Rep. (Name/Title): Greg Morash /SAO

Licensee: Hamlet of Pangnirtung

Licence No.: NWB3PAN0207

### WATER SUPPLY

Source(s): Duval River/ Reservoir

Quantity used:

Owner:/Operator: Hamlet of Pangnirtung

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Intake Facilities: A

Storage Structure: U

Treatment Systems: A

Chemical Storage: A

Flow Meas. Device: NA

Conveyance Lines: NA

Pumping Stations: A

**Comments:** Water Intake Facility was clean and operating properly. Reservoir fence requires maintenance to replace 20 meters on east side. Reservoir schedule to have excessive sludge-sediment removed in 2003. Authorization required prior to transportation of reservoir sludge dump. Excessive sludge or sediment may be adversely effected by shallow water at reservoir recharge inlet.

### WASTE DISPOSAL

**Sewage:** Sewage Treatment System (Prim./Sec/Ter.): discharge over land to ocean.

Natural Water Body:

Continuous Discharge (land or water): water

Seasonal Discharge:

Wetlands Treatment: X

Trench:

**Solid Waste:** Owner/Operator: Hamlet of Pangnirtung

Landfill:

Burn &amp; Landfill: X

Other: Fish plant waste buried in hole 2 meters deep.

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Discharge Quality: Sampled

Decant Structure: U

Erosion: A

Discharge Meas. Device: NIL

Dyke Inspection: U

Seepages: U

Dams, Dykes: NA

Freeboard: NA

Spills: NIL

Construction: A

O&amp;M Plan: NA

A&amp;R Plan: NA

Periods of Discharge: U

Effluent Discharge Rate: Not Measured

**Comments:** The new Sewage Treatment Plant was not operational at the time of inspection. The present sewage disposal system does not meet the criteria as set out in the Water Licence NWB3PAN0207. A berm is required at the back of the sewage decant pit. This berm is required to reduce the now unrestricted sewage effluent flow from entering water. Commissioning of the new plant should be undertaken ASAP. The landfill leaches effluent from the culverts that have been placed in the north side of the dump. These culverts should be closed to contain any effluent from fish processing waste. Lab analysis of samples taken will be forthcoming once received by the Inspector.

### FUEL STORAGE

Owner/Operator:

Indicate: **A** - Acceptable **U** - Unacceptable **NA** - Not Applicable **NI** - Not Inspected

Berms &amp; Liners: NI

Water within Berms: NI

Evidence of Leaks: NI

Drainage Pipes: NI

Pump Station &amp; Catchment Berm: NI

Pipeline Condition: NI

Not Applicable: NI

Condition of Tanks: NI

### SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected

Hamlet: NIL

INAC: PAN-1, PAN-2, PAN-3

Signs Posted

SNP: NIL

Warning: None Observed

Records &amp; Reporting: Unacceptable

Geotechnical Inspection: Not Applicable

**Non-Compliance of Act or Licence:** : At the time of inspection the Hamlet of Pangnirtung was in breach of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* for the use of water and disposal of waste. (Part B, Item 6 General Conditions) The Licencee shall immediately report any spill to the 24 hour spill line, and (Part D, Item 2 Conditions Applying to Waste Disposal) all effluent discharged shall meet the effluent quality standards.

Constantine Bodykevich

Inspector's Name



Inspector's Signature

Peter Kusugak

Field Operations Manager Name



Manager's Signature