

TO: A. Theriault
District Manager
Forbisher Bay District
Northern Affairs Program

FROM: Rodney Lemon
DE: A/Regional Municipal Coordinator
Inland Waters Section, Water Resources Division
Northern Affairs Program

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OUR FILE - N / RÉFÉRENCE N5L4-0087; N5L4-1441; N5L4-0158; N5L4-1447; N4A4-0427; N4A4-0110
YOUR FILE - V / RÉFÉRENCE
DATE October 18, 1984

SUBJECT: Water Quality - Municipalities
OBJET: Forbisher Bay District

Cape Dorset

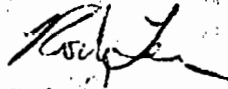
As per your memo to R. H. Kury dated September 26, 1984 the following analytical results have been reviewed.

1. Cape Dorset - Lab. No. 41500 - all the parameters are well below the Canadian Drinking Water Quality Standards except for pH, however the low pH is of little concern and is probable an analytical error.
2. Arctic Bay - Lab. No. 41422 - iron, and chromium are the only parameters above the objective concentration, however they are still below the maximum acceptable concentration.
3. Arctic Bay - Lab. No. 41308 - iron and chromium are the only parameters above the objective concentration, however they are still below the maximum acceptable concentration.
4. M.O.T. Resolute Bay - Lab. No. 41310 - all the parameters are below the objective concentration.
5. Nanisivik (Town) - Lab. No. 41421 - iron and mercury are the only parameters above the objective concentration, however they are below the maximum acceptable concentration.
6. Frobisher Bay - Lab. No. 41499 - all the parameters are below the objective concentration.
7. Lake Harbour - Lab. No. 41496 - mercury and chromium are the only parameters above the objective concentration, however they are still below the maximum acceptable concentration.
8. Lake Harbour - Lab. No. 41497 - mercury is the only parameter above the maximum acceptable concentration and objective concentration. Samples should be redone to insure the sample bottles weren't contaminated.

.../p.2

9. Lake Harbour - Lab. No. 41498 - all the parameters are below the objective concentration.
10. Pangnirtung - Lab. No. 41388 - mercury is the only parameter over the maximum acceptable concentration and the objective concentration. Samples should be redone to ensure the sample bottles weren't contaminated.
11. Resolute Bay (Village) - Lab. No. 41309 - all the parameters are below the objective concentration.

If you have any question regarding my comments please feel free to call me. Also for your information I am enclosing a copy of recommended limits for drinking water.



Rodney Lemon
A/Regional Municipal Coordinator
Inland Waters Section

LEMON/jn

Encl.

Table A4
SUMMARY OF RECOMMENDED LIMITS

Parameter	Maximum Acceptable Concentration*	Objective Concentration*	Basis**	Page
Aldrin + Dieldrin	0.0007	$\leq 5 \times 10^{-4}$	H	50
Antimony	—	≤ 0.0002	H	41
Arsenic	0.05	≤ 0.005	H	41
Asbestos	—	—	—	41
Barium	1.0	≤ 0.1	H	42
Boron	5.0	≤ 0.01	H	42
Cadmium	0.005	≤ 0.001	H	42
Carbaryl	0.07	$\leq 5 \times 10^{-4}$	H	50
Chlordane (Total)	0.007	$\leq 5 \times 10^{-4}$	H	50
Chloride	250	< 250	A	54
Chromium	0.05	≤ 0.0002	H	43
Colour (TCU)	15	< 15	A	21
Copper	1.0	< 1.0	A	54
Cyanide	0.2	≤ 0.002	H	43
DDT (Total)	0.03	$\leq 5 \times 10^{-4}$	H	50
Diazinon	0.014	$\leq 1 \times 10^{-4}$	H	50
Dieldrin + Aldrin	0.0007	$\leq 5 \times 10^{-4}$	H	50
Endrin	0.0002	$\leq 5 \times 10^{-4}$	H	50
Fluoride	1.5	1.0***	H & A	36
Hardness	—	—	—	57
Heptachlor + Heptachlor Epoxide	0.003	$\leq 5 \times 10^{-4}$	H	50
Iron	0.3	≤ 0.05	A	54
Lead	0.05	≤ 0.001	H	43
Lindane	0.004	$\leq 1 \times 10^{-4}$	H	50
Manganese	0.05	≤ 0.01	A	55
Mercury	0.001	≤ 0.0002	H	44
Methoxychlor	0.1	$\leq 5 \times 10^{-4}$	H	50
Methyl Parathion	0.007	$\leq 1 \times 10^{-4}$	H	50
Nitrate (as N)	10.0	≤ 0.001	H	44
Nitrotriacetic Acid (NTA)	0.05	≤ 0.0002	H	49
Nitrite (as N)	1.0	≤ 0.001	H	45
Odour	—	Inoffensive	A	22
Parathion	0.035	$\leq 1 \times 10^{-4}$	H	50
Pesticides (Total)****	0.1	—	H	49
pH	6.5 - 8.5	—	A	22
Phenols	0.002	< 0.002	A	55
Selenium	0.01	≤ 0.002	H	45
Silver	0.05	≤ 0.005	H	46
Sodium	—	—	—	46
Sulphate	500	< 150	H & A	46
Sulphide (as H_2S)	0.05	< 0.05	A	55
Taste	—	Inoffensive	A	22

Parameter	Maximum Acceptable Concentration*	Objective Concentration*	Basis**	Page
Temperature (°C)	15	<15	A	23
Total Dissolved Solids	500	—	A	57
Total Organic Carbon	—	—	—	58
Toxaphene	0.005	$\leq 5 \times 10^{-3}$	A	50
Trihalomethanes	0.35	≤ 0.0005	H	52
Turbidity (NTU)	5	<1	H & A	23
Uranium	0.02	≤ 0.001	H	47
Zinc	5.0	≤ 5.0	A	56
2, 4-D	0.1	≤ 0.001	H	50
2, 4, 5-TP	0.01	≤ 0.001	H	50

* Unless indicated otherwise, the maximum acceptable and objective concentrations are specified in mg/L.

** Maximum acceptable and objective concentrations have been established on the basis of either aesthetic (A) or health (H) considerations.

*** In areas where the annual mean maximum temperature is below 10°C, the objective is 1.2 mg/L.

**** The "total pesticides" limit applies to water in which more than one of the pesticides listed in this Table is present, in which case, the sum of their concentrations should not exceed 0.1 mg/L.

581607 VIA DEX

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED
DATE 01-11-84 BY 1044

SEP 26 10 44 '84

Northern Affairs Program
P.O. Box 100
Frobisher Bay, N.W.T.
XOA QHQ

Date: Sept 26/84

File Nbr. various

To: R. Kury
Water Res.

~~Arctic Bay~~
Arctic Bay
0427
0158
1441
1447
0110

Comments:

your action
Thanks

0262
0159
BK
LC
RL
file

Number of pages to follow:

2 Short
_____ Long

From: A. Thesault
Frobisher Bay



Government
of Canada

(Gouvernement
du Canada)

MEMORANDUM

NOTE DE SERVICE

TO
A

R. Kury
Water Management
Yellowknife

1/2

FROM
DC

J.M.A. Theriault
District Manager
Baffin

SECURITY - CLASSIFICATION - DE SÉCURITÉ
OWN FILE / NOTRE RÉFÉRENCE
as listed below
YOUR FILE / NOTRE RÉFÉRENCE
DATE
September 26, 1984

SUBJECT
OBJET

Review of Sampling Results

1. As discussed with you over the phone would you please have the appropriate specialist in your organization review the results of the sampling relevant to the locations noted below and advise me of any special concerns they may identify.
2. As you are aware, our DWRO is away on Educational Leave for the next few months hence my relying on your good services for assistance and info.
3. On receipt of your review we shall provide the communities and / or industrial operators with copy of analysis report in the usual manner.

Thank you.


J.M.A. Theriault

(see attached)

-12

Municipal

Cape Dorset - Sampled 24 Aug. 84 - Lab Number 41500
Arctic Bay - Sampled 16 July 84 - Lab Number 41422
- " 30 July 84 - " 41308
HOT Resolute Bay - " 1 Aug. 84 - " 41310
Nanisivik (Town) - " 15 July 84 - " 41421
Frobisher Bay - " 28 Aug. 84 - " 41499
Lake Harbour - " 28 Aug. 84 - " 41496
- " " - " 41497
- " " - " 41498
Pangnirtung - " 8 Aug. 84 - " 41388
- " " - " 41389
Resolute Bay (Village) - " 1 Aug. 84 - " 41309

Industrial

Cominco Polariss - Sampled 2 Aug. 84 - Lab Numbers 41311 / 41312

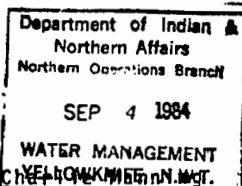
Cominco Polariss - Sampled 2/3 Aug. 84 - Lab Numbers
41313 / 41314 / 41315 / 41316 / 41317

Nanisivik - Sampled 13 - 15 July 84 - Lab Numbers
41391 / 41392 / 41393 / 41394 / 41395 / 41396
41403 / 41404 / 41405 / 41406 / 41407 / 41408
- Sampled 15 - 16 July 84 - Lab Numbers
41397 / 41398 / 41399 / 41400 / 41401 / 41402
41409 / 41410 / 41411 / 41412 / 41413 / 41414
41415 / 41416 / 41417 / 41418 / 41419 / 41420



Indian and
Northern Affairs

Affaires
et du Nord



Mr. CHARLIE MANNING, N.W.T.
Secretary Manager
Cape Dorset, N.W.T.

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

August 30, 1984

Your file Your reference

Our file Your reference B9546-11

Dear Charlie;

Re: Results of Laboratory Analysis of Cape Dorset
Water Supply - March 16, 1984

Attached is a copy of the above noted results. Samples were taken from the truck fill point on March 16, 1984. Based on the parameters measured, the water quality is of acceptable quality. I overlooked sending these results to you earlier and I apologize for this.

I'm sorry that we missed each other when I was in Cape Dorset on August 24, 1984. Although we didn't have a meeting I did take water samples from Tee Lake and the old Water lake. I did note as you had mentioned earlier there is discarded material in the old lake. When the analytical results become available I will forward them to you.

If you have any questions or comments please contact me at 979-6369.

Yours truly

Peter Bannon
Water Resources officer
Baffin District

cc. ~~Mr. Lannon~~
T. Smyth
G. Korzeniecki

Cape Dorset
BK
RL
file

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

LICENSEE/PROJECT HAMLET OF CAPE DORSET		LICENCE NUMBER N/A		LOCATION Cape Dorset	
DATE SAMPLED Aug 24/84		DATE RECEIVED Aug 28.84		DATE COMPLETED SEPT. 14/84	
STATION NUMBER	CD 1	CD-3			
LABORATORY NUMBER	41500	41501			
ANALYSIS REQUIRED	✓	✓	✓	✓	✓
pH (units)	✓ 5.7	✓ 7.2			
Conductivity (µmho/cm)	✓ 37	✓ 54			
Dissolved Oxygen					
Turbidity (NTU)	✓ 3.5	✓ 4.1			
Colour (colour U.)	✓ 5	✓ 5			
Suspended Solids	✓ 15	✓ 15			
TDS, Residue	✓ 15	✓ 6			
Calcium	✓ 2.8	✓ 5.1			
Magnesium	✓ 0.7	✓ 1.1			
Tot. Hardness (CaCO ₃)	✓ 9.9	✓ 17.1			
Tot. Alkalinity (CaCO ₃)	✓ 5.0	✓ 13			
Sodium	✓ 3.6	✓ 3.3			
Potassium	✓ 0.5	✓ 0.5			
Chloride	✓ 5.7	✓ 4.2			
Sulphate	✓ 1.9	✓ 4.6			
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)					
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					
Phenols					
Arsenic	T (µg/L) ✓ <1.0	✓ <1.0			
	D (µg/L)				
Cadmium	T (µg/L) ✓ 0.1	✓ 0.1			
	D (µg/L)				
Copper	T (µg/L) ✓ 1.1	✓ 1.3			
	D (µg/L)				
Iron	T (µg/L) ✓ 2.0	✓ 17			
	D (µg/L)				
Lead	T (µg/L) ✓ 0.3	✓ 0.9			
	D (µg/L)				
Mercury	T (µg/L) ✓ 0.05	✓ 0.11			
	D (µg/L)				
Nickel	T (µg/L) ✓ <1.0	✓ <1.0			
	D (µg/L)				
Zinc	T (µg/L) ✓ <10	✓ <10			
	D (µg/L)				
Chromium	T (µg/L) ✓ 2.2	✓ 0.6			
	D (µg/L)				
Mn	T	✓ 0.7	✓ 2.9		

*Recorded
4/21/85
JLM*

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

FIELD SAMPLING AND DATA

C.D.3 - Old water lake