



## Indian and Northern Affairs Canada – BC Region

Assessment Studies of Water and  
Wastewater Systems and Associated Water  
Management Practices at First Nation  
Communities

First Nation Community of Boston Bar

Prepared by:

Stantec Consulting Ltd.  
1007 – 7445 – 132<sup>ND</sup> Street  
Surrey, BC Canada V3W 1J8

Phone: (604) 597-0422

December 19, 2001  
1-17-40300

Section 1

Appendix B

2.1  
Tuckwighum IR#1 /  
Kopchichin IR#2

2.2  
Kopchichin IR#2

ASL  
EAR

# ASL

## CHEMICAL ANALYSIS REPORT

Date: Mar. 01, 1992  
ASL File No. 1562C  
Report On: Water Analysis  
Report To: Sto:Lo Nation (Nairne & Assoc.)  
P.O. Box 280  
13 - 7201 Vedder Road  
Sardis, BC  
V2R 1A6  
Attention: Ms. Ina Hanson  
cc -David Nairne & Associates Ltd.  
Att'n: Tricia Cook  
-DIAND Technical Services  
✓Att'n: Mr. Ron Green  
Date Received: Feb. 12, 1992


### METHODOLOGY

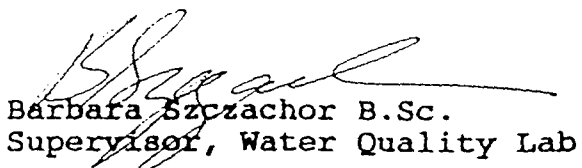
These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 17th Ed. published by the American Public Health Association, 1989. Further details are available on request.

### COMMENTS

The water as represented by the samples submitted can be characterized as moderate to moderately low with respect to dissolved mineralization. The water samples met the Canadian and British Columbia drinking water guidelines for all parameters analysed.

ASL ANALYTICAL SERVICE LABORATORIES LTD.

  
Brent A. Makelki B.Sc.  
Project Chemist

  
Barbara Szczachor B.Sc.  
Supervisor, Water Quality Lab

## DRINKING WATER PACKAGE

Physical Parameters		Drinking *1 Water Guidelines
<b>Physical Tests</b>		
Colour	(CU)	15.(A)
Conductivity	(µmhos/cm)	-
Dissolved Solids	(mg/L)	500.(A)
Total Hardness	(mg/L)	-*2 (A)
pH		6.5-8.5 (A)
Suspended Solids	(mg/L)	-
Turbidity	(NTU)	5. (A)
<b>Dissolved Anions (mg/L)</b>		
Alkalinity	CaCO <sub>3</sub>	-
Chloride	Cl	250. (A)
Fluoride	F	1.5 (H&A)
Silicate	SiO <sub>2</sub>	-
Sulfate	SO <sub>4</sub>	500. (H&A)
Nitrate + Nitrite	N	10.0 (H)
<b>Bacteriological Tests</b>		
Coliform Bacteria - Fecal		- *5 (H)
Coliform Bacteria - Total		- *4 (H)
<b>Metals (mg/L)</b>		
Arsenic	As	0.05 (H)
Barium	Ba	1.0 (H)
Cadmium	Cd	0.005 (H)
Calcium	Ca	-
Chromium	Cr	0.05 (H)
Copper	Cu	1.0 (H)
Iron	Fe	0.30 (A)
Lead	Pb	0.01 (H)
Magnesium	Mg	-
Manganese	Mn	0.05 (A)
Potassium	K	-
Sodium	Na	- *3
Zinc	Zn	5.0 (A)

< = Less than      A = Aesthetic reasons      H = Health Considerations  
 Results expressed as milligrams per litre except for pH, Conductivity (µmhos/cm), Colour (CU), Turbidity (NTU) and Coliform Bacteria (colonies/100 ml)

- \*1 "Maximum acceptable concentration" as published by Health & Welfare Canada, 1989
- \*2 Maximum level not established - water supplies with a hardness exceeding 200 mg/L are considered poor but will be tolerated.
- \*3 Maximum level not established - of concern to consumers with sodium restricted diet. Levels exceeding 20 mg/L may be of concern in this circumstance.
- \*4&\*5 No coliform bacteria should be detected, for more information please contact the lab



RESULTS OF ANALYSIS - Water

File No. D9454

	Raw #1	Raw #2	Treated
	94 05 17 16:30	94 05 17 16:30	94 05 17
<hr/>			
<u>Physical Tests</u>			
Colour CU	-	8	-
Total Dissolved Solids	-	43.0	292
Turbidity NTU	-	2.10	-
<u>Dissolved Anions</u>			
Chloride Cl	-	0.5	98.4
<u>Bacteriological Tests</u>			
Coliform Bacteria - Fecal	2	-	-
Coliform Bacteria - Total	2	-	-
<u>Dissolved Metals</u>			
Sodium D-Na	-	1.61	64.1

Results are expressed as milligrams per litre except for Colour (CU), Turbidity (NTU), and Coliform Bacteria (MPN/100 ml).



## **Appendix 2 - METHODOLOGY**

File No. D9454

Samples were analyzed by methods acceptable to the appropriate regulatory agency. Outlines of the methodologies utilized are as follows:

### **Conventional Parameters in Water**

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Ed. published by the American Public Health Association, 1992. Further details are available on request.

### **Metals in Water**

These analyses are carried out in accordance with procedures described in "Standard Methods for the Examination of Water and Wastewater" 18th Edition published by the American Public Health Association, 1992. The procedures involve a variety of instrumental analyses including atomic emission spectrophotometry (ICP) and atomic absorption spectrophotometry (AA) to obtain the required detection limit for each element. Specific details are available on request.

**End of Report**



RESULTS OF ANALYSIS

File No. D7665

Boston  
Bar Mx.  
System  
94 02 28

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Dissolved Metals  
Sodium D-Na

13000

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Result is expressed as milligrams per litre.



Health  
Canada

Santé  
Canada

# Fax

RECEIVED

NOV 09 2001

STANTEC CONSULTING  
LTD. Your file Voire référence  
Our file Notre référence  
SURREY, BC

Name: Nathalie Lapierre

Organization:

Fax: 604 666 5159

Phone:

From: Kerrilyn Street, Environmental Health Officer

Date: Sept 4 / 01.

Pages: 35 (incl. cover)

Subject: Boston Bar Water Results

**Comments:**

Hi Nathalie,

Here are copies of the Boston Bar  
Water Reports from Feb 99 - Aug / 01.

Sorry, I didn't have time to summarize  
the results for you. Hope this helps in  
the mean time.

Kerrilyn

From the desk of:

Kerrilyn Street, EHO  
Health Canada  
Environmental Health Services  
45860 Cheam Ave  
Chilliwack, BC V2P 1N6  
Ph: 604-792-9562 Fax: 604-792-8273  
003535

**Page(s) 003536 to\à 003539**

**Is(are) under consultation**

Environmental Health Services  
 Health Canada  
 45860 Cheam Avenue  
 Chilliwack, BC, V2P 1N6

April 25, 2000

Boston Bar First Nation  
 S.S. 1, Green Ranch Road  
 Boston Bar, BC, V0K 1C0

151-5-7 IR 22

Attention: Chief and Councillors

**Re: Bacteriological Water sample Results**

The following water sample was submitted by Ms. Josie Froste, Community Health Representative:

Date	Location Sampled	Total Coliform	Faecal Coliform
12 April 2000	Band Office, CWS	1	Satisfactory

CWS = community water system

This sample is considered "Doubtful" for total coliform. Please have the system re-sampled to confirm the results. If you have any questions concerning this report, please contact our office at (604) 792-9562 in Chilliwack.

Yours truly,

K. Henry  
 Environmental Health Officer

cc: CHR Josie Froste

Lytton HC

**Page(s) 003541 to\à 003542**

**Is(are) under consultation**

037 047 2001 10:10

disinfecting with a bleach and water solution.

The water samples from the North Bend CWS, however, resulted with total coliform organisms in all the samples collected and do not meet the Guidelines for Canadian Drinking Water Quality. Fortunately there was no fecal contamination. I understand the water source for the North Bend CWS is from the Kopchichin Creek. The raw water supply (creek) is open to contamination such as leaves, insects, decaying matter, animals, etc. therefore it is not unusual to have total coliform count present in the raw water. However to have total coliforms present in 100 percent of the samples collected from the North Bend CWS, is unacceptable. Furthermore, given that the turbidity reading of the raw water was extremely high (as indicated in the treatment plant), and the chlorinator not operational at the time of inspection it is not surprising to have total coliforms present.

Until the new water treatment plant is commissioned, and consecutive water sample results indicate the absence of total and fecal coliform bacteria, please advise all the users of the North Bend CWS, in particularly, the elderly, the very young, and those with immunocompromised immune systems to boil their water for:

- drinking,
- cooking (if cooking temperatures are not reached),
- making ice,
- mixing cold juices and other cold beverages,
- mixing baby formula,
- washing fruits and vegetables that will be eaten raw, and
- washing dishes

Alternatively, the dishes can be disinfected by immersing the dishes in a bleach and water solution (1 capful of household bleach/gallon of water). The Boston Bar Water Technician, Rod Andrew, should continue to monitor the water by collecting regular samples from each water system. If you have any questions, or concerns regarding this report, please do not hesitate to contact this office at (604) 792-6258.

Sincerely,



Vivian Lee  
Environmental Health Officer

cc. : PWGSC (Natalie Lapierre)  
: Health Canada (Dennis Wahoski, Sr. EHO)  
: Nlaka'pamux Nation Tribal Council (Jose Froste, CHR)

**Page(s) 003544 to\à 003548**

**Is(are) under consultation**

Centre for  
Disease Control  
Society

BCCDC LABORATORY SERVICES  
655 12th Avenue West  
Vancouver, B.C. V5Z 1R4

Fax: (604)660-6073

ENVIRONMENTAL  
BACTERIOLOGY

Phone Number :

Printed : 2001 AUG 21

Requisition : A1WW027793

Submitter Ref :

HEALTH CANADA (CHILLIWACK) - 995  
45860 CHEAM AVE  
CHILLIWACK BC V2P 1N6

Specimen Submitter

s.19(1)

:995-HEALTH CANADA (CHILLIWACK) \*

Site Information

Code/Name : 02P9464 - 02P9464

Site Desc : BOSTON BAR FN, ( ) KT, ANDERSON CWS

City/Area : Type : COM.W.S.

Source : Well

Specimen

Treatment : UNTREATED

Ph Level : Free Chlorine Level: ppm

Nature : WATER

Exams Req : Total Coliform

NO : K. STREET

: Fecal Coliform

Collected : 2001 AUG 16

Received : 2001 AUG 17

RESULTS

Reported on 2001 AUG 21

<u>Test</u>	<u>Result</u>	<u>Units</u>
1. Total Coliform (Membrane Filtration)	L1	TC Count/100ml
2. Fecal Coliform (Membrane Filtration)	L1	FC Count/100ml
L: LESS THAN		

For inquiries from medical personnel regarding laboratory results,  
please contact the Central Inquiry Line at 604-660-5100.

Specimen was 24 hours in transit

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Centre for  
Disease Control  
and Prevention

BCCDC LABORATORY SERVICES  
655 12th Avenue West  
Vancouver, B.C. V5Z 4R4

Fax: (604) 660-6073

ENVIRONMENTAL  
BACTERIOLOGY

Phone Number :

Printed : 2001 AUG 21

Requisition : A1WW027797  
Submitter Ref :

HEALTH CANADA (CHILLIWACK) - 995  
45860 CHEAM AVE  
CHILLIWACK BC V2P 1N6

Specimen Submitter

: 995-HEALTH CANADA (CHILLIWACK) \*

s.19(1)

Additional Information

Site/Name : 02P9492 - 02P9492  
Site Desc : BOSTON BAR FN, [REDACTED] KT, NBCWS  
City/Area : Type : COM.W.S.  
Source : River

Specimen  
Treatment : TREATED Ph Level : Free Chlorine Level : ppm  
Matrix : WATER Exams Req : Total Coliform  
[REDACTED] STREET : Fecal Coliform

Collected : 2001 AUG 16  
Received : 2001 AUG 17

ULTI  
Reported on : 2001 AUG 21

Test	Result	Units
Total Coliform (Membrane Filtration)	L1	TC Count/100ml
Fecal Coliform (Membrane Filtration)	L1	FC Count/100ml
LESS THAN		

Inquiries from medical personnel regarding laboratory results,  
please contact the Central Inquiry Line at 604-660-5100.

Specimen was 24 hours in transit

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Centre for  
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Society

BCCDC LABORATORY SERVICES  
655 12th Avenue West  
Vancouver, B.C. V5Z 4R4

Fax: (604) 681-1111

ENVIRONMENTAL  
BACTERIOLOGY

Phone Number :

Printed : 2001 AUG 21

HEALTH CANADA (CHILLIWACK) - 995  
45860 CHEAM AVE  
CHILLIWACK BC V2P 1N6

Requisition : A1W4027800  
Submitter Ref :

Specimen Submitter

: 995-HEALTH CANADA (CHILLIWACK) \*

Specimen Information

Code/Name : 02P9502 - 02P9502

Spec Desc : BOSTON BAR FN, BAND OFFICE, KT, NBCWS

City/Area : Type : COM.W.S.

Source : River

Specimen

Treatment : TREATED

Ph Level : Free Chlorine Level: ppm

Nature : WATER

Exams Req : Total Coliform

Location : K. STREET

: Fecal Coliform

Collected : 2001 AUG 16

Received : 2001 AUG 17

RESULTS

Reported on 2001 AUG 21

Test	Result	Units
1. Total Coliform (Membrane Filtration)	L1	TC Count/100ml
2. Fecal Coliform (Membrane Filtration)	L1	FC Count/100ml
L: LESS THAN		

For inquiries from medical personnel regarding laboratory results,  
Please contact the Central Inquiry Line at 604-660-5100.

Specimen was 24 hours in transit

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Vancouver

BCCDC LABORATORY SERVICES  
655 12th Avenue West  
Vancouver, B.C. V5Z 4R4

Fax: (604)660-6073

ENVIRONMENTAL  
BACTERIOLOGY

Phone Number :

Printed :2001 SEP 1

Requisition :A1WW031043  
Submitter Ref :

HEALTH CANADA (CHILLIWACK) - 995  
45860 CHEAM AVE  
CHILLIWACK BC V2P 1N6

Specimen Submitter

:995-HEALTH CANADA (CHILLIWACK)\*

Site Information

Code/Name :02Q2489 - 02Q2489 s.19(1)  
Site Desc :KITCHEN TAP, BOSTON BAR  
City/Area :  
Source : Type :

Specimen

Treatment:  
Nature :WATER Ph Level: Free Chlorine Level: ppm  
Exams Req :Total Coliform  
LMO :JOSIE FROSTE :Fecal Coliform

Collected:2001 AUG 30  
Received :2001 AUG 31

RESULTS

Reported on 2001 SEP 1

Test	Result	Units
1. Total Coliform (Membrane Filtration)	1-70	TC Count/100ml
2. Fecal Coliform (Membrane Filtration)	1	FC Count/100ml
3. ** PRELIMINARY REPORT **		

For inquiries from medical personnel regarding laboratory results,  
please contact the Central Inquiry Line at 604-660-5100.

Specimen was 24 hours in transit

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