→ Water Resources YK

Indian and Northern Affairs | Affaires indiennes et du Nord

Northern Affairs Program
P.O. Box 100
Iqaluit, N.W.T.
X0A 0H0

September 14, 1988

Ms. Napatchie MacRae
Secretary Manager
Hamlet of Hall Beach
Hall Beach, N.W.T.
X0A 0K0

Your file Votre référence

Our file Notre référence B9545-5-H6

Insp
Hall Beach
IW
WB
MACA

Dear Ms. MacRae;

Re: Inspection - Hall Beach, N.W.T.
July 4, 1988

Enclosed please find the above report prepared by Mr. Jessiman following the July 4, 1988 inspection.

The inspection report identified a number of concerns that may require your attention:

1. the inspectors recommended that the Hamlet obtain an improved intake filter for the truck pump-out location at the water reservoir.

2. The sewage pit should be enlarged to accomodate the sewage discharges for Hall Beach on a yearly basis.

3. The garbage dump should be consolidated and a garbage pit be dug to reduce the windblown garbage.

4. The Hamlet should restore the abandoned waste and sewage disposal areas.

5. The ponds and creeks (near the dump) should be cleaned up of garbage, animal remains and scrap metal.

6. The Northwest Territories Power Corporation should clean-up the waste oil and diesel fuel around the generator building.

7. The inspectors recommended that warning signs should be posted near the sewage pit and the garbage dump perimeter in order to prevent indiscriminate dumping.

The results of the water quality samples will be sent to you under separate cover when they are received by this office.

If you have any questions or comments on the inspection report, please contact Mr. David Jessiman, Water Resources Officer at 979-4405.

Sincerely

J.M.A. Theriault
District Manager
Baffin District

cc. Water Resources YK
GNWT - MACA, Iqaluit (M. Ferris)
GNWT - DPW, Iqaluit (S. Kennedy)
BRHB, Iqlauit (L. Wilson)
NWTPC, Iqaluit (W. Boyle)

INSPECTION REPORT

ON THE

HAMLET OF HALL BEACH

JULY 4, 1988

BY

DAVID JESSIMAN

INSPECTOR UNDER THE NORTHERN INLAND WATERS ACT

NORTHERN AFFAIRS PROGRAM

INDIAN AND NORTHERN AFFAIRS CANADA

IQALUIT, N.W.T.

Date: August 17, 1988
Water Register: N/A

INTRODUCTION

On July 4, 1988, David Jessiman, Water Resources Officer and Peter Kusugak, Resource Management Officer of the Baffin District conducted an inspection of the water use and the waste disposal practices of the Hamlet of Hall Beach, N.W.T.. The inspector met with Ms.Napatchie MacRae, Secretary Manager, to review and discuss the inspection.

INSPECTION

Water Supply

The Hamlet water supply is obtained from a reservoir located approximately four kilometers southeast of Hall Beach. The reservoir was originally built in 1956 by the United States Air Force as part of the Distant Early Warning network. The reservoir continues to be operated and maintained by the Fox-Main Station. The perimeter of the reservoir and the weir was inspected and no concerns were noted.

Water is trucked to the community with a 4 500 Litre Water Truck. The potable water does not receive treatment and is pumped into holding tanks. The metal tanks are gradually being replaced with plastic tanks. Ms. MacRae indicated the Hamlet was considering obtaining an improved intake hose filter for the truck. She added that turbidity of the potable water tends to be very high in the summer months which is partially caused by windblown dust from roads and the airstrip.

Sewage Disposal

Sewage is almost entirely removed by Vacuum truck to the waste disposal area northwest of the community. Three older houses continue to use honeybuckets with one of the houses being modified this year for a sewage holding tank. The honeybags are being dumped adjacent to the garbage dump.

The sewage pit measures approximately 15 metres by 25 metres with a freeboard of less than one metre. The sewage leaches through the coarse shale into a drainage area that gradually reaches the shore. The sewage pit was observed to be underdesigned to support the population of Hall Beach. Ms. MacRae mentioned that the sewage pit freezes solid in October and the raw sewage flows over the ground toward the garbage dump and the shoreline.

The old abandoned sewage pits were observed to be partially filled in and remnants of plastic bags were scattered around the area.

The sewage disposal area was not posted and was freely accessible to the public.

Solid Waste Disposal

Domestic and commercial garbage is deposited on the ground adjacent to the sewage pit and is periodically burnt and covered with local pit-run shale. The garbage disposal area was observed to be very scattered and dumping practices of the users appear to be haphazard. It was observed that garbage is slowly migrating towards the community. A large pile of unburnt wood, insultation, and fixtures belonging to the NWT Housing Corporation was clearly outside of the dump area (towards the community).

Garbage and old 45 gallon drums were observed strewn along a small creek approximately 50 metres from the dump and approximately 400 metres from Hall Beach.

The metal waste site is located half way between the garbage dump and the community. The metal waste site considered of old vehicles, unused fuel tanks, steel pipes, and destroyed snowmobiles.

Fuel Storage

The Hamlet of Hall Beach does not own any bulk fuel storage facilities. The existing tank farms belong to the Government of the Northwest Territories, Northwest Territories Power Corporation, Ministry of Transport, Department of National Defence and the D.E.W. Line Station.

SURVEILLANCE NETWORK PROGRAM

The following water quality samples were collected:

HB-1 Water Reservoir
HB-2 Potable Water - Hall Beach Hotel

Posting

The water reservoir was posted in all four corners by the DEW Line Station. The waste disposal dumpsites and the sewage pit were not posted.

Other concerns

Waste oil and diesel fuel was observed to be dumped all around Northwest Territories Power Corporation generator building. A small pond southwest of the building was heavily stained with diesel fuel. Oil globules were observed on the bottom of the pond. The fuel tank farm adjacent to the generator building was observed to have inadequate berms and lacked impermeable liners.

Scattered garbage, animal remains, and dog faeces was observed along and in the shallow pond directly west of the community (edge of housing row).

DISCUSSION

After the inspection a meeting was held with Ms. MacRae. The following points were covered:

1. Water Supply: The Hamlet was encouraged to obtain an improved intake filter for the truck pumpouts at the water reservoir.

2. Waste Disposal

a) The Hamlet should restore the previously used waste disposal areas and establish a Garbage Pit to control and contain the windblown garbage.

b) The waste disposal area should be clearly marked and large local organizations who use the dump should be requested to improve their dumping practices. Ms. MacRae indicated that the Hamlet picks up the domestic garbage and burns it regularly. She mentioned that the Hamlet has little control over other users and will contact local organizations to control the random dumping.

c) The refuse belonging to the NWT Housing Corporation should be moved inside the accepted dumping area and burnt.

d) The inspectors recommended that the Hamlet clean-out the creek bed from the road (culvert) to the shoreline. Future dumping should not be allowed within 50 metres of the creek.

3. Sewage Pit - A new sewage lagoon should be considered to reflect the year round requirements for sewage disposal. The present sewage pit appeared to be adequate only during the summer months. After freeze-up the pit would be inoperable and the sewage would glaciate the surrounding area.

The inspectors recommended that the abandoned sewage pits and honeybag disposal areas should be totally restored. The Hamlet should consider posting warning signs to advise the public of the sewage disposal area.

4. General Clean-up - The Hamlet should strongly consider cleaning up the garbage, animal remains and scrap metal that has collected in ponds behind the community. A creek adjacent to the RCMP detachment was observed to be littered with old rusted 45 gallon drums and scrap metal.

Northwest Territories Power Corporation - The area surrounding the Diesel Generator building was observed to have large amounts of waste oil and diesel fuel spread around the site. The operators appear to be end dumping waste oil near the building. This practice is totally unacceptable. The waste oil and fuel should be contained in drums until it is removed or disposed of. The oil soaked fill should be removed and replaced with new gravel and the unacceptable dumping practices completely curtailed. The area had noticeable fuel smells and visually unaesthetic considering it is in the centre of the community.

The fuel tank farm adjacent to the generator building was observed to have inadequate berms and did not have impermeable liners.

6. General - The inspectors recognize that the Hamlet cannot correct all the noted deficiencies by themselves and additional resources must come through established government departments.

The cooperation and assistance of Ms. MacRae was greatly appreciated.

David Jessiman

Inspector Under the
Northern Inland Waters Act

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
WATER RESOURCES DIVISION, YELLOWKNIFE NORTHWEST TERRITORIES

RESULTS OF LABORATORY ANALYSIS

LICENSEE/ PROJECT	Hamlet of Hall Beach	LICENCE NUMBER	Hall Beach N/A	LOCATION	Hall Beach
DATE SAMPLED	July 4, 1988	DATE RECEIVED	July 11.	DATE COMPLETED	Aug. 15/88

STATION NUMBER		HB1	HB2						
LABORATORY NUMBER		880652	-653						
ANALYSIS REQUIRED		✓	✓	✓		✓		✓	
pH (units)		✓ 6.6	✓ 7.3						
Conductivity (µmho/cm)		✓ 43	✓ 146						
Dissolved Oxygen		✗							
Turbidity (NTU)		✓ .28	✓ .4						
Colour (colour U.)		✓ L2	✓ 5						
Suspended Solids		✓ L2	✓ 2						
TDS, Residue		✓ 22	✓ 82						
Calcium		✓ 5.5	✓ 18						
Magnesium		✓ 0.84	✓ 3.4						
Tot. Hardness ($CaCO_3$)		✓ 17	✓ 59						
Tot. Alkalinity($CaCO_3$)		✓ 15	✓ 51						
Sodium		✓ 1.8.	✓ 6.1						
Potassium		✓ 0.2	✓ 0.8.						
Chloride		✓ 2.3	✓ 9.5						
Sulphate		✓ 2.0	✓ 5.1						
Total Coliform (count/100 ml)		✓	✓	reed too late					
Fecal Coli. (count/100 ml)		✓	✓	reed too late					
Fecal Strep. (count/100 ml)		✓	✓	reed too late					
Std. Plate Cnt (cnt/ml)									
BOD_5									
COD									
Carbon, IC									
Carbon, TOC									
Ammonia Nitrogen (as N)									
Nitrate + Nitrite (as N)									
Total Kjeldahl N (as N)									
Phosphorus O-P (as P)									
Phosphorus Tot (as P)									
Silica Reac.(as SiO_2)									
Total Cyanide									
Available Cyanide									
Sulphide									
Oil & Grease									
Phenols									
Arsenic	T (µg/L)	✓ L1.	✓ L1.						
	D (µg/L)								
Cadmium	T (µg/L)	✓ L0.5	✓ L0.5						
	D (µg/L)								
Copper	T (µg/L)	✓ 2.	✓ 84						
	D (µg/L)								
Iron	T (µg/L)	✓ 16	✓ 41						
	D (µg/L)								
Lead	T (µg/L)	✓ L1	✓ L1						
	D (µg/L)								
Mercury	T (µg/L)	✓ 0.03	✓ 0.05						
	D (µg/L)								
Nickel	T (µg/L)	✓ L1	✓ L1						
	D (µg/L)								
Zinc	T (µg/L)	✓ 130	✓ 65						
	D (µg/L)								
Chromium	T (µg/L)	✓ L1	✓ L1						
	D (µg/L)								

Results are expressed in µg/L, except as indicated. T and D refer to total and dissolved metals respectively.

WATER RESOURCES DIVISION, YELLOWKNIFE, NORTHWEST TERRITORIES

FIELD SAMPLING AND DATA

LICENSEE/PROJECT	LICENCE NO.	LOCATION
Hamlet of Hall Beach	HALLBEACH N/A	HALL BEACH
DATE SAMPLED: July 4, 1988	SAMPLED BY: JESSIMAN	

ANALYSIS	SAMPLE VOLUME	PRESERVATIVE	STATION NUMBER					
			HB 1	HB 2				
			BOTTLE NUMBER					
MISC. & ARSENIC	1 LITRE	NONE	HB 1	HB 2				
HEAVY METALS	2-125ml ~~500 ML~~	2 ML 1:1 HNO_3	"	"				
CYANIDE	500 ML	About 6 pellets NaOH to pH 12						
MERCURY	250 ML	2 ML 1:1 HNO_3 + 2 ML 5% $K_2Cr_2O_7$	"	"				
NUTRIENTS	250 ML	NONE	"	"				
BACTERIA	500 ML	NONE	"	"				
OIL AND GREASE	1 LITRE (GLASS)	4 ML 1:1 H_2SO_4						
Time of Sampling			11:01	12:03				
Air Temperature			6°C	6°C				
Water Temperature			+3°C					
Rate of Flow								
Ice Thickness			1 m.					
Depth of Sampling								
pH								
Conductivity								
Dissolved Oxygen								

NO Preservative Added
Please Add.

Preservative added July 11.

ARSENIC			1	1				
HEAVY METALS	2-125ml ~~500 ML~~	2 ML 1 HNO_3	"	"				
CYANIDE	500 ML	About 6 pellets NaOH to pH 12						
MERCURY	250 ML	2 ML 1:1 HNO_3 + 2 ML 5% $K_2Cr_2O_7$	"	"				
NUTRIENTS	250 ML	NONE	"	"				
BACTERIA	500 ML	NONE	"	"				
OIL AND GREASE	1 LITRE (GLASS)	4 ML 1:1 H_2SO_4						
Time of Sampling			11:01	12:03				
Air Temperature			6°C	6°C				
ter Temperature			+3°C					
Rate of Flow								
Ice Thickness			1m.					
Depth of Sampling								
pH								
Conductivity								
Dissolved Oxygen								

NO Preservative Added
Please Add.

Preservatives added July 11.