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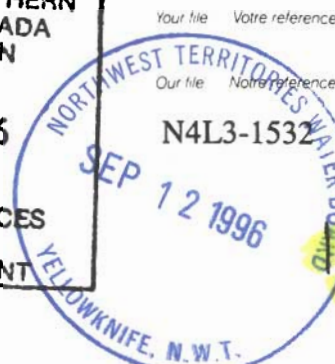
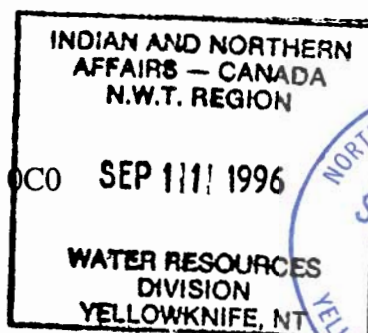
August 23, 1996

Hamlet of Cambridge Bay

P.O. Box 16

CAMBRIDGE BAY, NT X0E 0C0 SEP 11 1996

Attention: Wilfred Wilcox
Mayor



Dear Mr. Wilcox

**RE: Water Licence Inspection, Water Licence N4L3-1532
 Cambridge Bay, N.W.T.**

Enclosed please find a copy of the 1996 Municipal Inspection Report for the Hamlet of Cambridge Bay. The Inspection was conducted on July 19, 1996, by Mike Collie, Water Inspector under the Northwest Territories Water Act. The Inspection Report is self explanatory, but I would like to bring to your attention several items which require your attention.

- 1) **PART D, Item 5** of the Water Licence requires that the Licensee shall maintain the Sewage Disposal Facilities to the satisfaction of the Inspector. Currently effluent is ponded SW of the Lagoon adjacent to the turn around pad. A dyke should be constructed in this area to contain effluent in the lagoon. Sewage has been pumped out indiscriminately around the perimeter of the pad. The practice is eroding the edge of the pad and is *to be* discouraged. Use of the chutes is necessary to ensure proper mixing and containment of waste. It is recommended that the pad be extended to the edge of the lagoon or the chutes be extended into the lagoon.
- 2) The Hamlet currently does not operate a separate bagged sewage pit. Although there are no units remaining on the honey bag system, it was indicated to the inspector that some outpost camps use the landfill for disposal of honey bags. This fact as well as the requirement under the Water Licence **PART B, Item 6** and **PART D, Item 6** makes it necessary to maintain and post a bagged toilet waste disposal area.
- 3) There are several outstanding reporting requirements that require your immediate attention as the Hamlet is currently in violation of the NWT Water Act.
 - a) **PART H, Item 11** of the Water Licence requires that an O & M plan for the Waste Disposal Facilities be submitted to the Board within six (6) months of the issuance of the licence.

- b) **PART B, Item 1** requires that the Licensee file an Annual Report with the Board not later than March 31st. To facilitate the completion of the report I have enclosed, for your consideration, a blank form that can be used as a template for completing the Annual Report. Please feel free to use additional pages if more space is required to provide the necessary information.
- c) **PART D, Items 8-11** concern the assessment of the solid waste disposal facility. The terms of reference for an assessment of the site shall be submitted to the Board for approval by January 1, 1996. If you have any questions regarding these requirements, please contact Mr. Brian Collins, Water Resources, at (403) 920-8219.

I would like to bring to your attention several other matters.

- 1) Two (2) 1100 litre fuel tanks are located in the boiler room, adjacent to the pump house. The building is located 12m from the ordinary high water mark of the Water Lake. A breach of the tank has the potential to contaminate the water lake.
- 2) The Inspector was informed that residents occasionally collect ice, for consumption, near the sewage outfall area. It is recommended that the Hamlet post signs in the area identifying the outfall area to the general public.

The Inspection was discussed with Mr. Henry Brown, SAO. I would like to thank Mr. Henry Brown for his time and assistance provided during the Inspection.

Should you have any questions, please contact Mike Collie, Land Use Inspector, at (403) 982-4306 or the undersigned at (819) 979-4405.

Sincerely,



Mike Collie
Resource Management Officer
Nunavut District/Kitikmeot Region

cc: District Manager, DIAND Nunavut District, Iqaluit
Kitikmeot Health Board, Cambridge Bay
MACA, Cambridge Bay
Water Resources, Yellowknife, NT
Nunavut Water Board, Gjoa Haven

**ANNUAL REPORT
FOR THE HAMLET OF CAMBRIDGE BAY**

The following information is compiled pursuant to the requirements of Part B; Item 1, of Water Licence N4L3-1532 issued to the Hamlet of Cambridge Bay.

- a), b) Monthly and annual quantity in Cubic Metres, of fresh water obtained from all sources and the quantities of sewage waste discharged.

Month Reported	Quantity of water obtained from all sources	Quantity of Sewage Waste discharged	Quantity of solid waste removed from Sewage Disposal Facilities
January			
February			
March			
April			
May			
June			
July			
August			
September			
October			
November			
December			
ANNUAL TOTAL			

Note: Please indicate volumes in Cubic Metres - 1 Cubic Metre equals 1000 litres

- d) a summary of modifications and/or major maintenance work carried out on the Water Supply and Waste Disposal Facilities, including all associated Structures.

- e) tabular summaries of all data generated under the "Surveillance Network Program".

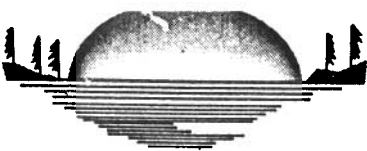
- f) a summary of any Abandonment and Restoration work completed during the year and an outline of any work anticipated for the next year.

- g) a summary of any studies requested by the Board that relate to waste disposal, water use or recalculation, and a brief description of any future studies planned.

- h) a list of unauthorized discharges.

- i) updates or revisions to the approved sewage and solid waste Operation and Maintenance Plans.

- j) any other details on water use or waste disposal requested by the board by November 1st of the year being reported.



NORTHERN ANALYTICAL LABORATORY
DEPARTMENT OF INDIAN AFFAIRS & NORTHERN DEVELOPMENT
BOX 1500, 4601-52ND AVE., YELLOWKNIFE, NT X1A 2R3
TELEPHONE: 403-920-8129 FAX: 403-873-9300

FIELD SAMPLE SHEET

CLIENT NAME: DIAD
ADDRESS: Box 278
Kugluktuk, NT
X0E 0E0

TEL#: (403) 982-4306
FAX#: (403) 982-4307

PROJECT: Hamlet of Cambridge Bay
N4L3-1532

DATE SAMPLED: 96 July 12
DATE RECEIVED: _____

SAMPLER: mike collie
SAMPLE TYPE: Surface grab

BOTTLE TYPE: PARAMETER		STATION NO.	1532-1	1532-2		
		STN LOCATION/TIME	1500	1530		
		LAB. NO.				
ROUTINE: (GREEN)	pH		✓	✓		
	Fluoride		✓	✓		
	Sp. Conduct		✓	✓		
	Colour		✓	✓		
	Alkalinity		✓	✓		
	Calcium		✓	✓		
	Magnesium		✓	✓		
	Sodium		✓	✓		
	Potassium		✓	✓		
	Chloride		✓	✓		
	Sulphate		✓	✓		
	R. Silica					
NUTRIENTS: (BLACK)	Turbidity		✓	✓		
	NFR (TSS)		✓	✓		
	FR (TDS)		✓	✓		
	Nitrate+ Nitrite-N		✓	✓		
	Nitrate-N		✓	✓		
	Ammonia-N		✓	✓		
	Total Phosphorus-P		✓	✓		
	Ortho-P					
PRESERVED NUTS: (PINK)	Diss-P					
	Tot. Phosphorus-P					
	Nitrate+ Nitrite-N					
	Ammonia-N					
BACTI: (AUTOCLAVED TAPE)	Chem. Oxy Demand					
	Tot. Coliform			✓		
	Fecal Coliform			✓		
	Fecal Streptococci			✓		
CYANIDE: (BLUE)	BOD			✓		
	Tot. Cyanide					
	Tot. Cyanide (Low)					
SULPHIDE: (PURPLE)	WAD Cyanide					
SULPHIDE: (PURPLE)	Sulphide					
PHENOL: (YELLOW)	Phenol					
OIL AND GREASE: (YELLOW)	O+G					
OTHER PARAMETER:						
MERCURY: (ORANGE)	Tot. Mercury			✓		
METALS: (RED)	Tot. Arsenic		✓	✓		
	Tot. Selenium					
	Tot. Antimony					
LAB NUMBER (IF REQUIRED)						

ICP-MS(1):Cd, Cr, Cu, Co, Mn, Ni, Pb, Zn, Fe
ICP-MS(2):total scan - 23
ICP-MS(3): extractable - 23
ICP-MS(4):

SAMPLER: RETAIN FOR YOUR RECORDS

FIELD SAMPLE NOTES: PROJECT: N4C3-1532

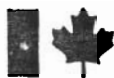
	(1)	(2)	(3)	(4)
STATION NO.	1532-1	1532-2		
WATER TEMP (°C)	15°	11°		
SAMPLING DEPTH (m)	Surface	Surface		
FLOW, ICE, etc.	0	24 L/min		
pH	8.5	7.12		
COND.	230 µS	720 µS		
DO	\	\		
TURB	\	\		
OTHER				

SITE LOCATION/DESCRIPTION 1) Water lake - 0.5 m off shore 0.5 m depth
2) Surfage & current
3)
4)

COMMENTS:

PRESERVATION CODE GUIDE

BOTTLE TYPE	DESCRIPTION	PRESERVATIVE	COLOUR
ROUTINE (R)	1 litre plastic (HDPE)	4 degrees C	green
NUTRIENTS (NUT)	500 mL plastic (HDPE)	4 degrees C	black
P...S. NUTRIENTS (p-nut)	125 mL plastic (HDPE)	1 mL 1:1 sulphuric acid	pink
BACTI	250 or 500 or 1 litre plastic (HDPE)	autoclave (time) tape	white
SULPHIDE (S)	250 mL plastic (HDPE)	1 mL 6N zinc acetate	purple
PHENOL (P-OH)	1 litre glass	4 mL 1:1 sulphuric acid	yellow
OIL + GREASE (O+G)	1 litre glass	4 mL 1:1 sulphuric acid	yellow
CYANIDE (CN)	500 mL brown plastic	5 mL 10% sodium hydroxide	blue
MERCURY (Hg)	150 mL glass	2 mL 1:1 sulphuric acid + 1 mL 5% potassium dichromate	orange
METAL (M)	500 mL clear plastic	5 mL 1:1 nitric acid	red



MUNICIPAL WATER USE INSPECTION FORM

DATE: July 19, 1996

COMPANY REP.: Henry Brown, SAO

LICENSEE: Hamlet of Cambridge Bay

LICENCE #: N4L3-1532

WATER SUPPLY

Source (s): Water Lake

Quantity Used (to date): 549643 m³

Owner/Operator: GNWT/DPW

(estimate or actual)

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

Intake Facilities: A Storage Structure A Treatment Systems A Chem. Storage A

Flow Meas. Device A Convey. Lines A Pumping Stations A (Note #1)

Comments: Note #1 Two (2) 1100 litre fuel tanks are located in the boiler room adjacent to the pump house. The building is located 12m from the OHWM of the water lake. A breach of the tank has the potential to contaminate water lake.

WASTE DISPOSAL

Sewage Sewage Treatment System (primary, secondary or tertiary)

Natural Water body Continuous Discharge (land or water)

Seasonal Discharge Wetlands Treatment Trench

Solid Waste: Owner/Operator: Hamlet of Cambridge Bay

Landfill Burn & Landfill Other

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

Disch. Quality N/A Decant Structure A Erosion U (Note #4)

Disch. Meas. Dev. N/A Dyke Inspection N/A Seepages N/A

Dams, Dykes A (Note #2) Freeboard N/A Spills N/A

Construction N/A O & M Plan U (Note #3) A & R Plan N/A

Periods of Discharge: Continuous Effluent Discharge Rate: 24 litres/min (est.)

Comments: Note #2 Dams, Dykes: Effluent is ponded SW of the lagoon adjacent to the turnaround pad. A dyke should be constructed in this area in order to contain effluent in the lagoon. Note #3 O & M Plan: O & M plan has not been received to date. (Continued Page #2)

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)

(DIAND) 1532-1 1532-2

Signs Posted: SNP Warning

Record & Reporting Please note that the Surveillance Network Program annexed to the water licence requires sample results to be submitted in this year's annual reports

Geotechnical Inspection: N/A

Non-Compliance of Act or Licence: Part B, Item 6 Part D, Item 6: A bagged toilet waste area is not maintained. Part H, Item 11: O & M plan has not been received to date for the 1995 reporting year. Part D, Items 8-11: Terms of reference for the landfill have not been received to date.

Page 2 attached Yes No

Not Available
Licensee Representatives Title

Mike Collie
Inspectors Name

Licensee Representatives Signature

Inspectors Signature



WATER USE INSPECTION REPORT (continued)

Date: July 19, 1996

Licence #: N4L3-1532

General Comments: (Continued)

Note # 4 Erosion: Sewage has been pumped out indiscriminately around the perimeter of the pad. This practice is eroding the edge of the pad, and is discouraged. Use of the chutes ensures proper mixing and containment of waste, reducing potential health hazards. The edge of the pad should be extended to the edge of the lagoon, or the chutes should be extended out into the lagoon.

Your prompt attention to the outstanding licence requirements are required, as the Hamlet is currently in violation of the NWT Water Act.

Comments

Mr. Brown advised the Inspector that the pumpout area and the landfill will be modified this season. Construction of a road between the landfill and waste metal dump is being considered. Plans are also being made to ensure segregation of wastes in the landfill. The Inspector made Mr. Brown aware of the requirement of PART E of the Water Licence pertaining to Modifications.

The Inspector was informed that residents occasionally collect ice, for consumption, near the outfall area. It is recommended that the Hamlet post signs in the area identifying the outfall area to the general public.

The Hamlet was in the process of a general clean-up, during the inspection. This initiative was noticed and encouraged. The inspector would like to thank Mr. Henry Brown for his time and cooperation.

Water Inspector