



DIAND Nunavut District
Box 100
Iqaluit, NT
XOA OHO

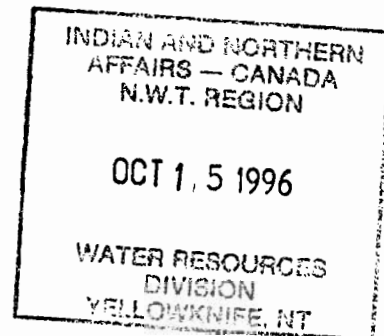
Your file Votre référence

Our file Notre référence

October 10, 1996

B9545-5-N6L4-1538

Mr. Roy Mullins
Senior Administrative Officer
Hamlet of Chesterfield Inlet
Chesterfield Inlet, NT
XOC OBO



Dear Mr. Mullins;

Re: Inspection Report - August 15, 1996
 & Analytical Water Result

1. Please find enclosed a copy of the inspection report prepared as a result of the inspection carried out on August 15, 1996.
2. There are several issues that must be addressed. Primarily in the provision of studies and plans that must be submitted to the Nunavut Water Board. Specifically, these items are:

Part D, Item 2; a proposal for upgrading the sewage disposal facilities. This proposal was related to the construction of a lagoon and was due August 1, 1994. As the current sewage disposal facilities operate on a "wet-lands" treatment system and the upgrades currently being considered by MACA relate more to a proper truck discharge area, you are encouraged to approach the Nunavut Water Board to determine if your licence can be amended to reflect the current operational situation.

Part D, Item 5; a proposal for upgrading the solid waste disposal facility. This proposal was also due on August 1, 1994. As the issues required to be addressed by this proposal have for the most part been addressed, current site plans (as-built drawings) should be submitted to the Board for their approval/information. You will have to work with MACA to obtain these site plans.

Part D, Item 9; a study on existing abandoned waste disposal sites. This study was due on August 1, 1994. This is still a valid clause and will have to be addressed. It is possible that MACA may be able to assist you in this requirement as MACA has been conducting such studies in other Keewatin communities in the past couple of years.

.../2

Part D, Item 11 requires an approved Abandonment and Restoration Plan prior to any waste disposal site being abandoned. The various considerations are provided in this section of the licence. As MACA is funding the construction/relocation of the current site, they may also be able to assist you in developing this plan.

Part E, Item 4 requires that prior to new waste disposal facilities becoming operational, a plan must be submitted to the Board, for their approval, that describes the changes and includes an Operation and Maintenance Plan. This clause applies to the new area where future waste disposal is planned. In addition, the as-built plans for this facility are required to be submitted to the Board. Contact MACA to obtain these drawings.

Part F, Item 1 required an Operation and Maintenance Plan to have been submitted by February 1, 1994. As promised during the inspection, enclosed is a copy of a previously approved O+M Plan which may assist you in designing your own plan. In addition, Part F of the Licence lists the various aspects that should be addressed within the plan.

3. I would also draw your attention to the requirement of SNP Station signs (at stations 1538-4 and -5) and to the sampling required below the sewage and solid waste disposal facilities. I realize that the signs are ready and that the reason why they are not yet erected is because the new facilities are not yet complete, however the requirement for sampling to be carried out is still there with the older facilities.

4. With respect to the analytical water results for potable water (SNP 1538-1), all parameters tested for were within the Health and Welfare *Guidelines for Canadian Drinking Water Quality*. Analytical results from dump and sewage effluent (1538-5) do not appear to be of concern at this station.

5. If you have any questions, or if I can provide any additional assistance, please do not hesitate to contact me at the above address, or by phone at (819)-979-4405.

Sincerely,



Paul Smith
Water Resources Officer
Nunavut District

cc. - Nunavut Water Board, Gjoa Haven
- Water Resources Division, DIAND, YK
- RMO, DIAND Rankin Inlet

INDIAN & NORTHERN AFFAIRS
WATER RESOURCES LABORATORY
Box 1500
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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

0149
N6L4-1538

SAMPLE INFORMATION

Our Lab # : 961345
Your Sample ID: 1538-1
Sample Matrix : grab water

Account No.: Baffin

Collection:
Location: Chesterfield Inlet
Date: 08/15/96
By: PS

Report Date: 09/11/96

Approved by: W. Wood

- SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	analdate	Method
961345	Alkalinity	10.2 mg/L	0.300	08/16/96	10101
	Calcium	3.53 mg/L	0.040	08/26/96	20103
	T.Cadmium ICP-M	10.1 ug/L	0.100	08/20/96	100133
	→ Chloride	18.50 mg/L	0.080	08/21/96	17206
	Colour	L3 Colour	5.000	08/16/96	02021
	Conductivity	93.5 uS/cm	0.100	08/16/96	02041
	T.Cobalt ICP-MS	0.1 ug/L	0.100	08/20/96	100115
	T.Chromium ICP-	0.5 ug/L	0.200	08/20/96	100111
	T.Copper ICP-MS	1.2 ug/L	0.100	08/20/96	100119
	Potassium	0.94 mg/L	0.050	08/27/96	19106
	Magnesium	1.62 mg/L	0.010	08/26/96	12102
	T.Manganese ICP	1.1 ug/L	0.100	08/20/96	100113
	Sodium	9.62 mg/L	0.040	08/27/96	11102
	Non Filt Residu	L3 mg/L	3.000	08/16/96	10406
	T.Nickel ICP-MS	0.6 ug/L	0.100	08/20/96	100117
	T.Lead ICP-MS	4.0 ug/L	0.200	08/20/96	100145
	pH	7.11 pH	0.050	08/16/96	10301
	T.Iron	27 ug/L	20.000	08/19/96	26004
	T.Mercury-C/V	10.01 ug/L	0.010	08/21/96	80011
	Turbidity	0.6 NTU	0.100	08/16/96	02081
	T.Zinc ICP-MS	10.5 ug/L	0.500	08/20/96	100121

RECEIVED

SEP 18 1996

D.I.A.N.D.
IQALUIT, NT

DIRECT
Natural
and Env

SEP 18 1996

D.I.A.

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

SAMPLE INFORMATION

Our Lab # : 961346
Your Sample ID: 1538-5
Sample Matrix : grab water

Account No.: Baffin

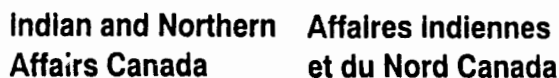
Collection:
Location: Chesterfield Inlet
Date: 08/15/96
By: PS

Report Date: 09/15/96

Approved by: W. Coady

- SAMPLE ANALYSIS REPORT -

Lab#	Parameter	Result Units	Detect Limit	Method Code
961346	Alkalinity	32.9 mg/L	0.300	10101
	Calcium	9.80 mg/L	0.040	20103
	T.Cadmium ICP-MS	LO.1 ug/L	0.100	100133
	Chloride	26.30 mg/L	0.080	17206
	Colour	40 Colour	5.000	02021
	Conductivity	184.0 us/cm	0.100	02041
	T.Cobalt ICP-MS	0.1 ug/L	0.100	100115
	T.Chromium ICP-MS	12 ug/L	2.000	100111
	T.Copper ICP-MS	3.0 ug/L	0.100	100119
	Potassium	LO.05 mg/L	0.050	19106
	Magnesium	2.59 mg/L	0.010	12102
	T.Manganese ICP-MS	2.9 ug/L	0.100	100113
	Sodium	20.00 mg/L	0.040	11102
	Non_Filt Residue	4 mg/L	3.000	10406
	Ammonia-N	0.006 mg/L	0.002	07562
	T.Nickel ICP-MS	2.0 ug/L	0.100	100117
	Oil&Grease	LO.2 mg/L	0.200	06524
	T.Lead ICP-MS	1.3 ug/L	0.200	100145
	pH	6.97 pH	0.050	10301
	Phenols	LO.002 ug/L	2.000	06533
	T.Iron	558 ug/L	20.000	26004
	T.Mercury-C/V	LO.01 ug/L	0.010	80011
	T.Zinc ICP-MS	17.1 ug/L	0.500	100121



DATE: August 15, 1996 COMPANY REP.: Roy McNamee (SSO)
LICENSEE: Harriet of Chesterfield Inlet LICENCE #: N6L4-1538

Source (s): Reservoir (from First Lake) Quantity Used (to date): ~ 600 - 700 m³/month
Owner/Operator: DPW / Hamlet (estimate or actual)

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

Comments: Refilling the reservoir will begin in a week or so (and will take 1 week). Conveyance lines needs to be reconnected at at least 1 spot. Approximately 3,000 m³ of water will be pumped to the Reservoir

Sewage Sewage Treatment System (primary, secondary or tertiary) Primary w/ wetlands treatment
 Natural Water body ✓ Continuous Discharge (land or water) ✓
 Seasonal Discharge _____ Wetlands Treatment ✓ Trench _____
 Solid Waste: Owner/Operator: DPW / Hamlet
 Landfill _____ Burn & Landfill ✓ Other _____

Disch. Quality	<u>Sample Collected</u>	Decant Structure	<u>See note 2</u>	Erosion	<u>A</u>
Disch. Meas. Dev.	<u>See note 1 N/A</u>	Dyke Inspection	<u>" B</u>	Seepage	<u>N/A</u>
Dams, Dykes	<u>N/A</u>	Freeboard	<u>" H</u>	Spills	<u>See note 4</u>
Construction	<u>See note 1</u>	O & M Plan	<u>See note 3</u>	A & R Plan	<u>See note 5</u>
Periods of Discharge:	<u>Seasonal</u>	Effluent Discharge Rate:	<u>Unknown</u>		

Comments: _____

FUEL STORAGE Owner: Pol Operator _____ Condition of Tanks Reconditioned
Berms & Liners In place Water within berm: _____ Evidence of Leaks: _____
Drainage Pipes _____ Pump Station and Catchment Berm _____
Pipeline Condition _____ Not Applicable: ✓

Samples Collected: (Hamlet) None - See note 6
 (DIAND) 1538-1; 1538-5
 Signs Posted: SNP C 1538-1 + -2 See note 7 Warning In place
 Record & Reporting Annual Report submitted.

Geotechnical Inspection: Not Applicable

Non-Compliance of Act or Licence: The Licence requires the submission of a number of reports/planning studies. These include; a proposal for upgrading the sewage disposal facility; a proposal for upgrading the solid waste disposal facilities; a study on existing abandoned waste disposal sites; and an A+R plan, an O&M Plan - continued - Page 2 attached Yes ☒ No ☐

Not available
Licensee Representatives Title

Licensee Representatives Signature

Paul Smith
Inspectors Name

Inspector's Signature



WATER USE INSPECTION REPORT

(continued)

Date: August 15/96

Licence #: N6L4-1538

General Comments: (Continued)

Note 1: A berm, which will act as a dumping face, has been constructed in an area below the current waste disposal site.

The area still requires to be fenced. Current plans have the fencing extending hundreds of metres beyond the dumping face.

In discussions with Mr. Mullins, concerns were expressed that the proposed fencing (the extent of fencing) was unnecessary and that a smaller area would be more appropriate (and more effective at catching windblown garbage). The plans for this site must be submitted to the Water Board for approval. The licensee must work with MACA to obtain these plans.

Note 2: Sewage disposal area consists of a pit into which sewage is dumped. Sewage overflows this structure and makes its way through a heavily vegetated field and eventually into a series of lakes.

Dump leachate also flows through this area

Note 3: An Operation + Maintenance (O+M) plan is a requirement of the licence, and must be approved by the Water Board. A copy of a previously approved O+M plan ^{will be} provided to the licensee in order that it act as a template on how to address the various issues ~~the~~ required.

Note 4: Waste oil is kept separate above the present waste disposal site, but it was noted that the immediate area around the drums was quite heavily stained. An area should also be designated for the storage of other hazardous wastes (like batteries and paint).

Paul Smith

Water Inspector

Page 2 of 3



WATER USE INSPECTION REPORT (continued)

Date: August 15/96

Licence #: N6L4-01538

General Comments: (Continued)

Note 5: An abandonment and restoration (A+R) plan is required to be submitted to the Water Board for approval, prior to any A+R work being carried out. The Licensee will have to work with MACA to develop this plan (MACA has budgeted funds for the clean-up).

Note 6: The licensee is required to collect samples (during periods of flow from SNP Station 1538-4 and twice annually from 1538-5 during August + September). The licensee has not collected these samples.

Note 7: SNP Station signs are posted at 1538-1 and -2. Once the new waste disposal site is operational, the licensee will have to establish SNP stations 1538-4 and -5. Signs are ready - just waiting for new site to come on-line before they are placed.

General Comments: The licensee requires that sewage disposal facilities be upgraded to a lagoon and the effluent quality limits are at the point of discharge. Presently, the disposal facility is more geared to wetlands treatment (which appears to be a viable alternative in this situation). The upgrades that are being considered (by MACA) to the sewage disposal facility do not include the construction of a lagoon (only a proper truck discharge point). The licensee should approach the Water Board to determine the possibility of altering the requirements of this section of the licence to reflect the nature and operation of these disposal facilities.

Paul Smith

Water Inspector

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