To: Rita Becker BIR
fax 867 360 6369

2001 Annual Report
for the Municipality of Qikiqtarjuaq e-mail also

1. The following information is compiled pursuant to the requirements of Part B, Item 1, of Water Licence **NWBB3QIK0106**, issued to the Municipality of Qikiqtarjuaq (Broughton Island).

b), c), The monthly and annual quantity, in cubic metres, of water pumped from the Tulugak River or reservoir and the monthly and annual quantity of waste discharged to the sewage disposal facilities (including quantity of bagged sewage).

Apr 2/02

> Also fulfils SNP (Part B, Item 1 a, Item 2, & Schedule I C 1 & 2)

Month being reported	Water pumped from Tulugak River or reservoir (in m^3)	Sewage disposed of at the sewage disposal facility (approximate amt as sewage not metered)	Amount of bagged sewage disposed of at the sewage disposal facility (# of bags)
January	1,454	1,454	3
February	1,320	1,320	2
March	1,451	1,451	4
April	1,297	1,297	4
May	1,378	1,378	3
June	1,378	1,378	1
July	1,415	1,415	1
August	1,539	1,539	2
September	1,251	1,251	3
October	1,469	1,469	0
November	1,398	1,398	0
December	1,415	1,415	0
Annual Total	16,765	16,765	23

Note: 1 m^3 equals 1000 litres

d) No Sewage Solids removed from the lagoon

e) A detailed record of major maintenance work carried out on the water supply and waste disposal facilities:

Refilled Trench (abandoned project).
Repaired both Generators (major failures on electronics and pumps)

Installed electric Heating system in chlorinating room to prevent freeze up of chlorinating system.

f) Unauthorised discharges:

None

g) A description of any abandonment and restoration work carried out at areas where water supply or waste disposal facilities have been abandoned.

None

h) Any summary on any water use or waste disposal studies requested by the Board.

No requests made

i) Updates or revisions to Operation and Maintenance Plans:

None

j) Any other details requested by the Board by November 1st:

No requests made

Additional Information:

- persistent pH problems with water supply – have been unsuccessful in balancing pH to aesthetic objective as outlined in the *Guidelines for Canadian Drinking Water Quality*.
- Levels of faecal coliform and biological oxygen demand breach the effluent quality standards and concentrations of ammonia and phenols exceed the *Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life*. Toxicity Indicator (IC_{50}) 5.3% for sewage disposal.
- Interest in fluoridation for water supply.
- O&M Plan is pending funding approval from CG&T

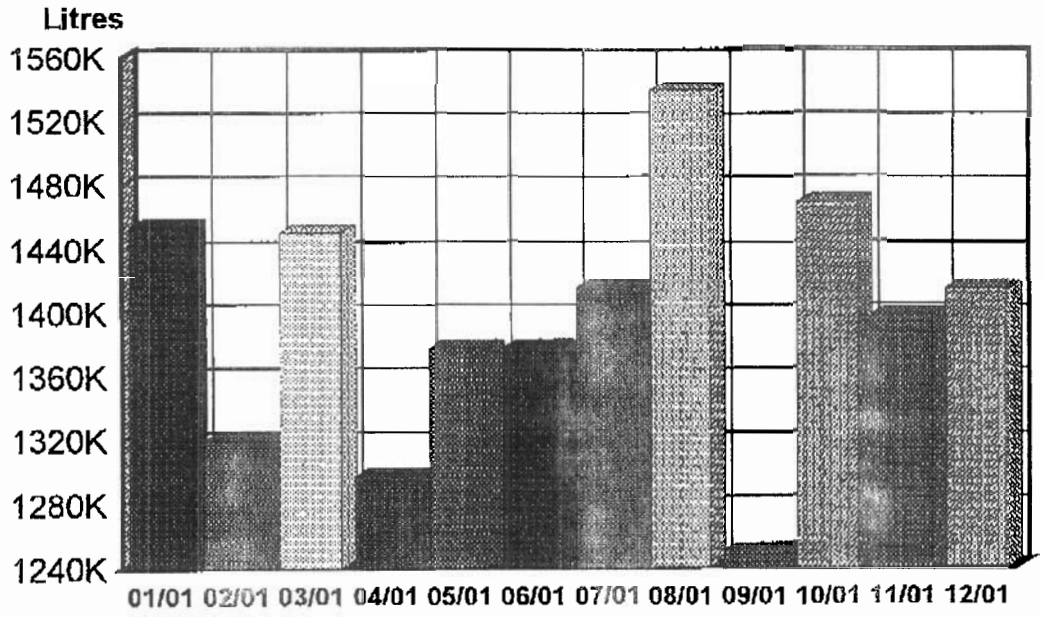
cc Philippe Lavallee, WRO, INAC fax to 867 979 6445
Sameh Elsayed, Municipal Engineer CG&T - Baffin Region fax to 867 897 3633

YTD Water Consumption

Municipality of Qikiqtarjuaq

For the Date Range: From: Jan-01-2001 To: Dec-31-2001

Printed OnMar 13 200 At: 8:51:36 AM

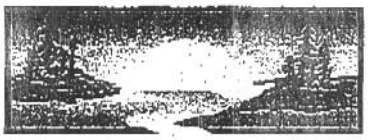


YTD Water Consumption - Details

Date	Quantity
January	1,454,014
February	1,320,460
March	1,450,627
April	1,297,155
May	1,377,622
June	1,377,653
July	1,414,944
August	1,538,599
September	1,250,600
October	1,468,623
November	1,398,342

YTD Water Consumption - Details

Date	Quantity
December	1,414,847
Grand Total	**16,763,487.10**



Taiga Environmental Laboratory
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Fax: (867)-669-2718

- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations **Attn:** Philippe Lavalllee

Sample ID: raw water 0640-1 **Taiga Sample ID:** 212473

Client Project: **Sample Type:** potable **Received Date:** 07-Sep-01

Location: Qikiqtarjuaq **Sampling Date:** 06-Sep-01

Report Status: Final ***Approved by:***

Test Parameter	Result	Units	Detection Limit	Analysis Date
Physicals				
Colour	<5		5	14-Sep-01
Solids, Total Dissolved	<10	mg/L	10	13-Sep-01
Turbidity	1.0	NTU	0.1	14-Sep-01
Nutrients				
Ammonia as N	<0.005	mg/L	0.005	12-Sep-01
Nitrate+Nitrite as N	0.125	mg/L	0.008	10-Oct-01
Organic Carbon, Total	0.6	mg/L	0.2	09-Oct-01
Major Ions				
Sodium	1.90	mg/L	0.02	18-Sep-01
Microbiology				
Coliforms, Fecal	<1	CFU/100mL	1	07-Sep-01
Metals, Total				
Arsenic	<1.0	µg/L	1	21-Sep-01
Cadmium	<0.3	µg/L	0.3	11-Sep-01
Chromium	<3	µg/L	3	11-Sep-01

RECEIVED NOV 01 2001

Report Date: Tuesday, October 16, 2001

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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations ***Attn:*** Philippe Lavaillee

Sample ID: raw water 0640-1 **Taiga Sample ID:** 212473

Cobalt	<1	µg/L	1	11-Sep-01
Copper	<2	µg/L	2	11-Sep-01
Iron	<30	µg/L	30	14-Sep-01
Lead	<1	µg/L	1	11-Sep-01
Manganese	<1	µg/L	1	11-Sep-01
Mercury	<0.01	µg/L	0.01	02-Oct-01
Nickel	<1	µg/L	1	11-Sep-01
Zinc	<10	µg/L	10	11-Sep-01
Subcontracted Tests				
Chloride	2.9	mg/L	0.1	05-Oct-01
Sulphate	0.5	mg/L	0.3	05-Oct-01

Field Data (01/09/06) **0640-1**
Temperature: 13.0 °C
Conductivity: 26 µS/cm
pH: 8.9 **Time:** 13:56

Report Date: Tuesday, October 16, 2001

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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations *Attn:* Philippe Lavalllee

Sample ID: sewage 0640-6 **Taiga Sample ID:** 212475

Client Project: **Sample Type:** sewage **Received Date:** 07-Sep-01

Location: Qikiqtarjuaq **Sampling Date:** 06-Sep-01

Report Status: Final ***Approved by:***

Test Parameter	Result	Units	Detection Limit	Analysis Date	Data Qualifier
Physicals					
Solids, Total Suspended	93	mg/L	3	19-Sep-01	
Nutrients					
Ammonia as N	47.0	mg/L	0.005	12-Sep-01	
Biological Oxygen Demand	175	mg/L	2	10-Sep-01	11
Nitrate+Nitrite as N	0.013	mg/L	0.008	10-Oct-01	
Phosphorous, Total	0.645	mg/L	0.004	27-Sep-01	
Microbiology					
Coliforms, Fecal	2900000	CFU/100mL	1	07-Sep-01	
Subcontracted Tests					
Phenols	320	µg/L	0.5	05-Oct-01	

Data Qualifier Descriptions:

11 Holding time exceeded before sample analysis

Field Data (01/09/06) 0640-6
Temperature: 13.0 °C
Conductivity: 584 µS/cm
pH: 7.6 Time: 14:16

Report Date: Tuesday, October 16, 2001

REPORT OF TOXICITY USING MICROTOX

COMP. .Y/LOCATION: **Qikiqtarjuaq, 0640-6, Sewage Discharge**

Sample Collected By: Philippe Lavallee

Date/Time Sampled: September 06, 2001 / 14:16

Date/Time Received: September 08, 2001

Date/Time Test Start: September 11, 2001

Sample Type: Elutriate
Sampling Method: Grab

Method: ***Environment Canada Laboratories SOP#330.0 Revision 1, for Microtox Testing in Compliance with November 1992: Biological Test Method: Toxicity Test Using Luminescent Bacteria Photobacterium phosphoreum), November 1992, EPS 1/RM/24.***

Environment Canada has conducted testing on the material sampled according to its own Microtox standards and procedures. The data proceeding from that testing is intended as a preliminary screening tool only, and cannot be used for any other purpose. This data is provided on the condition that it not be used in any report that is intended for public or official use.

RESULTS: TOXIC - IC_{50} Concentration: 5.3% (Toxic 0 to 50%)

TEST ORGANISMS:
Species: Vibrio fisheri (Photobacterium phosphoreum)
Test Apparatus: Model 500 Analyzer

TEST SUBSTANCE/CONDITIONS

pH of Sample: 7.4 (No pH adjustment)

Sample Appearance: Greyish, no colour adjustment

Lot # of Osmotic Adjusting Solution: OAS007

Lot # of Reconstitution Solution: RSN099Y

Lot # of Diluent: DIL034L

TEST METHODS AND CONDITIONS

Test Start Date/Time: September 11, 2001 / 2:04 PM

Test Method: Basic 45% Test, 15 minute incubation.

QUALITY CONTROL

Reference Toxicant: Zinc Sulfate Standard

Reagent Lot #: ACV026-6

IC_{50} - 15 minutes mg/L: 3.7 mg/L

IC_{50} Confidence Range: 3.1 to 4.4 mg/L

TEST ANALYST: Ron Bujold

INITIAL: RB

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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations ***Attn:*** Philippe Lavalllee

Sample ID: creek at dump **Taiga Sample ID:** 212476

Client Project: **Sample Type:** wastewater **Received Date:** 07-Sep-01

Location: Qikiqtarjuaq **Sampling Date:** 06-Sep-01

Report Status: Final ***Approved by:***

Test Parameter	Result	Units	Detection Limit	Analysis Date
Physicals				
Solids, Total Suspended	4	mg/L	3	19-Sep-01
Nutrients				
Ammonia as N	0.039	mg/L	0.005	12-Sep-01
Nitrate+Nitrite as N	<0.008	mg/L	0.008	10-Oct-01
Organic				
Oil and Grease	<0.2	mg/L	0.2	10-Oct-01
Metals, Total				
Arsenic	<1.0	µg/L	1	21-Sep-01
Cadmium	<0.3	µg/L	0.3	11-Sep-01
Chromium	<3	µg/L	3	11-Sep-01
Cobalt	<1	µg/L	1	11-Sep-01
Copper	<2	µg/L	2	11-Sep-01
Iron	66	µg/L	30	14-Sep-01
Lead	<1	µg/L	1	11-Sep-01
Manganese	5	µg/L	1	11-Sep-01

Report Date: Wednesday, October 17, 2001

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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations ***Attn:*** Philippe Lavaillee

Sample ID: creek at dump **Taiga Sample ID:** 212476

Nickel	<1	µg/L	1	11-Sep-01
Zinc	<10	µg/L	10	11-Sep-01

Field Data (01/09/06) DumpCreek
Temperature: 14.5 °C
Conductivity: 26 µS/cm
pH: 8.2 **Time:** 15:02

Report Date: Wednesday, October 17, 2001

REPORT OF TOXICITY USING MICROTOX

COMP. Y/LOCATION: **Qikiqtarjuaq, Creek @ Dump**
Sample Collected By: Philippe Lavallee

Date/Time Sampled: September 06, 2001 / 15:02

Date/Time Received: September 08, 2001

Date/Time Test Start: September 11, 2001

Sample Type: Elutriate
Sampling Method: Grab

Method: ***Environment Canada Laboratories SOP#830.0 Revision 1, for Microtox Testing in Compliance with November 1992: Biological Test Method: Toxicity Test Using Luminescent Bacteria Photobacterium phosphoreum), November 1992, EPS 1/RM/24.***

Environment Canada has conducted testing on the material sampled according to its own Microtox standards and procedures. The data proceeding from that testing is intended as a preliminary screening tool only, and cannot be used for any other purpose. This data is provided on the condition that it not be used in any report that is intended for public or official use.

RESULTS: NON TOXIC at 45% concentration

TEST ORGANISMS:
Species: Vibrio fisheri (Photobacterium phosphoreum)
Test Apparatus: Model 500 Analyzer

TEST SUBSTANCE/CONDITIONS

pH of Sample: 8.0 (No pH adjustment)

Sample Appearance: Clear, no colour adjustment

Lot # of Osmotic Adjusting Solution: OAS007

Lot # of Reconstitution Solution: RSN099Y

Lot # of Diluent: DIL034L

TEST METHODS AND CONDITIONS

Test Start Date/Time: September 11, 2001 / 2:54 PM

Test Method: Basic 45% Test, 15 minute incubation.

QUALITY CONTROL

Reference Toxicant: Zinc Sulfate Standard

Reagent Lot #: ACV026-6

IC_{50} - 15 minutes mg/L: 3.7 mg/L

IC_{50} Confidence Range: 3.1 to 4.4 mg/L

TEST ANALYST: Ron Bujold INITIAL: RB.

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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut District Office DIAND, Operations ***Attn:*** Philippe Lavalllee

Sample ID: metal dump runoff **Taiga Sample ID:** 212674

Client Project: **Sample Type:** wastewater **Received Date:** 07-Sep-01

Location: Qikiqtarjuaq **Sampling Date:** 06-Sep-01

Report Status: Final ***Approved by:***

Test Parameter	Result	Units	Detection Limit	Analysis Date
Metals, Total				
Arsenic	<1.0	µg/L	1	21-Sep-01
Cadmium	<0.3	µg/L	0.3	11-Sep-01
Chromium	<3	µg/L	3	11-Sep-01
Cobalt	<1	µg/L	1	11-Sep-01
Copper	<2	µg/L	2	11-Sep-01
Iron	<30	µg/L	30	14-Sep-01
Lead	<1	µg/L	1	11-Sep-01
Manganese	<1	µg/L	1	11-Sep-01
Mercury	<0.01	µg/L	0.01	02-Oct-01
Nickel	<1	µg/L	1	11-Sep-01
Zinc	<10	µg/L	10	11-Sep-01

Field Data (01/09/06) metal dump
Temperature: 9.5 °C
Conductivity: 18 µS/cm
pH: 8.5 **Time:** 14:55

Report Date: Wednesday, October 10, 2001

REPORT OF TOXICITY USING MICROTOX

COMPANY/LOCATION: **Qikiqtarjuaq, Metal Dump, (2nd)**
Sample Collected By: Philippe Lavallee

Date/Time Sampled: September 9, 2001 / 14:55

Date/Time Received: September 08, 2001

Date/Time Test Start: September 11, 2001

Sample Type: Elutriate
Sampling Method: Grab

Method: ***Environment Canada Laboratories SOP#830.0 Revision 1, for Microtox Testing in Compliance with November 1992: Biological Test Method: Toxicity Test Using Luminescent Bacteria Photobacterium phosphoreum), November 1992, EPS 1/RM/24.***

Environment Canada has conducted testing on the material sampled according to its own Microtox standards and procedures. The data proceeding from that testing is intended as a preliminary screening tool only, and cannot be used for any other purpose. This data is provided on the condition that it not be used in any report that is intended for public or official use.

RESULTS: **NON TOXIC at 45% concentration**

TEST ORGANISMS:
Species: Vibrio fisheri (Photobacterium phosphoreum)
Test Apparatus: Model 500 Analyzer

TEST SUBSTANCE/CONDITIONS

pH of Sample: 8.3 (No pH adjustment)

Sample Appearance: Clear, no colour adjustment

Lot # of Osmotic Adjusting Solution: OAS007

Lot # of Reconstitution Solution: RSN099Y

Lot # of Diluent: DIL034L

TEST METHODS AND CONDITIONS

Test Start Date/Time: September 11, 2001 / 4:06 PM

Test Method: Basic 45% Test, 15 minute incubation.

QUALITY CONTROL

Reference Toxicant: Zinc Sulfate Standard

Reagent Lot #: ACV026-6

IC_{50} - 15 minutes mg/L: 3.7 mg/L

IC_{50} Confidence Range: 3.1 to 4.4 mg/L

TEST ANALYST: Ron Bujold **INITIAL:** RB