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MEMORANDUM **NOTE DE SERVICE**

TO / À: N. Bryant
Co-ordinator, Municipal

FROM / DE: Peter Bannon
Water Resources Officer
Baffin

SECURITY-CLASSIFICATION-DE SÉCURITÉ:

OUR FILE—N/RÉFÉRENCE: B9546-11

YOUR FILE—V/RÉFÉRENCE:

DATE: October 18, 1982

4571-1-7
Inspection
Dist list

SUBJECT / OBJET: Investigation of Hamlet of Cape Dorset
Municipal Water Services, September 28, 1982

Attached is the a/n report. As the report indicates, the situation is quite good in Cape Dorset with the exception of the grey water discharge which was seen meandering away from a few houses. This is however a minor concern but should be kept in mind when Licencing of Cape Dorset occurs.

Peter

Peter Bannon

INVESTIGATION OF HAMLET OF CAPE DORSET MUNICIPAL WATER SERVICES, SEPTEMBER 28, 1982

INTRODUCTION

I met with Mr. Charlie Manning, the Secretary Manager of the Hamlet of Cape Dorset on September 28, 1982, and the Water Licencing process and our Department's function in the process were discussed. An inspection of the potable water services and the sanitary waste disposal areas was also carried out.

DISCUSSION

Water Supply

The water supply for Cape Dorset is Tee Lake situated about 1.5 - 2 kilometers from the community. The water is pumped to a heater house with circulating heaters situated near Tee Lake and the Water is then piped to the 90,000 litre storage tank in the water distribution building. This is accomplished with about 2000 meters of 75mm pipeline. No complaints of the system were expressed by Mr. Manning.

Sanitary Waste Disposal

Cape Dorset has about 790 people living in about 135 inhabitable buildings including buildings such as the hamlet office, the nursing station, and the school. Of these,approximately 75 percent of the buildings are on full service with sewage pumpout and the remainder are served by bagged sewage and discharge of grey water outside the house. The sewage is disposed of at the hamlet dump. Cape Dorset's waste disposal area has been relocated and upgraded considerably over the last three years. Sewage wastes,combustibles, and metal wastes are segregated in one area of the dump which covers a large area relative to dumps in other Baffin communities. The sewage pumpout is discharged into a pit and the bagged sewage is contained in another pit. Due to the availability of surface area and gravel resources the plans are to bury the honey bag pits and start a new one every 2 - 3 years. This will also be the case for combustible garbage. West Inlet is about 100 - 200 meters from the sewage disposal area but no pollution of the inlet is thought to exist.

The grey water disposal at some of the houses observed could be improved by trying to dig a containment pit where it is possible.

SUMMARY

Generally Cape Dorset has a good waste disposal operation and a good water supply and distribution system.

Peter Bannon
Water Resources Officer

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DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
WATER RESOURCES DIVISION -- NORTHWEST TERRITORIES
REQUEST FOR AND RESULTS OF LABORATORY ANALYSIS

LICENSEE Cape Dorset	LICENCE NO. 4571-1-7	LOCATION Cape Dorset
DATE SAMPLED Sept 28/82	DATE RECEIVED Oct 4/82	DATE ANALYZED Nov 4, '82

STATION NUMBER						
LABORATORY NUMBER	21963					
ANALYSIS REQUIRED	✓	✓	✓	✓	✓	✓
pH (units)	✓ 6.7					
Sp.Cond. (umho/cm)	✓ 38					
Dissolved Oxygen						
Turbidity (JTU)	✓ 0.96					
Colour (colour U.)						
Suspended Solids	✓ <5					
TDS, Residue	✓ <5					
Oil & Grease						
Phenols						
Calcium	✓ 2.28					
Magnesium	✓ 0.74					
Tot.Hardness as CaCO3	✓ 8.7					
Tot.Alkalinity as CaCO3	✓ 6.1					
Sodium	✓ 9.6					
Potassium	✓ 0.2					
Tot.Coliform ent/100 ml						
Faecal Coli. ent/100 ml						
Faecal Strep. ent/100 ml						
BOD5						
COD						
Carbon, IC						
Carbon, TOC						
Total Cyanide						
Chloride	✓ 6.5					
Sulphate	✓ 1.5					
Sulphide						
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 SiO2						
Arsenic T	✓ <0.002					
Arsenic D						
Cadmium T		✓ <0.0001				
Cadmium E						
Copper T		✓ 0.007				
Copper E						
Iron T		✓ 0.042				
Iron E		✓				
Lead T		✓ 0.002				
Lead E						
Mercury T (µg/l)			✓ <0.01			
Mercury E (µg/l)						
Nickel T		✓ <0.001				
Nickel E						
Zinc T		✓ 0.529				
Zinc E						

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT

WATER RESOURCES DIVISION -- NORTHWEST TERRITORIES

FIELD SAMPLING AND DATA

LICENSEE Cape Dorset	LICENCE NO. ———	LOCATION Truck fill point	
DATE SAMPLED 28 Sept 82	SAMPLED BY Bannon		

SAMPLE COLLECTION

ANALYSIS REQUIRED	VOLUME TO BE COLLECTED	PRESERVATIVE TO BE USED	STATION NUMBER: Dorset-1					
			BOTTLE NUMBER					
MISC. & ARSENIC	2 LITRES	NONE	-1 ~~Dorset-1-1~~					
HEAVY METALS	1 LITRE	2ml HNO_3	-2					
CYANIDE	1 LITRE	2ml 50% NaOH Soln.						
MERCURY	250 ML	2ml HNO_3 + 2ml 5% $K_2Cr_2O_7$ Soln.	-3					

FIELD OBSERVATION

Time of Day	1030						
Wind Velocity							
Wind Direction							
Air Temperature							
Barometric Pressure							
Water Level							
Rate of Flow							
Ice Thickness							
Depth of Sampling							

FIELD ANALYSIS

pH	6.9						
Sp. Conductance	25						
Dissolved O2							
Turbidity							
Water Temperature	11°C						

NOTES

- Water Supply