

R E P O R T

OWEEKENO FIRST NATION

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

RESULTS OF ANALYSIS - Water

File No. M7698

Sample ID		OWeek-
		end
Sample Date		Health
Sample Time		01 03 13
		14:00

Physical Tests

Colour	(CU)	<5
Conductivity	(umhos/cm)	71
Total Dissolved Solids		54
Hardness	CaCO3	22.1
pH		7.32
Turbidity	(NTU)	<0.1

Dissolved Anions

Alkalinity-Total		CaCO3	27
Chloride	Cl		1.1
Fluoride	F		0.03
Sulphate	SO4		2

Nutrients

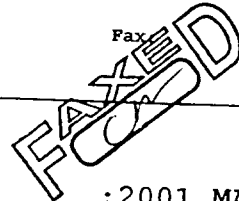
Nitrate Nitrogen		N	0.3
Nitrite Nitrogen		N	<0.1

Total Metals

Aluminum	T-Al	0.006
Arsenic	T-As	<0.0001
Barium	T-Ba	0.005
Boron	T-B	<0.05
Cadmium	T-Cd	<0.0002
Calcium	T-Ca	7.04
Chromium	T-Cr	<0.001
Copper	T-Cu	0.865
Iron	T-Fc	<0.03
Lead	T-Pb	0.001
Magnesium	T-Mg	1.09
Manganese	T-Mn	<0.001
Mercury	T-Hg	<0.00005
Potassium	T-K	0.97
Selenium	T-Se	<0.001
Sodium	T-Na	2.51
Uranium	T-U	<0.00001
Zinc	T-Zn	0.006

Remarks regarding the analyses appear at the beginning of this report.
 Results are expressed as milligrams per litre except for pH, Colour (CU),
 Conductivity (umhos/cm), and Turbidity (NTU).
 < = Less than the detection limit indicated.

DRAFT



ENVIRONMENTAL
BACTERIOLOGY
Phone Number :

Printed : 2001 MAR 17

HEALTH CANADA (CAMPBELL RIVER) - 342
OCCUPATIONAL & ENVIRONMENTAL HEALTH
1180 IRONWOOD ST SUITE 119
CAMPBELL RIVER BC V9W 5P7

Requisition : A0WW054326
Submitter Ref :

Specimen Submitter
: 342-HEALTH CANADA (CAMPBELL RI*

Site Information

Code/Name : 02N4314 - 02N4314
Site Desc : 4455, TAP, OWEEKENO CLINIC, RIVERS INLET
Type/Area : Type : COM.W.S.
Source : Well

Specimen

Treatment : UNTREATED
Culture : WATER
Ph Level : Free Chlorine Level : ppm
Exams Req : Total Coliform
NO : CAROL MACRAC : Fecal Coliform

Collected : 2001 MAR 13
Received : 2001 MAR 16

SULTS

Reported on 2001 MAR 17

Test

Test	Result	Units
1. Total Coliform (Membrane Filtration)	L1	TC Count/100ml
2. Fecal Coliform (Membrane Filtration) L: LESS THAN	L1	FC Count/100ml
3. WATER SAMPLE TESTED ALTHOUGH MORE THAN 2 DAYS IN TRANSIT. COLIFORM TEST RESULT MAY NOT BE VALID.		

DON'T WAIT FOR THESE RESULTS TO ARRIVE IN THE MAIL!
MEDINET delivers lab reports electronically throughout the province--on your computer or on your fax. It's easy, fast and convenient, at no charge to you.
Call now, at 737-1477 in Vancouver or toll free at 1-800-737-3771.

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

Specimen was 72 hours in transit

FAC

ENVIRONMENTAL
BACTERIOLOGY

Phone Number :

Printed : 2001 MAR 17

Requisition : A0WW054327

Submitter Ref :

Specimen Submitter

: 342-HEALTH CANADA (CAMPBELL RI*)

HEALTH CANADA (CAMPBELL RIVER) - 342
OCCUPATIONAL & ENVIRONMENTAL HEALTH
1180 IRONWOOD ST SUITE 119
CAMPBELL RIVER BC V9W 5P7

Site Information

Code/Name : 02N4311 - 02N4311

s.19(1)

Site Desc : 4456, KITCHEN TAP, HOUSE OF [REDACTED], RIVER INLET, OWEEKENO

City/Area :

Type : COM.W.S.

Source : Well

Specimen

Treatment : UNTREATED

Ph Level : Free

Chlorine Level : ppm

Medium : WATER

Exams Req : Total Coliform

Collector : CAROL MACRAC

Exams : Fecal Coliform

Collected : 2001 MAR 13

Received : 2001 MAR 16

SULTS

Reported on 2001 MAR 17

<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		
3. WATER SAMPLE TESTED ALTHOUGH MORE THAN 2 DAYS IN TRANSIT. COLIFORM TEST RESULT MAY NOT BE VALID.		

DON'T WAIT FOR THESE RESULTS TO ARRIVE IN THE MAIL!

MEDINET delivers lab reports electronically throughout the province--on your computer or on your fax. It's easy, fast and convenient, at no charge to you.

Call now, at 737-1477 in Vancouver or toll free at 1-800-737-3771.

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

Specimen was 72 hours in transit



ANALYTICAL SERVICES

07 May 02
Page 2 of 13

ANALYTICAL REPORT
Form 08097071

Client : HEALTH CANADA
Sampling site :
Submitted by : SANDRA GREEN

Philp ID : 12017364 12017365
Client ID : OWEEKENO GUILFORD

Spacode	Parameter	Unit	MDL	CDWG		
PHYSICAL						
00041220	pH	pH units	0.1	6.5-8.5	6.5	7.8
00021300	Color True	Col. Unit	5	15	< 5	5
00111160	Specific Conductance	uS/cm	1	---	61	2370
8CCALC	Computed Conductance	uS/cm	---	---	64	2780
CCPDALC	Conductance % Diff.	%	---	---	4.3	15.8
00081071	Residue Nonfilterable (TSS)	mg/L	4	---	< 4	< 4
007H1035	Residue Filterable 1.0u (TDS)	mg/L	10	500	44	1540
CTDSCALC	Computed TDS	mg/L	---	---	33	1280
TDSRCALC	TDS % Diff.	%	---	---	-27.7	-18.6
00151140	Turbidity	NTU	0.10	1.0	0.13	0.32
0107CALC	Hardness Total -T	mg/L	---	500	26.0	521
GENERAL INORGANICS						
01011211	Alkalinity Phen. 8.3 as CaCO3	mg/L	1	---	< 1	< 1
01021210	Alkalinity Total as CaCO3	mg/L	1	---	28	95
CO3-CALC	Carbonate as CO3=	mg/L	---	---	< 0.5	< 0.5
HCO3CALC	Bicarbonate as HCO3-	mg/L	---	---	34.1	116
OH-CALC	Hydroxide as OH-	mg/L	---	---	< 0.5	< 0.5
2105AA04	Cyanide(SAD) + Thiocyanam	mg/L	0.0005	0.2	0.0007	0.0005
0125LLHS	Sulfide Total	mg/L	0.005	0.05	< 0.005	< 0.005
ANIONS						
11041334	Chloride Dissolved	mg/L	0.5	< 250	1.1	678
11061341	Fluoride Dissolved	mg/L	0.01	1.5	0.05	0.53
IonBCALC	Ion Balance	%	---	---	1.2	1.1
AnnaCALC	Total Anions	meq/L	---	---	0.65	22.42
CatnCALC	Total Cations	meq/L	---	---	0.67	23.90
LmgCALC	Langelier Index	pH units	---	---	-2.6	0.4
pHRCALC	Saturation pH	pH units	---	---	9.1	7.4
CARBON						
01030912	Organic Carbon - Total	mg/L	0.5	---	< 0.5	0.6

Matrix : Water Water
Sampled on: 02/03/25 16:00 02/03/25 16:00

CONTINUED on page 3



ANALYTICAL SERVICES

07-May-02
Page 3 of 13

ANALYTICAL REPORT
Form 08097071

Client : HEALTH CANADA
Sampling site :
Submitted by : SANDRA GREEN

Philip ID : 12017364 12017365
Client ID : OWBEKENO GUILFORD

Spacode	Parameter	Unit	MDL	CDWC		
NITROGEN						
11081351	Ammonia Nitrogen (N)	mg/L	0.005	—	< 0.005	< 0.005
1110CALC	Nitrate Nitrogen Dissolved (N)	mg/L		10.0	0.34	0.04
11091350	Nitrate+Nitrite (N)	mg/L	0.02	10.0	0.34	0.05
11111354	Nitrite Nitrogen (N)	mg/L	0.005	1.0	< 0.005	0.006
SULFATE						
11211403	Sulfate	mg/L	0.5	< 500	1.6	66.3
METALS TOTAL						
Al-T0031	Aluminum	mg/L	0.02	—	< 0.02	< 0.02
Sb-TM811	Antimony	mg/L	0.001	—	< 0.001	< 0.001
As-TM831	Arsenic	mg/L	0.001	0.025	< 0.001	< 0.001
Ba-T0031	Barium	mg/L	0.001	1.0	0.005	< 0.001
B-T0031	Boron	mg/L	0.008	5.0	< 0.008	0.004
Cd-TMS31	Cadmium	mg/L	0.0001	0.005	< 0.0001	< 0.0001
Ca-T0031	Calcium	mg/L	0.05	—	8.22	158
Cr-T0031	Chromium	mg/L	0.005	0.05	< 0.005	< 0.005
Co-T0031	Cobalt	mg/L	0.005	—	< 0.005	< 0.005
Cu-T0031	Copper	mg/L	0.005	1.0	0.306	0.011
Fe-T0021	Iron	mg/L	0.005	0.5	< 0.005	0.058
Pb-TM331	Lead	mg/L	0.0005	0.01	0.0012	0.0017
Mg-T0031	Magnesium	mg/L	0.05	—	1.59	50.6
Mn-T0031	Manganese	mg/L	0.001	0.05	< 0.001	0.052
Hg-T0910	Mercury	mg/L	0.00005	0.001	< 0.00005	< 0.00005
Mo-T0031	Molybdenum	mg/L	0.005	—	< 0.005	0.008
Ni-T0031	Nickel	mg/L	0.008	—	< 0.008	< 0.008
K-T0031	Potassium	mg/L	1	—	< 1	3
Se-TM831	Selenium	mg/L	0.001	0.01	< 0.001	0.001
Ag-T0031	Silver	mg/L	0.01	—	< 0.01	< 0.01
Na-T0031	Sodium	mg/L	0.05	200	2.71	285
U-TLLMS	Uranium	mg/L	0.00001	0.1	< 0.00001	0.00039
V-T0031	Vanadium	mg/L	0.005	—	< 0.005	< 0.005
Zn-T0031	Zinc	mg/L	0.005	5.0	< 0.005	0.021

Matrix : Water Water
Sampled on: 02/03/25 16:00 02/03/25 16:00

CONTINUED on page 4



ANALYTICAL SERVICES

07-May-02
Page 4 of 13

ANALYTICAL REPORT
Form 08097071

Client : HEALTH CANADA
Sampling site :
Submitted by : SANDRA GREEN

Philp ID : 12017864 12017365
Client ID : OWEEKENO GUILFORD

Sparcode	Parameter	Unit	MDL	CDWC	
CHLORINATED PHENOLS					
EX9946Z7	Water Prep for CPs	date			02/04/01 02/04/01
MCP2CPWA	2-chlorophenol	mg/L	0.001	---	< 0.001 < 0.001
MCP3CPWA	3-chlorophenol	mg/L	0.001	---	< 0.001 < 0.001
MCP4CPWA	4-chlorophenol	mg/L	0.001	---	< 0.001 < 0.001
CPH1CPWA	2,3-Dichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CPH1CPWA	2,4+3,4-DiClPhenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CPH2CPWA	2,6-Dichlorophenol	ug/L	0.0001	---	< 0.0001 < 0.0001
CP09CPWA	2,6-Dichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CPH3CPWA	3,5-Dichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP03CPWA	2,3,4-Trichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP04CPWA	2,3,5-Trichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP05CPWA	2,3,6-Trichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP06CPWA	2,4,5-Trichlorophenol	ug/L	0.0001	---	< 0.0001 < 0.0001
CP07CPWA	2,4,6-Trichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP44CPWA	3,4,5-Trichlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP02CPWA	2,3,4,5-Tetrachlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
CP01CPWA	2346+2356-TeClPhenol	mg/L	0.0001	---	< 0.0001 < 0.0001
WZ2CPWA	Pentachlorophenol	mg/L	0.0001	---	< 0.0001 < 0.0001
SURROGATE RECOVERY					
DC01SURR	CL3 Phenylacetic acid	%			93 90
RR3-CPWA	Trichlorophenol	%	40	---	83 85
HERBICIDES					
EX995351	Prep for Glyphosate	date			02/03/28 02/03/28
A001P012	AMPA	mg/L	0.05	---	< 0.05 < 0.05
HYDROCARBONS					
HD99PT11	VH C6-C10	mg/L	0.1	---	< 0.1 < 0.1
EX995172	Volat. Wtd. Pro-Scr.	date			02/03/28 02/03/28
H09/CALC	VPHw	mg/L		---	< 0.1 < 0.1
POLYCYCLIC AROMATIC HYDROCARBONS					
EX9946Z4	PAH Extraction-Water	date			02/04/01 02/04/01
PA05MW03	Benzo(a)pyrene	mg/L	0.00002	0.00001	< 0.00002 < 0.00002

Matrix : Water Water
Sampled on: 02/01/25 16:00 02/03/25 16:00

CONTINUED on page 5



ANALYTICAL SERVICES

07-May-02
Page 5 of 13

ANALYTICAL REPORT
Form 08097071

Client : HEALTH CANADA
Sampling site :
Submitted by : SANDRA GREEN

Philp ID : 12017364 12017365
Client ID : OWDEKONO GUILFORD

Spacnde	Parameter	Unit	MDL	CDWC		
VOLATILE ORGANICS-MAH						
B020MS11	Benzene	ug/L	0.5	5.0	< 0.5	< 0.5
V919MS11	Chlorobenzene	ug/L	0.5	50.0	< 0.5	< 0.5
V924MS11	1,2-Dichlorobenzene	ug/L	0.5	200.0	< 0.5	< 0.5
V925MS11	1,3-Dichlorobenzene	ug/L	0.3	—	< 0.3	< 0.3
V926MS11	1,4-Dichlorobenzene	ug/L	0.4	5.0	< 0.4	< 0.4
B021MS11	Ethylbenzene	ug/L	0.5	—	< 0.5	< 0.5
V921MS11	Styrene	ug/L	0.4	—	< 0.4	< 0.4
T001MS11	Toluene	ug/L	0.5	24.0	< 0.5	< 0.5
X_RR47_4	Xylenes	ug/L	0.5	300.0	< 0.5	< 0.5
X001MS11	m,p - Xylene	ug/L	0.5	—	< 0.5	< 0.5
X002MS11	o - Xylene	ug/L	0.5	—	< 0.5	< 0.5
MTBEMS11	Methyl t-butyl ether	ug/L	5	—	< 5	< 5
VOLATILE ORGANICS-CHLORINATED ALIPHATIC						
V903MS11	Bromomethane	ug/L	3	—	< 3	< 3
C034MS11	Carbon tetrachloride	ug/L	1	—	< 1	< 1
V904MS11	Chloroethane	ug/L	4	—	< 4	< 4
V914MS11	2-chloroethylvinylether	ug/L	2	—	< 2	< 2
V901MS11	Chloromethane	ug/L	1	—	< 1	< 1
V909MS11	1,1-Dichloroethane	ug/L	0.7	—	< 0.7	< 0.7
V912MS11	1,2-Dichloroethane	ug/L	0.5	—	< 0.5	< 0.5
V906MS11	1,1-Dichloroethene	ug/L	0.4	—	< 0.4	< 0.4
V910MS11	cis-1,2-Dichloroethene	ug/L	0.4	—	< 0.4	< 0.4
V908MS11	trans-1,2-Dichloroethene	ug/L	0.7	—	< 0.7	< 0.7
V907MS11	Dichloromethane	ug/L	0.9	—	< 0.9	< 0.9
V913MS11	1,2-Dichloropropane	ug/L	0.5	—	< 0.5	< 0.5
V915MS11	cis-1,3-Dichloropropane	ug/L	0.4	—	< 0.4	< 0.4
V916MS11	trans-1,3-Dichloropropane	ug/L	0.3	—	< 0.3	< 0.3
V918MS11	1,2-Dibromoethane	ug/L	1	—	< 1	< 1
V923MS11	1,1,2,2-Tetrachloroethane	ug/L	0.5	—	< 0.5	< 0.5
T030MS11	tetrachloroethene	ug/L	0.5	30.0	< 0.5	< 0.5
V911MS11	1,1,1-Trichloroethane	ug/L	0.7	—	< 0.7	< 0.7
V917MS11	1,1,2-Trichloroethene	ug/L	0.3	—	< 0.3	< 0.3
T029MS11	Trichloroethene	ug/L	0.6	50.0	< 0.6	< 0.6
V905MS11	Trichlorofluoromethane	ug/L	4	—	< 4	< 4

Matrix : Water Water Water
Sampled on: 02/03/25 16:00 02/03/25 16:00 02/03/25 16:00

CONTINUED on page 6



ANALYTICAL SERVICES

07-May-02
Page 6 of 13

ANALYTICAL REPORT
Form 08097071

Client : HEALTH CANADA
Sampling site :
Submitted by : SANDRA OREGN

Philip ID : 12017364 12017365
Client ID : OWICKENO GUILFORD

Sample	Parameter	Unit	MDL	CDWC		
V902MS11	Vinyl Chloride	ug/L	1	2.0	< 1	< 1
VOLATILE ORGANICS-TRihalOMETHANES						
B012MS11	Bromodichloromethane	ug/L	0.5	100.0	< 0.5	< 0.5
B013MS11	Bromoform	ug/L	0.4	100.0	< 0.4	< 0.4
C032MS11	Chloroform	ug/L	0.6	100.0	< 0.6	< 0.6
C033MS11	Dibromochloromethane	ug/L	0.4	100.0	< 0.4	< 0.4
VOC SURROGATE RECOVERY						
V501VSUR	Bromofluorobenzene	%	0	—	85	93
V502VSUR	1,1,2-dichloroethane	%	0	—	107	99
V503VSUR	o-Toluene	%	0	—	91	94

Matrix : Water Water
Sampled on: 02/03/25 16:00 02/03/25 16:00