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Nunavut District Office
P.O. Box 100
Iqaluit, NU, X0A 0H0

November 29, 2002

Brian MacQuarrie
Senior Administrative Officers
Municipality of Repulse Bay
P.O. Box 10
Repulse Bay, NU X0C 0H0

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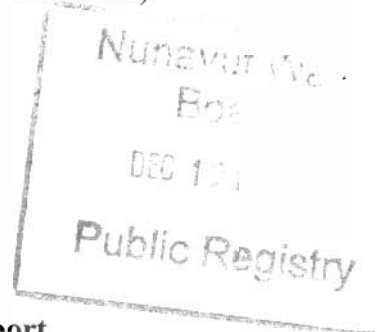
Tel: (867) 975-4289

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Your file - Votre référence

Our file - Notre référence

(Unlicensed)



Re: September 3, 2002 Municipal Water Inspection - Report

I would like to thank you for your time and assistance provided during the tour of the Municipality's water use and waste disposal facilities. Attached for your records is the Municipal Water Use Inspection Report along with the Certificate of Analysis Report pertaining to the September 3, 2002 inspection. Considering the limited resources at its disposal, the municipality appears to manage its facilities fairly well. However, there is one (1) issue that must be addressed that relates to the solid waste disposal.

- 1. Water supply:** No concerns were noted regarding the water intake and supply facility. Further, the attached analytical results relating to samples taken in the vicinity of the intake station indicate that all tested parameters meet the *Guidelines for the Canadian Drinking Water Quality*. Please find attached analytical results. (Figure 1-2 Refers to Water Supply)
- 2. Sewage disposal:** Sewage effluent is discharged at a dumping point, which flow through series of small water bodies that lead to the ocean. Samples were collected within 92 meters from the drop point. Further, the attached analytical results indicate that the level of ammonia (3.28 mg/l vs 2.2 mg/l) is a little high. This community is within the municipal waste water guideline. Please find attached analytical results. (Figure 3-4 Refers to the Sewage Disposal)
- 3. Solid waste disposal:** The inspector recommended that some sort of retaining wall be built or fencing set up to limit, windblown waste from entering the sewage / disposal area. A new location has been picked to have the new solid waste disposal site well away from the main community. (Figure 5-6 Refers to the Solid Waste Disposal)

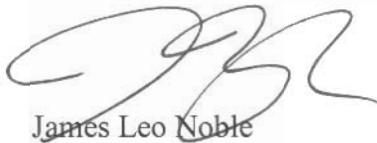
The inspector was also advised that 110 barrels of waste oil were shipped out during the sealift season. Evidence of hydrocarbon contamination was still noted at the waste oil site. The inspector recommended that the site be cleaned. (Figure 9-10 Refers to Waste Oil Site)

Bulky metal waste: During the site inspection the inspector observed numerous hazardous materials, (e.g. fuel storage tanks, drums, batteries) in the metal dump. The inspector suggested that all hazardous waste be kept together to minimize the chances of contaminating a larger area.

4. **Non-compliance of the licence:** Municipality of Repulse Bay does not currently hold the Water licence that is required under both the *Nunavut Waters Act* and the *Nunavut Land Claims Agreement* for its municipal water use and waste disposal. The Nunavut Government have been assisting a lot of communities in getting the information required to completed the water application and submitted, this community should be licenced soon.

If you have any concerns or questions, please feel free to contact me.

Sincerely,



James Leo Noble
Water Resource Officer
INAC - Nunavut District Office
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noblej@inac.gc.ca

cc. Nunavut Water Board, Gjoa Haven, NU
DIAND Water Resources Division, Iqaluit, NU
CG&T, Iqaluit, NU (Doug Sitland)
Kivalliq Health & Social Services, Rankin Inlet, NU
EC, Environmental Protection, Yellowknife, NT (Anne Wilson)



Taiga Environmental Laboratory
4601-52nd Ave., Box 1500, Yellowknife, NT. X1A 2R3

Tel: (867)-669-2788
Fax: (867)-669-2718

- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D **Attn:** James Lee Noble

Sample ID: Repulse Bay #1 Pot water

Taiga Sample ID: 222923

Client Project:

Sample Type: wastewater

Received Date: 10-Sep-02

Location: Nunavut

Sampling Date: 03-Sep-02

Report Status: Final

Approved by:

Test Parameter	Result	Units	Detection Limit	Analysis Date
Physicals				
Alkalinity	49.2	mg/L	0.3	30-Sep-02
~Colour	<5		5	14-Nov-02
Conductivity, Specific	114	µS/cm	0.3	30-Sep-02
pH	8.10	pH units	0.05	30-Sep-02
Major Ions				
Calcium	14.7	mg/L	0.05	20-Sep-02
Chloride	3.8	mg/L	0.2	17-Sep-02
Hardness as CaCO ₃	49.7	mg/L	0.17	20-Sep-02
Magnesium	3.18	mg/L	0.02	20-Sep-02
Potassium	0.80	mg/L	0.03	11-Sep-02
Silica, Reactive	0.92	mg/L	0.02	12-Sep-02
Sodium	2.36	mg/L	0.02	11-Sep-02
Sulphate	5	mg/L	3	02-Oct-02



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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D Attn: James Lee Noble

Sample ID: Repulse Bay #2 Pot Water

Taiga Sample ID: 222924

Client Project:

Sample Type: wastewater

Received Date: 10-Sep-02

Location: Nunavut

Sampling Date: 03-Sep-02

Report Status: Final

Approved by:

Test Parameter	Result	Units	Detection Limit	Analysis Date
<u>Physicals</u>				
Solids, Total Dissolved	69	mg/L	10	15-Oct-02
Solids, Total Suspended	<3	mg/L	3	15-Oct-02
Turbidity	0.5	NTU	0.1	17-Sep-02
<u>Nutrients</u>				
Ammonia as N	<0.005	mg/L	0.005	10-Sep-02
Nitrate+Nitrite as N	<0.008	mg/L	0.008	13-Sep-02
Organic Carbon, Dissolved	2.7	mg/L	0.5	07-Oct-02
Organic Carbon, Total	2.4	mg/L	0.5	07-Oct-02
Ortho-Phosphate as P	0.002	mg/L	0.002	23-Sep-02
Phosphorous, Dissolved	0.056	mg/L	0.004	20-Sep-02
Phosphorous, Total	0.055	mg/L	0.004	25-Sep-02



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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D Attn: James Lee Noble

Sample ID: Repulse Bay #4 *Sewage discharge*

Taiga Sample ID: 222925

Client Project:

Sample Type: wastewater

Received Date: 10-Sep-02

Location: Nunavut

Sampling Date: 03-Sep-02

Report Status: Final

Approved by:

Test Parameter	Result	Units	Detection Limit	Analysis Date
<u>Physicals</u>				
Alkalinity	163	mg/L	0.3	30-Sep-02
<u>~ Colour</u>	<u>25</u>		5	14-Nov-02
Conductivity, Specific	616	µS/cm	0.3	30-Sep-02
<u>~ pH</u>	<u>8.09</u>	pH units	0.05	30-Sep-02
<u>Major Ions</u>				
Calcium	12.4	mg/L	0.05	20-Sep-02
Chloride	49.8	mg/L	0.2	11-Oct-02
Hardness as CaCO ₃	89.2	mg/L	0.17	20-Sep-02
Magnesium	14.2	mg/L	0.02	20-Sep-02
Potassium	5.82	mg/L	0.03	11-Sep-02
Silica, Reactive	2.12	mg/L	0.02	12-Sep-02
Sodium	42.6	mg/L	0.02	11-Sep-02
Sulphate	56	mg/L	3	02-Oct-02



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- CERTIFICATE OF ANALYSIS -


Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D Attn: James Lee Noble

Sample ID: Repulse Bay #5 *Port water (Truck)* Taiga Sample ID: 222926

Client Project: Sample Type: wastewater Received Date: 10-Sep-02

Location: Nunavut Sampling Date: 03-Sep-02

Report Status: Final

Approved by: 

Test Parameter	Result	Units	Detection Limit	Analysis Date
<u>Physicals</u>				
Alkalinity	48.2	mg/L	0.3	30-Sep-02
<u>Colour</u>	<u><5</u>		5	14-Nov-02
Conductivity, Specific	116	µS/cm	0.3	30-Sep-02
<u>pH</u>	<u>8.02</u>	pH units	0.05	30-Sep-02
<u>Major Ions</u>				
Calcium	15.0	mg/L	0.05	20-Sep-02
Chloride	4.3	mg/L	0.2	23-Oct-02
Hardness as CaCO ₃	50.2	mg/L	0.17	20-Sep-02
Magnesium	3.12	mg/L	0.02	20-Sep-02
Potassium	0.75	mg/L	0.03	11-Sep-02
Silica, Reactive	0.86	mg/L	0.02	12-Sep-02
Sodium	2.45	mg/L	0.02	11-Sep-02
Sulphate	6	mg/L	3	02-Oct-02



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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D **Attn:** James Lee Noble

Sample ID: Repulse Bay #3 *sewage discharge*

Taiga Sample ID: 222927

Client Project:

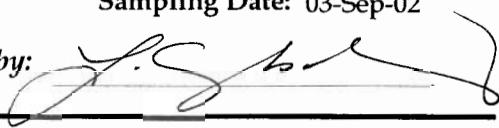
Sample Type: wastewater

Received Date: 10-Sep-02

Location: Nunavut

Sampling Date: 03-Sep-02

Report Status: Final

Approved by: 

Test Parameter	Result	Units	Detection Limit	Analysis Date
<u>Physicals</u>				
Solids, Total Dissolved	362	mg/L	10	15-Oct-02
<u>Solids, Total Suspended</u>	<u>5</u>	mg/L	3	15-Oct-02
<u>Turbidity</u>	<u>2.4</u>	NTU	0.1	17-Sep-02
<u>Nutrients</u>				
<u>Ammonia as N</u>	<u>3.82</u>	mg/L	0.005	10-Sep-02
<u>Nitrate+Nitrite as N</u>	<u>0.294</u>	mg/L	0.008	13-Sep-02
Organic Carbon, Dissolved	9.3	mg/L	0.5	07-Oct-02
Organic Carbon, Total	9.0	mg/L	0.5	07-Oct-02
Ortho-Phosphate as P	0.154	mg/L	0.002	23-Sep-02
Phosphorous, Dissolved	0.299	mg/L	0.004	20-Sep-02
Phosphorous, Total	0.374	mg/L	0.004	25-Sep-02



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- CERTIFICATE OF ANALYSIS -

Prepared For: Nunavut Regional Officer, Operati Indian Affairs and Northern D **Attn:** James Lee Noble

Sample ID: Repulse Bay #6 *port water (truck)*

Taiga Sample ID: 222928

Client Project:


Sample Type: wastewater

Received Date: 10-Sep-02

Location: Nunavut

Sampling Date: 03-Sep-02

Report Status: Final

Approved by: 

Test Parameter	Result	Units	Detection Limit	Analysis Date
<u>Physicals</u>				
Solids, Total Dissolved	69	mg/L	10	15-Oct-02
<u>Solids, Total Suspended</u>	<u><3</u>	mg/L	3	15-Oct-02
<u>Turbidity</u>	<u>0.3</u>	NTU	0.1	17-Sep-02
<u>Nutrients</u>				
<u>Ammonia as N</u>	<u>0.007</u>	mg/L	0.005	10-Sep-02
<u>Nitrate+Nitrite as N</u>	<u><0.008</u>	mg/L	0.008	13-Sep-02
Organic Carbon, Dissolved	2.4	mg/L	0.5	07-Oct-02
Organic Carbon, Total	2.4	mg/L	0.5	07-Oct-02
Ortho-Phosphate as P	0.003	mg/L	0.002	23-Sep-02
Phosphorous, Dissolved	0.064	mg/L	0.004	20-Sep-02
Phosphorous, Total	0.063	mg/L	0.004	25-Sep-02



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September 3, 2002

Our file - Notre référence

Community Site Inspections / Waypoint Information

Repulse Bay 1	Water Reservoir / Sample 1	N66 33 47.1 W86 15 07.1
Repulse Bay 2	New Proposed Dump Site	N66 32 56.1 W86 14 41.9
Repulse Bay 3	Solid Waste Disposal (Metals)	N66 31 46.8 W86 13 46.2
Repulse Bay 4	Waste Oil Site	N66 31 43.5 W86 13 40.0
Repulse Bay 5	Waste Disposal (Main Dump)	N66 31 40.1 W86 13 30.7
Repulse Bay 6	Sewage Disposal Area	N66 31 37.0 W86 13 22.0
Repulse Bay 7	Sample 2 Sewage Runoff	N66 31 34.7 W86 13 12.9

James Leo Noble
Water Resource Officer
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noblej@inac.gc.ca



(Figure 1)

- Repulse Bay, Water Supply (Water Reservoir) Site: N66 33 47.1 W86 15 07.1



(Figure 2)

- Repulse Bay, Water Pump Station, Site: N66 33 47.1 W86 15 07.1



(Figure 3)

- Repulse Bay, Sewage Disposal, Discharge Point, Site: N66 31 37.0 W86 13 22.0



(Figure 4)

- Repulse Bay, Sewage Disposal (Sewage Lagoon), Site: N66 31 34.7 W86 13 12.9



(Figure 7)

- Repulse Bay, Community Tank Farm



(Figure 8)

- Repulse Bay, Community Tank Farm, Drainage Pump



(Figure 5)

- Repulse Bay, Solid Waste Disposal (Main Dump) Site: N66 31 40.1 W86 13 30.7



(Figure 6)

- Repulse Bay, Solid Waste Disposal (Metal Dump) Site: N66 31 46.8 W86 13 46.2



(Figure 9)

- Repulse Bay, Waste Oil Site, Evidence of Leaks, Site:N66 31 43.5 W86 13 40.0



(Figure 10)

- Repulse Bay, Waste Oil Site, Evidence of Leaks, Site: N66 31 43.5 W86 13 40.0



(Figure 9)

- Repulse Bay, Waste Oil Site, Evidence of Leaks, Site:N66 31 43.5 W86 13 40.0



(Figure 10)

- Repulse Bay, Waste Oil Site, Evidence of Leaks, Site: N66 31 43.5 W86 13 40.0



Indian and Northern
Affairs Canada

Affaires Indiennes
et du Nord Canada

MUNICIPAL WATER USE INSPECTION REPORT

Date: September 3, 2002 Licensee Rep. (Name/Title): Brian McQuarrie (SAO)

Licensee: Municipality of Repulse Bay

Licence No.: Unlicensed, File # NWB3REP

WATER SUPPLY

Source(s): Water Lake

Quantity used: Unable to determine amount

Owner:/Operator: Municipality

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

Intake Facilities: A

Storage Structure: NA

Treatment Systems: A

Chemical Storage: A

Flow Meas. Device: NI

Conveyance Lines: NA

Pumping Stations: A

Comments: No concern were note with respect to the water supply lake

WASTE DISPOSAL

Sewage: Sewage Treatment System (Prim./Sec/Ter.): Primary, discharge through wetland, stream, ocean

Natural Water Body:

Continuous Discharge (land or water):

Seasonal Discharge:

Wetlands Treatment: X

Trench:

Solid Waste: Owner/Operator:

Landfill:

Burn & Landfill: x

Other:

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

Discharge Quality:

Decant Structure: NA

Erosion: A

Discharge Meas. Device: NA

Dyke Inspection: NA

Seepages: A

Dams, Dykes: NA

Freeboard: NA

Spills: Unknown, None Reported

Construction: NA

O&M Plan: NA

A&R Plan: NA

Periods of Discharge: A

Effluent Discharge Rate: Unknown, Not Measured

Comments: No major issue to note with respect to the sewage system, only concern was the amount of garbage that has blown from the waste disposal site into the streams that flow out towards the ocean, mixture of both. Recommendation was made to try and keep the two apart, possibly fencing. As for the waste oil storage site, 110 barrels of waste oil was shipped out the sealift, very few drum are left at the site and some clean up is still required within the ground area

FUEL STORAGE

Owner/Operator: Community co-op / GN

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

Berms & Liners: A

Water within Berms: A

Evidence of Leaks: NA

Drainage Pipes: A

Pump Station & Catchment Berm: NA

Pipeline Condition: NI

Not Applicable:

Condition of Tanks: NI

SURVEILLANCE NETWORK PROGRAM (SNP)

Samples Collected Hamlet: None

INAC: Raw Water, Sewage, Delivery Truck

Signs Posted SNP: None

Warning: None

Records & Reporting: NA

Geotechnical Inspection: NA

Non-Compliance of Act or Licence: During the time of inspection, the paper work process for the water licence was within the hand of Nunavut Government and should soon be licenced

James Leo Noble

Inspector's Name


Inspector's Signature