



DIAND Nunavut District  
Box 100  
Iqaluit, NT  
XOA OHO

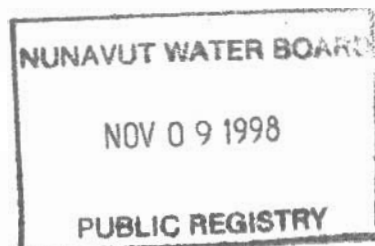
Your file    Votre référence

Our file    Notre référence

October 20, 1998

B9545-5-N5L3-0087

Mr. Denis Bedard, P. Eng.  
Director, Engineering and Planning  
Municipality of Iqaluit  
Box 460  
Iqaluit, NT  
XOA OHO



Dear Mr. Bedard;

**Water Licence Inspection - N5L3-0087**  
**Town of Iqaluit - October 14, 1998.**

1. Attached is a copy of the inspection report prepared as a result of the water licence inspection carried out on licence N5L3-0087 held by the Town of Iqaluit.
2. As a follow-up to our post-inspection discussion, there are a number of issues that I wish to highlight:
  - please advise this office when the graduated marker post has been placed in the inlet area of the sewage lagoon and has been referenced to the top of the west dyke (Note 5).
  - you noted that MACA has identified funds for the A+R of the old Apex and West 40 waste disposal sites for the years 2002-2003. While I can understand the relative priority given the large capital projects the Town faces (sewage plant construction, upgrading the water treatment plant, rapid growth and development in the community, etc.) this is a delay that may be considered unacceptable. Once an A+R plan has been approved, the Town is obligated to meet whatever deadline the NWB sets for the implementation of the clean-up plan (Note 7).
  - please provide the NWB with an 'as-built' drawing for the berm that was placed along the north-east side of the waste disposal site (General Comments).
  - should the Town wish to pursue measures to modify the outlet of 'North 40 Lake' in order to control future flooding problems, an application to the NWB should be made (General Comments).

.../2

3. I wish to thank Rock Burton and Chris Freda for their assistance provided during the inspection. Should you have any questions with respect to the report, please do not hesitate to contact this office.

Sincerely,



Paul Smith  
Water Resources Officer  
Nunavut District

- cc. - Nunavut Water Board, Gjoa Haven  
- DIAND Water Resources, YK  
- MACA, Iqaluit (Doug Sitland)  
- Public Health, Iqaluit (Nicole Ritchie)





## MUNICIPAL WATER USE INSPECTION FORM

DATE: October 14, 1998 COMPANY REP.: Rock Burton, Chris Freda  
LICENSEE: Town of Igloolik LICENCE #: N5L3-0087

### WATER SUPPLY

Source (s): Lake Geraldine Quantity Used (to date): 1,184 m<sup>3</sup>/day  
Owner/Operator: Town of Igloolik (estimate or actual) (based on weekly average)

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

Intake Facilities: A Storage Structure A Treatment Systems A Note 2 Chem. Storage A Note 3  
Flow Meas. Device A Convey. Lines A Note 1 Pumping Stations A

Comments: See following page

### WASTE DISPOSAL

Sewage Sewage Treatment System (primary, secondary or tertiary) Primary lagoon  
Natural Water body \_\_\_\_\_ Continuous Discharge (land or water) to ocean  
Seasonal Discharge \_\_\_\_\_ Wetlands Treatment \_\_\_\_\_ Trench \_\_\_\_\_

Solid Waste: Owner/Operator: Town of Igloolik  
Landfill \_\_\_\_\_ Burn & Landfill ✓ Other \_\_\_\_\_

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

Disch. Quality A Note 4 Decant Structure A Erosion N/A  
Disch. Meas. Dev. N/A Dyke Inspection A Daily Seepages N/A  
Dams, Dykes Note 5 Freeboard A Note 5 Spills N/A  
Construction Note 6 O & M Plan A A & R Plan Note 7  
Periods of Discharge: Continuous Effluent Discharge Rate: \_\_\_\_\_

Comments: See following page

### FUEL STORAGE

Owner: \_\_\_\_\_ Operator \_\_\_\_\_ Condition of Tanks \_\_\_\_\_  
Berms & Liners \_\_\_\_\_ Water within berm: \_\_\_\_\_ Evidence of Leaks: \_\_\_\_\_  
Drainage Pipes \_\_\_\_\_ Pump Station and Catchment Berm \_\_\_\_\_  
Pipeline Condition \_\_\_\_\_ Not Applicable: ✓

### SURVEILLANCE NETWORK PROGRAM

Samples Collected: (Hamlet) Per SNP requirements  
(DIAND) Not during this inspection  
Signs Posted: SNP ✓ Warning Note 8  
Record & Reporting 1997 Annual Report submitted

Geotechnical Inspection: N/A

Non-Compliance of Act or Licence: Only on it relates to the late provision of the Spill Contingency Plan (2 years late) and Long term Waste Management Plan (10 months late).

Page 2 attached Yes ✓ No \_\_\_\_\_

Licensee Representatives Title \_\_\_\_\_

Licensee Representatives Signature \_\_\_\_\_

Paul Smith  
Inspectors Name

Tom Simon  
Inspectors Signature



## Inspection Report

Town of Iqaluit  
October 14, 1998

B9545-5-N5L3-0087

Note 1. Conveyance Lines. At the present time, work is continuing on the recirculation lines at the reservoir. NTPC use to use water/heat exchanges to cool the generators. They have now gone to a radiator and this required the plumbing to be upgraded/modified. The Water Treatment Plant, which have the boilers installed, will temper all return water to ensure that nothing freezes. The work was to be completed by the end of August, but due to a tremendous backlog of sealift materials, this work is on-going.

Note 2. Treatment Systems. There are a number of aspects to this category, but only those where changes have occurred since last year (relating to pH modification and chlorination) will be noted. The pH of the drinking water is improved using lime. At present a bag of lime is used per day. Last year at this time, and for some time prior to that, the plant operator was not using enough and as a result, low pH water was being produced.

The second aspect relates to the installation of a new chlorine leak detection system. The detector is located near the floor in the chlorination room. The alarms are located both inside and outside of the building proper and will warn the operator should there be an incident. In addition, the Town has installed, in strategic places, hazardous materials handling equipment as well as a fully contained breathing apparatus (Scott Air Pack).

Note 3. All chlorine cylinders are now stored in a sealift container adjacent to the treatment plant. These measures were required after the incident last year when a chlorine cylinder started leaking and there was no immediately safe way to address the situation and various shortcomings were identified.

Note 4. Discharge Quality. From analysis that the Town received for samples from 0087-2 (sewage discharge), the Town is meeting their discharge requirements. On June 6, 1998 the following results were obtained:

pH	7.13
Total suspended Solids	31 mg/L
Ammonia	17.4 mg/L
Fecal Coliform	560,000 CFU/dL
BOD <sub>5</sub>	82 mg/L

Note 5. Dams, Dykes & Freeboard. The Town is presently attempting to place a graduated marker post in the inlet area of the sewage lagoon. Once placed, the top of the dyke will be referenced to this marker. As this part of the lagoon stays open year round, a more accurate and acceptable means to monitor freeboard level will be established. This effort is a result of concerns that this office had with the operating level of the lagoon last year and the necessity to absolutely ensure that the 1 m of freeboard is maintained.

Note 6. Construction. The Town will initiate construction of the new sewage treatment plant in late May of 1999 (pile, beams and concrete floor). An Agreement in Principle has been reached with MACA.

Note 7. A&R Plan. The A&R plans that the Town had OM+M prepare for the Apex and West 40 waste disposal sites have, for a second time, been rejected by the Nunavut water Board. The Town is still reviewing the comments and realizes that some baseline monitoring will have to be done prior to actual restoration of the sites. Denis Bedard, Director, Engineering and Planning, Town of Iqaluit, indicated that capital funds from MACA will not be available until the years 2002-2003 to actually begin this work. This is an unacceptable time delay. Efforts to restore these sites was initiated 2 years ago and should be completed prior to 2002, not start again at this later date.

Note 8. Warning Signs. The Town has ordered new warning signs for placement around the reservoir (no ski-doing, thin ice, no dogs, no littering). One set of signs will be placed along the access road to the dam. The other 3 signs will be placed by a contractor once there is sufficient snow to allow overland travel.

#### General Comments:

The Town will shortly be initiating an RFP's process for upgrading the water treatment plant.

A berm was placed along the northeast side of the waste disposal site at the request of this office as the grade in the waste metal disposal section is not sufficient to ensure water drains towards the valved culvert as opposed to out the backside of the dump and into a bypass drainage ditch. The Town has committed to provide a general 'as-built' and provide this information to the NWB.

FSC has the contract to identify new granular reserves for the Town. Present reserves are nearing exhaustion. There has been some talk about building a bridge across the Sylvia Grinnell River in order to access material there.

Water draining down the North 40 gorge caused flooding around the airport this year and washed out SNP station 0087-5. The cause appears to have been a very rapid melt in the spring and the existing waterways were still full of snow. There is, and used only as a means of identification, not because it is large, the North 40 lake. The Town would like to change the outlet area (open in out a bit) in order to reduce its volume. The Town was advised to approach this as a separate licence issue and to apply to the NWB in order to address the issue.

Robert Eno, RWED Environmental Protection Officer, had the day before, demonstrated to the dump supervisor, an appropriate method to neutralize battery acid using soda ash. The Town has soda ash on order (will come in on an upcoming sealift).

Paul Smith  
Water Resources Officer  
Nunavut District