



Indian and
Northern Affairs

Affaires indiennes
et du Nord

Northern Affairs Program
P.O. Box 100
Igloolik, N.W.T.
XOA OHO

March 21, 1989

Mr. Marcel Manson
Senior Administrative Officer
Hamlet of Igloolik
Igloolik, N.W.T.
XOA OLO

Your file Votre référence

Our file Notre référence



~~B9545-5-A11~~

M-9545-N4L4-0571
(Unlicensed)

Dear Mr. Manson;

Re: Water Quality Sample Results
Inspection Report - Hamlet of Igloolik, N.W.T.

Enclosed please find a copy of the results of the water quality samples collected while in Igloolik.

The sample results are within the Guidelines established for Canadian Drinking Water Quality.

If you have any questions or comments, please feel free and call, Mr. David Jessiman, Water Resources Officer, at (819) 979-4405.

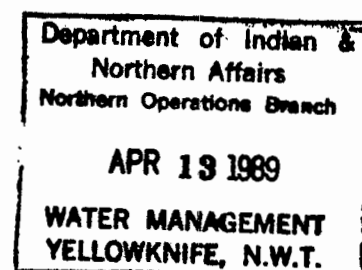
Sincerely,

J.M.A. Theriault
District Manager
Baffin District

cc. Water Resources, YK
GNWT - DPW - S. Kennedy
GNWT - MACA - M. Ferris
BRHB - L. Wilson

encls/1

Insp
0571
/W
WB
MACA



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

RESULTS OF LABORATORY ANALYSIS

LICENSEE/ PROJECT <i>Hamlet of Igloodik</i>	LICENCE NUMBER <i>N464-0571</i> <i>(Application)</i>	LOCATION <i>Igloodik, N.W.T.</i>	
DATE SAMPLED <i>July 5, 1988</i>	DATE RECEIVED <i>July 13/88</i>	DATE COMPLETED <i>Aug. 18/88</i>	

STATION NUMBER	<i>0571-01</i>	<i>0571-02</i>	<i>0571-03</i>	<i>0571-04</i>		
LABORATORY NUMBER	<i>880655</i>	<i>880656</i>	<i>880657</i>	<i>880658</i>		
ANALYSIS REQUIRED	☒	☒	☒	☒	☒	☒
pH (units)	<i>✓ 8.0</i>	<i>✓ 6.6</i>	<i>✓ 7.8</i>	<i>✓ 7.1</i>		
Conductivity (umho/cm)	<i>✓ 690</i>	<i>✓ 55</i>	<i>✓ 1090</i>	<i>✓ 121</i>		
Dissolved Oxygen						
Turbidity (NTU)	<i>✓ 5.6</i>	<i>✓ .2</i>	<i>✓ .5</i>	<i>✓ .3</i>		
Colour (colour U.)	<i>✓ 5</i>	<i>✓ 15</i>	<i>✓ 40</i>	<i>✓ 5</i>		
Suspended Solids	<i>✓ 9</i>	<i>✓ 12</i>	<i>✓ 3</i>	<i>✓ 12</i>		
TDS, Residue	<i>✓ 391</i>	<i>✓ 30</i>	<i>✓ 702</i>	<i>✓ 60</i>		
Calcium	<i>✓ 53</i>	<i>✓ 5.2</i>	<i>✓ 64</i>	<i>✓ 13</i>		
Magnesium	<i>✓ 14</i>	<i>✓ 1.4</i>	<i>✓ 34</i>	<i>✓ 4.4</i>		
Tot. Hardness (CaCO ₃)	<i>✓ 190</i>	<i>✓ 19</i>	<i>✓ 300</i>	<i>✓ 50</i>		
Tot. Alkalinity (CaCO ₃)	<i>✓ 172</i>	<i>✓ 16</i>	<i>✓ 143</i>	<i>✓ 43</i>		
Sodium	<i>✓ 59</i>	<i>✓ 2.8</i>	<i>✓ 90</i>	<i>✓ 3.9</i>		
Potassium	<i>✓ 7.1</i>	<i>✓ 0.4</i>	<i>✓ 21</i>	<i>✓ 0.5</i>		
Chloride	<i>✓ 97</i>	<i>✓ 5.0</i>	<i>✓ 129</i>	<i>✓ 7.7</i>		
Sulphate	<i>✓ 27</i>	<i>✓ 2.0</i>	<i>✓ 190</i>	<i>✓ 3.9</i>		
Total Coliform (count/100)						
Fecal Coli. (100 ml)						
Fecal Strep. (ml)						
Std. Plate Cnt (cnt/ml)						
BOD ₅						
COD						
Carbon, IC						
Carbon, TOC						
Ammonia Nitrogen (as N)						
Nitrate + Nitrite (as N)						
Total Kjeldahl N						
Phosphorus O-P (as P)						
Phosphorus Tot (P)						
Silica Reac. (as SiO ₂)						
Total Cyanide						
Available Cyanide						
Sulphide						
Oil & Grease	<i>Extant</i>	<i>Extant</i>	<i>Extant</i>	<i>Extant</i>		
Phenols	<i>WQS</i>	<i>WQS</i>	<i>WQS</i>	<i>WQS</i>		
	<i>5740</i>	<i>5741</i>	<i>5742</i>	<i>5743</i>		
Arsenic	T (ug/L) <i>✓ L1</i>	T (ug/L) <i>✓ L1</i>	T (ug/L) <i>✓ L1</i>	T (ug/L) <i>✓ L1</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Cadmium	T (ug/L) <i>✓ 10.5</i>	T (ug/L) <i>✓ 10.5</i>	T (ug/L) <i>✓ 10.5</i>	T (ug/L) <i>✓ 10.5</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Copper	T (ug/L) <i>✓ 2.</i>	T (ug/L) <i>✓ L1.</i>	T (ug/L) <i>✓ 2.</i>	T (ug/L) <i>✓ L1.</i>		
	D (ug/L)	<i>X</i>	D (ug/L)	D (ug/L)		
Iron	T (ug/L) <i>✓ 190</i>	T (ug/L) <i>✓ 21</i>	T (ug/L) <i>✓ 133</i>	T (ug/L) <i>✓ 28</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Lead	T (ug/L) <i>✓ 1.</i>	T (ug/L) <i>✓ L1</i>	T (ug/L) <i>✓ L1</i>	T (ug/L) <i>✓ L1</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Mercury	T (ug/L) <i>✓ X</i>	T (ug/L) <i>✓ X</i>	T (ug/L) <i>✓ X</i>	T (ug/L) <i>✓ X</i>	<i>MERCURY NOT PRESERVED!</i>	
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Nickel	T (ug/L) <i>✓ 3.</i>	T (ug/L) <i>✓ 3.</i>	T (ug/L) <i>✓ 4.</i>	T (ug/L) <i>✓ 2.</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Zinc	T (ug/L) <i>✓ 23</i>	T (ug/L) <i>✓ 26</i>	T (ug/L) <i>✓ 7.</i>	T (ug/L) <i>✓ L1.</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		
Chromium	T (ug/L) <i>✓ L1.</i>	T (ug/L) <i>✓ L1.</i>	T (ug/L) <i>✓ L1.</i>	T (ug/L) <i>✓ L1.</i>		
	D (ug/L)	D (ug/L)	D (ug/L)	D (ug/L)		

Results are expressed in ug/L, except as indicated. T and D refer to

FIELD SAMPLING AND DATA

LICENSEE/PROJECT <u>Hamlet of Igoolik</u>	LICENCE NO. <u>N444-0571(Applic)</u>	LOCATION <u>Igoolik, A. U.T.</u>
DATE SAMPLED <u>July 05, 1988</u>	SAMPLED BY <u>Jessiman</u>	

ANALYSIS	SAMPLE VOLUME	PRESERVATIVE	STATION NUMBER					
			0571 01	0571 02	0571 03	0571 04		
			BOTTLE NUMBER					
MISC. & ARSENIC	1 LITRE	NONE	0571 01	0571 02	0571 03	0571 04		
HEAVY METALS	500 ML 2-125ml	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 ₂ Cr ₂ O ₇	((	((	((	((		
NUTRIENTS	250 ML	NONE	((	((	((	((		
BACTERIA	500 ML	NONE						
OIL AND GREASE	1 LITRE (GLASS)	4 ML 1:1 H ₂ SO ₄						
Time of Sampling			10:50	11:15	13:30	14:08		
Air Temperature			6°C	6°C	6°C	6°C		
Water Temperature			3°C	3°C	3°C	3°C		
Rate of Flow			N/A	N/A	12/min	N/A		
Ice Thickness			N/A	1m	N/A	1m		
Depth of Sampling			hose	surface	surface	surface		
pH								
Conductivity								
Dissolved Oxygen								

0571 - 01 - Reservoir (Pumphouse)

0571 - 02 - South Lake (4m from shoreline on rise)

0571 - 03 - Dump Drainage (40m from Dump)

0571 - 04 - East Lake

* Note - Not Preservativied - Please Do.

MISC. & ARSENIC	1 LITRE	NONE ✓				"	"	
HEAVY METALS	250 500 ML	3.5 ML 3:1 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 ₂ Cr ₂ O ₇				"	"	
NUTRIENTS	250 ML	NONE ✓				"	"	
BACTERIA	500 ML	✓ NONE						
OIL AND GREASE	1 LITRE (GLASS)	4 ML 1:1 H ₂ SO ₄						

Time of Sampling		11:00		10:15	10:25
Air Temperature		9°C -		→	→
Water Temperature		-		-	-
Rate of Flow		-		~200/min.	-
Ice Thickness		-		-	-
Depth of Sampling		Surface		Surface	Surface
pH		-		-	-
Conductivity		-		-	-
Dissolved Oxygen		-		-	-

0571-02 South Lake (Raw water)

- Water used to fill reservoir which is being enlarged. Operational in August.

All samples preserved @ 12:00 this date

0571-05 Sewage effluent

0571-06 North Lake - raw water

Current water supply (since April)

Dissolved Oxygen		✓	0.42.	Aug 6/92 ML	✓	107.5	✓	1.4	Aug 13/92
Turbidity (NTU)		✓	5	Aug 6/92 ML	✓	380	✓	L5	Aug 13/92
Colour (colour U.)		✓	L3	Aug 7/92 ML	✓	43.148	✓	L3	Aug 17/92
Suspended Solids		✓	167	Aug 7/92 ML	✓	307.240	✓	92	Aug 17/92
TDS, Residue		✓	28.6				✓	19.1	
Calcium		✓	8.6				✓	8.5	
Magnesium		✓	107				✓	83	
Tot. Hardness (CaCO ₃)		✓	88				✓	73	Aug 4/92
Tot. Alkalinity (CaCO ₃)		✓	21.9				✓	13.1	Aug 4/92
Sodium		✓	1.4				✓	1.1	Aug 4/92
Potassium		✓	36.8				✓	19.4	Aug 15/92
Chloride		✓	10				✓	6	Aug 15/92
Sulphate									
Total Coliform (count)									
Fecal Coli. (100)									
Fecal Strep. (ml)									
Std. Plate Cnt. (cnt/ml)									
BOD ₅									
COD									
Carbon, IC									
Carbon, TOC									
Ammonia Nitrogen (as N)		✓	L0.01				✓	L0.01	Aug 6/92
Nitrate + Nitrite (N)									
Total Kjeldahl N									
Phosphorus O-P (as P)		✓	0.005				✓	0.004	Aug 7/92
Phosphorus Tot (P)									
Silica Reac. (as SiO ₂)		✓	0.014				✓	0.025	Aug 7/92
Total Cyanide									
Available Cyanide (WAD)									
Sulphide									
Oil & Grease									
Phenols									
Arsenic	T (µg/L)	✓	L0.5			✓	2.2	✓	L0.5 Aug 12/92
	D (µg/L)								
Cadmium	T (µg/L)	✓	0.2			✓	3.0	✓	0.2 Aug 21/92
	D (µg/L)								
Copper	T (µg/L)	✓	2			✓	110.	✓	2 "
	D (µg/L)								
Iron	T (µg/L)	✓	42			✓	1960	✓	39 "
	D (µg/L)								
Lead	T (µg/L)	✓	1			✓	8	✓	L1 "
	D (µg/L)								
Mercury	T (µg/L)	✓	0.04					✓	L0.02 WE
	D (µg/L)								
Nickel	T (µg/L)	✓	L1			✓	25	✓	L1 Aug 21/92
	D (µg/L)								
Zinc	T (µg/L)	✓	L1			✓	169	✓	2 "
	D (µg/L)								
Chromium	T (µg/L)	✓	1			✓	5	✓	2 "
	D (µg/L)								

Results are expressed in µg/L, except as indicated. T and D refer to Total & Dissolved Metals