

our file votre référence

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September 28, 1993

Mr. Sheldon Dory  
Senior Administrative Officer  
Hamlet of Repulse Bay  
General Delivery  
Repulse Bay, N.T. X0C 0H0

*Repulse Bay  
WB*

Dear Mr. Dory:

**RE: WATER INSPECTION - HAMLET OF REPULSE BAY  
UNLICENSED COMMUNITY**

Enclosed please find a copy of the recently conducted water inspection conducted by Dan Elliott, Water Inspector designated pursuant to Section 35.(1) of the Northwest Territories Waters Act. The inspection report is self explanatory as are the concerns related to the waste disposal facilities. As well, by way of this letter copies of this report have been forwarded to the Keewatin Health Board (attention Mr. Rob Kielly) and MACA of the GNWT.

Again the time taken by yourself, your staff and Mr. Makpah in assisting the Inspector during the course of his inspection was greatly appreciated.

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
Should you have any questions regarding the matters raised by the report please feel free to contact the undersigned at any time at (403) 920-8258.

Sincerely,

  
Dan Elliott

Inspector under the  
Northwest Territories Waters Act

Water Resource Officer  
Northern Affairs Program

  
District Managers Initials

encl: Inspection Report

cc: Water Resources Division  
Keewatin Health Board  
MACA

**UNLICENSED WATER INSPECTION**  
**ON THE**  
**HAMLET OF REPULSE BAY, N.W.T.**  
**ON**  
**AUGUST 26, 1993**

**NORTHERN AFFAIRS PROGRAM**  
**INDIAN AND NORTHERN AFFAIRS CANADA**  
**RANKIN INLET, N.W.T.**

**by: Dan Elliott**  
**Water Resources Officer**

**Water Register: UNLICENSED**

Hamlet of Repulse Bay, N.W.T.  
Unlicensed Water Inspection  
August 26, 1993

**Introduction**

An inspection of the Hamlet of Repulse Bay's water supply, waste disposal and fuel storage facilities was conducted on August 26, 1993 by Dan Elliott, Water Inspector designated pursuant to the Northwest Territories Waters Act. Accompanying the Inspector was Mr. Bruce Stephen, Environmental Health Officer for the Keewatin Health Board. Personnel contacted representing the Hamlet were; Mr. Sheldon Dory, Senior Administrative Officer, Mr. Joe Angotingoar, Hamlet Foreman, and Mr. Regan Makpah, Settlement Maintenance Supervisor, GNWT DPW.

The Hamlet of Repulse Bay is located on the northern shore of Repulse Bay on the south shore of the Rae Isthmus. The Hamlet is approximately 1,416 air km northeast of Yellowknife in the Keewatin Region. The geographical co-ordinates of the community are 66° 32'N latitude, 86° 15'W longitude.

Repulse Bay achieved Hamlet status on July 01, 1978, and presently has a population of approximately 500. Repulse Bay, to this date, has never been issued a water license under the Northern Inland Waters Act nor under the newer, Northwest Territories Waters Act.

**Inspection**

**A. Water Supply**

The present freshwater source for the Hamlet is Nuviqsluqtujuq Lake which is located about 4.9 kilometres north of the community. Per conversations with the Environmental Health Officer for the Keewatin Health Board, the quality of the water poses no public health concerns with bacterial samples taken routinely and chemical analysis performed yearly. A semi-permanent, skid-type water pumphouse, truckfill station and generator facility is located at the lake. Two submerged water pumps and intake hoses extend into the lake. These intakes are screened to prevent any uptake of fish and are periodically checked. As part of their routine maintenance schedule, one pump was changed this past summer and the screen was checked and found to be free of any debris. It is planned that the other pump will be done next year.

Treatment consists of a demand type, chlorine injection system which engages when the truckfill is activated. The chemical storage for the treatment system is located within the 1 pumphouse and all appears to be relatively neat and tidy. Records of the amount of chemical consumed is logged weekly and the Operator checks for free chlorine and residual chlorine levels three times per week (Mondays, Wednesdays and Fridays).

Repulse Bay is under a fully trucked water distribution system contracted by the Hamlet council which trucks water to individual home storage tanks using a single water 4 500 litre water truck. The 4 500 litre truck operates 7 days per week 12 hours a day.

The intake and treatment facilities within the pumphouse are generally operated in a clean efficient manner with signs posted indicating that the site is the location of the water supply and intake facility.

## **B. Waste Disposal**

### **1. Liquid Waste**

At present there are relatively few housing units which utilize honey bag collection systems (estimates are less than 10 units). Sewage and bagged sewage is collected daily from individual holding tanks by a pumpout truck, contracted by the Hamlet. There is no active treatment of liquid waste and the volume of waste disposed is not recorded. Bagged sewage is trucked to the garbage dump and is disposed of along with the solid waste -- no segregation of bagged sewage from the solid waste is practised. The liquid pumpout is discharged to an area just adjacent to the solid waste at the disposal facility. The wastes flow downhill away from the landfill site to a rather sizable pond and then through a series of ponds to the Ocean (located approximately 1 mile away).

Apparently, the department of Municipal and Community Affairs of the GNWT is investigating the area with the intention of upgrading the sewage waste facilities in the community of Repulse Bay. Efforts should be taken to ensure the separation of the solid and liquid wastes thereby reducing the likelihood of increasing the adverse effects of the leachate arising from the continuous flow of the liquids over the burnt and unburnt solids. Furthermore, an evaluation should be undertaken to assess the "treatment efficiency" arising from the existing overland treatment, as well as a prediction of likely effects on the treatment efficiency as a result of the proposed "improvements". Prior to the date of inspection, samples had been taken for MACA but unfortunately they could not be analyzed. When the Inspector was asked to take additional samples he was unable to comply due to the lack of appropriate sample bottles and time constraints.

### **2. Solid Waste**

Garbage is collected regularly from individual homes with the Hamlet garbage truck and disposed of at the solid waste disposal site located 1.5 km north of the Hamlet. The combustible solid wastes are burned daily (assuming that the winds will not blow the smoke towards the community). Furthermore, the Hamlet compacts the remaining debris twice a year and the area receives a lift or gravel approximately once a year. Some larger materials, such as vehicles, barrels, household appliances and other noncombustibles are for the most part separated and are used to "line" the access road to the Solid Waste Disposal Site. As well efforts were evident of attempts to segregate the scrap lumber and other building materials for reuse by the local populace.

The site is not fenced, resulting in some windblown materials above the site. The area is not posted to indicate that the areas are waste disposal facilities (neither for the solid or liquid wastes).

## **C. Fuel Storage**

The Hamlet of Repulse Bay has two main fuel storage facilities, with the largest site owned and operated by the GNWT, Government Service Petroleum Products. This facility is in a well maintained fenced area, with all tanks surrounded by a lined gravel berm. Government Services has a pump distribution system for their fuel. The tanks being utilized contain P-50 diesel fuel, gasoline and Turbo "A".

The other fuel facility is owned and operated by the Northwest Territories Power Corporation in an unfenced area connected to the GNWT POL facilities. Fuel storage consists of three large P50 diesel fuel tanks. These tanks are surrounded by an unlined gravel berm. As a result of a spill earlier in the year, personnel were on site investigating the degree of contamination of the soil in the immediate area of the tanks and to investigate the installation of an impermeable berm on site.

Both of the above facilities appear to be well maintained.

#### ***D. Records and Reporting***

The Hamlet of Repulse Bay is an unlicensed community and therefore has no record or reporting requirements to submit at this time.

The Inspector would like to thank Messrs. Sheldon Dory Senior Administrative Officer, Joe Angotingoar Hamlet Foreman and Reagan Makpah GNWT DPW, Settlement Maintenance Supervisor for their assistance and co-operation in providing information during this inspection.

A handwritten signature in cursive script that reads "Dan Elliott". The signature is written in black ink and is positioned above a horizontal line.

Daniel M. Elliott

Inspector under the  
Northwest Territories Waters Act