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Cape Dorset
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September 6, 1990

Mr. Chuck Gilhuly
Senior Administrative Officer
Hamlet of Cape Dorset
Cape Dorset, N.W.T.
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Dear Mr. Gilhuly;

Re: Northern Inland Waters Act
Hamlet of Cape Dorset
Inspection Report - August 3 and 4, 1990

Please find the above noted report prepared by David Jessiman, Water Resources Officer.

The inspection report identifies a number of concerns that requires your attention:

1. We commend the efforts of Mr. Gilhuly and the Hamlet Council to develop plans to relocate the waste disposal sites. Please ensure that when the Hamlet Council decides where to relocate the waste disposal sites they must conform to existing Federal and Territorial Acts and Regulations.
2. The inspector recommended that if the Hamlet Council selects the new waste disposal site above Tellik Inlet, it be located on the high and level terrace within the valley. It was strongly recommended that diversion ditches be constructed around the entire site and a berm and or fence be constructed along the toe of valley prior to any use.
3. It was recommended that the waste oil storage adjacent to the sewage lagoon be cleaned up and properly contained. The inspector observed that waste oil was allowed to enter the lagoon. This practice is totally unacceptable and future incidences must be eliminated.

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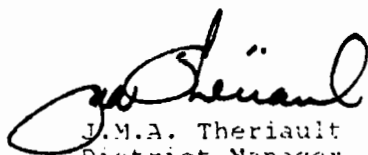
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4. Warning signs are recommended to be posted at the Truckfill Building, Landfill Sites, and at the Sewage Outfall area.

The results of the water quality samples collected by our inspector will be provided when available.

If you have any questions or comments on the inspection report please feel free and call Mr. David Jessiman, Water Resources Officer at (819) 979-4403.

Sincerely



J.M.A. Theriault
District Manager
Baffin District

cc. Water Resources, YK
GNWT - MACA (M. Ferris)
GNWT - DPWH (S. Kennedy)
GNWT - BRBB (L. Wilson)

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INSPECTION REPORT
ON THE
HAMLET OF CAPE DORSET
AUGUST 3 AND 4, 1990

BY
DAVID JESSIMAN
INSPECTOR UNDER THE NORTHERN INLAND WATERS ACT
NORTHERN AFFAIRS PROGRAM
IQALUIT, N.W.T.

DATE: August 14, 1990
WATER REGISTER: N/A

INTRODUCTION

On August 3 and 4, David Jessiman, Water Resources Officer of the Baffin District conducted an inspection of the water use and waste disposal practices of the Hamlet of Cape Dorset, N.W.T.. The inspector met Mr. Chuck Gilhuly, Senior Administrative Officer, Mr. Naudla Oshweetok, Assistant Administrative Officer, and Mr. Ray Faubert, Hamlet Foreman to review and discuss the inspection. A point of contact with the Government of the N.W.T. - Department of Public Works and Highways was Mr. Chris Freda, Acting Settlement Maintainer. Mr. Oshweetok and Mr. Faubert accompanied the inspector for portions of the inspection.

INSPECTION

Water Supply

The Hamlet's freshwater supply is obtained from Tee Lake located approximately one kilometre southwest of Cape Dorset. The intake facilities are located on the southern end of the Lake. Water flows from a submersible pump located 60 metres from the lakeshore to the heater house. The water is gravity fed from the 1 200 litre tank in the heater house through a 75 millimetre insulated pipeline to the Truckfill Building located approximately 2 050 metres away.

The intake facilities and water conveyance pipeline were inspected and no concerns were observed. The heater house was not inspected. The house is located at the high point of the system and contains three circulating water heaters. During periods of extremely cold weather the heat trace lines along the pipeline is activated.

The Truckfill Building contains a 91 000 litre holding tank and truck-fill dispenser. Water Treatment consists of Javex TM Bleach being added to the 4 550 litre water trucks prior to distribution. The Hamlet has two water trucks that operate five days a week. The Hamlet consumes between 13.5 and 15 million litres of water per year. The present population of Cape Dorset is approximately 1022 persons.

Sewage Disposal

Liquid sewage is collected by two 4 550 litre pumpout trucks and sewage bags are collected in a garbage truck. The sewage trucks operate five days per week.

Liquid sewage is discharged into a partial sewage lagoon measuring approximately 30 by 52 metres. Sewage is held within a rock bluff and a 50 metre sand / gravel berm. The berm retains the waters prior to an uncontrolled decant through a rock rip-rap depression. Sewage flows into a shallow trench to an access road. The trench measures approximately 0.60 by 0.20 metres deep and 25 metres long.

The trench is constructed in coarse rock and flows along the edge of the rock bluff. Sewage seeps through the access road to a rocky slope of approximately 30 metres and flows onto the tidal flats of Tellik Inlet. The sewage is periodically flushed out by tidal action.

The bagged sewage is trucked to a pit adjacent to the sewage lagoon. The sewage pit measures approximately 20 by 20 metres. The sewage pit is bermed by pit-run granular material. The pit was observed to be very full and no recent restoration was noted.

Mr. Faubert mentioned that 47 houses continue to use sewage bags and three to four houses are being retrofitted with water and sewer tanks this year. Mr. Gilhuly and Mr. Faubert indicated that the sewage lagoon and sewage bag disposal areas are too close to the community and must be abandoned and restored in the very near future. The Hamlet representatives indicated that a sewage disposal area may be built this fall in conjunction with their planned domestic waste disposal site.

Solid Waste Disposal

The Domestic and Metal Waste Disposal sites are located approximately a kilometre and 300 metres west of Cape Dorset.

The Domestic Landfill site was inspected and no concerns were observed. The site was well maintained and garbage was routinely burnt. A limited amount of granular material was observed over the abandoned portions of the site. The site measured approximately 40 by 50 metres.

Mr. Gilhuly and Mr. Faubert indicated that the Hamlet plans to relocate their Domestic Landfill site approximately 800 metres from the present site. The Hamlet is waiting for a D-7 caterpillar tractor from this year's sealift before commencing with the roadwork and site preparation.

The inspector accompanied Mr. Faubert to the Hamlet's proposed Domestic Waste Disposal and the Sewage Lagoon sites. The proposed access route was going to continue off the end of the waste disposal area which extends towards Tellik Inlet. The proposed sites were within a valley between two very large rock outcrops. The useable area was approximately 80 by 200 metres and was underlain by thick layers of coarse sand. The existing water courses ran down the centre and along the sides of the rock outcrops. The slopes varied from five percent at the head of the valley, to 10 to 15 percent at the centre and dropping off to 30 to 35 percent above Tellik Inlet.

The Metal Waste Disposal site was inspected and a large amount of scrap metal, culverts, steel drums, sewage tanks, snowmobiles, trucks and tracked vehicles were lined up along a rock outcrop. The metal waste site extends for approximately 100 metres. Burial is not possible due to the rocky site conditions.

Mr. Gilhuly mentioned that the Hamlet wants the site cleaned up and moved to accommodate future land development and reduce the existing hazards. The Hamlet and the Government of the N.W.T. are continuing to review methods to move and dispose of the scrap metal. The methods being considered include moving the material across the beach causeway to Mallik Island, hauling to the new waste disposal site, and shipping the scrap metal to southern smelters. The Hamlet retained Lesly Fagen to assess the viability of removing their abandoned and current waste metal sites by heavy equipment and ship. The report is titled "Municipality of Cape Dorset, Cape Dorset, Northwest Territories - Feasibility Study".

The Abandoned Landfill site adjacent to the ocean was inspected and was observed to be partially exposed along the perimeter of the dumpsite. Large amounts of scrap metal and old rusted drums were scattered along the edge. The perimeter was observed to be slowly eroded by wave action. During high tide conditions the water levels reached the edge of the landfill site.

Fuel Storage

The Government of the N.W.T. Bulk Fuel Tank Farm and fuel conveyance lines located northeast of the community was inspected and no concerns were noted. The facility was very well maintained and was observed in excellent condition. Mr. Gilhuly mentioned that the sealift intake facility will be upgraded this fall.

The Northwest Territories Power Corporation Fuel Tank located in the community was contained in a steel sided berm. The tank capacity was approximately 68 000 litres. The liner was installed during September 1989 and was observed in excellent condition.

SURVEILLANCE NETWORK PROGRAM

The following water quality samples were collected:

- MISC-CD-01 - Truckfill Station - Hose
- MISC-CD-02 - Tee Lake near pumping facility
- MISC-CD-03 - Airstrip Lake or Dead Dog Lake
- MISC-CD-04 - Sewage Effluent downstream of old access road
- MISC-CD-05 - Old dump drainage, approximately 10 metres from edge
- MISC-CD-06 - Sewage Effluent downstream of rip-rap dam

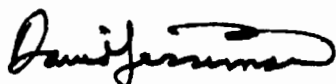
3. The Domestic Landfill site was discussed and Mr. Gilhuly mentioned that the Hamlet is waiting for a D-7 Caterpillar Tractor from this year's sealift in order to start on a new waste disposal site.

The inspector recommended that waste disposal sites be located as high as possible away from Tellik Inlet. It was suggested that the disposal sites and sewage lagoon be located within the level section of the valley. It was strongly recommended that diversion ditches be constructed around the entire disposal area prior to use. A berm and / or fence should be constructed at the toe of the valley to prevent garbage and drums from entering the Tellik Inlet.

4. It was recommended that the waste oil storage area be cleaned up and properly contained. It was observed that waste oil was allowed to enter the sewage lagoon which is a totally unacceptable practice and future incidences must be eliminated.

5. Warning signs are recommended to be posted at the Truckfill Building, Landfill sites and the Sewage outfall area.

The co-operation and assistance provided by Mr. Gilhuly, Mr. Oshweetok, and Mr. Faubert was appreciated while in Cape Dorset.



David S. Jessiman

Inspector Under the
Northern Inland Waters Act