

**MUNICIPAL INSPECTION REPORT
HAMLET OF AKLAVIK
WATER LICENCE N3L4-0570**

Introduction

An inspection of the water supply and waste disposal facilities was conducted by Scott Gallupe, Water Resources Officer, on September 19, 1989.

The Hamlet of Aklavik has been granted a renewal of their Water Licence effective May 1, 1989 and expires April 30, 1999.

Points of contact during the inspection were Knute Hansen, Senior Administrative Officer, and Danny Gordon, Hamlet Foreman.

Recent Population Figure: 900 Number of Dwellings: 190

A. Water Supply

The year round water supply is obtained from the Peel Channel of the Mackenzie River just south of the Hamlet.

GNWT's Department of Public Works maintains the intake line and treatment plant.

The Hamlet maintains the pumphouse, truck fill-up station, reservoir and the water distribution line through the Hamlet. The 75 mm and 100 mm distribution lines are only used in the summer.

The intake pipe runs out into the channel about 20 metres with the intake about 3 feet off the bottom of the channel. This intake line has heaved which means that it will be frozen into the ice this winter and most likely be sheared off with the next ice movement in the spring. DPW has brought this to the Inspector's attention and DPW already has plans to provide temporary pumping using two hoses, if needed. DPW plans to upgrade the placement of the intake line in the summer of 1990.

The treatment plant smelt like fuel oil due to a small leak from a broken line to the furnace that was repaired. The water was not contaminated.

The treatment plant was fairly neat and tidy. Quantity records are kept at the treatment plant.

There were no problems noted with the pumphouse.

Samples were taken in the treatment plan from a tap before treatment known as SNP Station 570 and from the truck fill-up line known as treated water 570-1A. 570-1A is not part of the Surveillance Network Program. Refer to Appendix 1 for results. The results are indicative of water having a high sediment content. The present treatment is not effective enough for providing safe drinking water. DPW, MACA and Environmental Health are all aware of this concern.

DPW has plans to remedy this situation in the summer of 1990. In the meantime, sampling is being done once a month. DIAND is doing the physical and chemical analysis and Environmental Health is doing the bacteriological.

B. Sewage Disposal

Pump-out is contracted to O.D. Hansen Enterprises. All except 48 dwellings are on pump-out. The 48 dwellings use honeybags and deposit their greywater beside their residence in a ditch. Honeybags are deposited at the new dump honeybag pit. No problems noted.

The pump-out facilities at Clearing Lake were not posted. No other problems noted.

Samples were taken at SNP Station number 570-3 and 570-4. Refer to Appendix 1 for results. No problems noted with these results.

C. Solid Waste Disposal

The honeybag pit at the old dump was not capped. The rest of the old dump had been capped and contoured. Some vegetation was showing. It was mostly snow covered at time of inspection.

There was a fair amount of windblown debris at the new dump. There was no fencing.

Segregation of bulky metal waste was evident. The new dump was posted.

The life expectancy of the new dump is thought to be 3 years from now.

D. Surveillance Network Program

Part C, Item 2 of the SNP requires records for quantities of sewage discharged to Clearing Lake sewage lagoon. There have been no records noted.

All other SNP requirements have been met.

E. Posting

The water treatment/pumphouse facilities were posted. The new solid waste disposal area was posted but signs were in poor condition.

The sewage lagoon was not posted.

F. Restoration and Maintenance

The old dump site had been capped and contoured.

The two intake pumps had been replaced in May, 1989.

No other restoration or major maintenance had been noted.

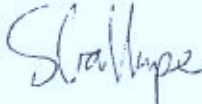
G. Other Concerns

None noted.

H. Official Onsite Discussion

A meeting with Knute Hansen, Senior Administrative Officer, and the Inspector occurred after the inspection to discuss the terms and conditions of the Hamlet's Water Licence N3L4-0570.

The Inspector would like to thank Knute Hansen and Danny Gordon for their cooperation.



Scott Gallupe
Water Resources Officer

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

RESULTS OF LABORATORY ANALYSIS APPENDIX #1

LICENSEE/PROJECT		LICENCE NUMBER				LOCATION
Hamlet of Aklavik		N3L4-0570				Aklavik, NWT
DATE SAMPLED		DATE RECEIVED				DATE COMPLETED
September 19, 1989		Sept. 20 / 89				Nov. 22 / 89
STATION NUMBER	RAW H ₂ O	RAW H ₂ O	Sewage	RAW H ₂ O	Treated	we
	570-1	570-2	570-3	570-4	570-1A	
LABORATORY NUMBER	890909	P	890910	890911	890912	
ANALYSIS REQUIRED	✓	✓	✓	✓	✓	✓
pH (units)	✓ 7.9	✓ E	✓ 8.6	✓ 8.4	✓ 6.9	
Conductivity (umho/cm)	✓ 400	✓ A			✓ 375	
Dissolved Oxygen		S				
Turbidity (NTU)	✓ 90	E			✓ 12	
Colour (colour U.)	✓ 150				✓ 7	
Suspended Solids	✓ 107	✓ O	✓ 38	✓ 9	✓ 15	
TDS, Residue	✓ 232	M			✓ 275	
Calcium	✓ 48	L			✓ 48	
Magnesium	✓ 16	T			✓ .15	
Tot. Hardness (CaCO ₃)	✓ 184				✓ .183	
Tot. Alkalinity (CaCO ₃)	✓ 113				✓ 85	
Sodium	✓ 6.5				✓ 6.2	
Potassium	✓ 13.3				✓ 0.7	
Chloride	✓ 13				✓ 4.2	
Sulphate	✓ 10 95				✓ 102	
Total Coliform (count/100)		✓	✓ 1080	✓ 16 × 10 ⁴	✓ < 1	
Fecal Coli. (ml)		✓	✓ 180	✓ 3000	✓ < 1	
Fecal Strep. (ml)			✓ 320			
Std. Plate Cnt (cnt/ml)						
BOD ₅			✓ 7	✓ 7	✓ < 5	
COD						
Carbon, IC						
Carbon, TOC						
Ammonia Nitrogen (as N)	✓ 0.02	✓				
Nitrate + Nitrite (as N)						
Total Kjeldahl N						
Phosphorus O-P (as P)	✓ 0.12	✓				
Phosphorus Tot (as P)						
Silica Reac. (as SiO ₂)	3.3					
Total Cyanide						
Available Cyanide						
Sulphide						
Oil & Grease						
Phenols						
Arsenic	T (ug/L)	✓ L05		✓ L05		
	D (ug/L)					
Cadmium	T (ug/L)	✓ L1		✓ L1		
	D (ug/L)					
Copper	T (ug/L)	✓ 6		✓ 1		
	D (ug/L)					
Iron	T (ug/L)	✓ 4036		✓ 1580		
	D (ug/L)					
Lead	T (ug/L)	✓ 1		✓ L1		
	D (ug/L)					
Mercury	T (ug/L)	✓ L.04		✓ L.04		
	D (ug/L)					
Nickel	T (ug/L)	✓ 7		✓ 2		
	D (ug/L)					
Zinc	T (ug/L)	✓ 38		✓ 16		
	D (ug/L)					
Chromium	T (ug/L)	✓ 8		✓ 1		
	D (ug/L)					

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

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FIELD SAMPLING AND DATA

LICENSEE/PROJECT Hamlet of Aklavik		LICENCE NO. N3L4-0570		LOCATION Aklavik, NWT			
DATE SAMPLED Sept. 19/89		SAMPLED BY S. Brillidge					
ANALYSIS	SAMPLE VOLUME	PRESERVATIVE	STATION NUMBER				
			570-1	570-2	570-3	570-4	Treated H ₂ O 570-1A
			BOTTLE NUMBER				
			E	A			
MISC. & ARSENIC	1 LITRE	NONE	✓	✓	✓	✓	✓
HEAVY METALS	500 250 ML	2 ML 1:1 HNO ₃	✓		✓		
CYANIDE	500 ML	About 6 pellets NaOH to pH 12		0 m			
MERCURY	250 ML	2 ML 1:1 HNO ₃ + 2 ML 5% K ₂ Cr ₂ O ₇	✓	1	✓		
NUTRIENTS	250 ML	NONE	✓	T			
BACTERIA	500 ML	NONE			250 ml ✓	250 ml ✓	✓
OIL AND GREASE	1 LITRE (GLASS)	4 ML 1:1 H ₂ SO ₄					
Time of Sampling			1:30 pm		2:30 pm	3:00 pm	
Air Temperature			1°C		1°C	1°C	
Water Temperature			4°C		4°C	4°C	
Rate of Flow			tap		surface	surface	
Ice Thickness			—		—	—	
Depth of Sampling			tap		surface	surface	
pH			—		—	—	
Conductivity			—		—	—	
Dissolved Oxygen			—		—	—	

Note from Bocti Dept: TC's and FC's indicate # 910
 and # 911 could be switched L.A.

SNP station # 570-4 = influent to Clearing Lake sewage lagoon.