

R E P O R T

TL'AZT'EN FIRST NATION

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



ANALYTICAL SERVICES

02-Mar-02
Page 2 of 12

ANALYTICAL REPORT

Client : HEALTH CANADA
Project : TL'AZT'EN - TACHIE (41) HEALTH CENTRE
Sampling site :
Submitted by : C. VON SCHILLING

Treated
Water

Philip ID : 12009399
Client ID : TACHIE
12009398
BINCHIE

Sparcode	Parameter	Unit	MDL	CDWG		
PHYSICAL						
00041220	pH	pH units	0.1	6.5-8.5	7.8	8.3
00021300	Color True	Col. Unit	5	15	< 5	< 5
00111160	Specific Conductance	uS/cm	1	---	145	571
SCCACALC	Computed Conductance	uS/cm	---	---	151	654
CCPDCALC	Conductance % Diff.	%	---	---	4.1	13.5
00081071	Residue Nonfilterable (TSS)	mg/L	4	---	< 4	< 4
007H1035	Residue Filterable 1.0u (TDS)	mg/L	10	500	98	326
CTDSCALC	Computed TDS	mg/L	---	---	78	346
TDSRCALC	TDS % Diff.	%	---	---	-22.7	6.0
00151140	Turbidity	NTU	0.10	1.0	0.20 ✓	0.37 ✓
0107CALC	Hardness Total -T	mg/L	---	500	68.8	181
GENERAL INORGANICS						
01011211	Alkalinity Phen. 8.3 as CaCO3	mg/L	1	---	< 1	1
01021210	Alkalinity Total as CaCO3	mg/L	1	---	54	205
CO3-CALC	Carbonate as CO3=	mg/L	---	---	< 0.5	1.2
HCO3CALC	Bicarbonate as HCO3-	mg/L	---	---	65.8	247
OH--CALC	Hydroxide as OH-	mg/L	---	---	< 0.5	< 0.5
2105AA04	Cyanide(SAD) + Thiocyanate	mg/L	0.0005	0.2	< 0.0005	< 0.0005
0125LLHS	Sulfide Total	mg/L	0.005	0.05	< 0.005	< 0.005
ANIONS						
11041334	Chloride Dissolved	mg/L	0.5	< 250	0.7	< 0.5
11061341	Fluoride Dissolved	mg/L	0.01	1.5	0.03	0.20
IonBCALC	Ion Balance	%	---	---	1.5	0.2
AnnsCALC	Total Anions	meq/L	---	---	1.45	6.35
CtnsCALC	Total Cations	meq/L	---	---	1.50	6.37
LangCALC	Langelier Index	pH units	---	---	-0.6	0.4
pHSACALC	Saturation pH	pH units	---	---	8.4	7.9
CARBON						
01030912	Organic Carbon - Total	mg/L	0.5	---	3.4	2.1

Matrix : Water
Sampled on: 02/02/16 02:30 Water 02/02/16 04:15

CONTINUED on page 3

↑
difference in results indicates that
Binchie 007372, not be GWT



ANALYTICAL SERVICES

02-Mar-02
Page 3 of 12

ANALYTICAL REPORT

Client : HEALTH CANADA
Project : TL'AZT'EN - TACHIE (41) HEALTH CENTRE
Sampling site :
Submitted by : C. VON SCHILLING

TREATED
↓

Philip ID : 12009399
Client ID : TACHIE
12009398
BINCHIE

Sparcode	Parameter	Unit	MDL	CDWG		
NITROGEN						
11081351	Ammonia Nitrogen (N)	mg/L	0.005	--		
1110CALC	Nitrate Nitrogen Dissolved (N)	mg/L		10.0	0.021	0.199
11091350	Nitrate + Nitrite (N)	mg/L	0.02	10.0	0.05	< 0.02
11111354	Nitrite Nitrogen (N)	mg/L	0.005	1.0	< 0.005	< 0.02
SULFATE						
11211405	Sulfate	mg/L	0.5	< 500	16.8	107
METALS TOTAL						
Al-T0031	Aluminum	mg/L	0.02	--		
As-TMS31	Arsenic	mg/L	0.001	0.025	< 0.02	< 0.02
Ba-T0031	Barium	mg/L	0.001	1.0	< 0.001	0.010
B--T0031	Boron	mg/L	0.008	5.0	0.019	0.018
Cd-T0031	Cadmium	mg/L	0.002	0.005	< 0.008	0.103
Ca-T0031	Calcium	mg/L	0.05	--	< 0.002	< 0.002
Cr-T0031	Chromium	mg/L	0.002	0.05	21.9	19.4
Co-T0031	Cobalt	mg/L	0.003	--	< 0.002	< 0.002
Cu-T0031	Copper	mg/L	0.001	1.0	< 0.003	< 0.003
Fe-T0031	Iron	mg/L	0.005	0.3	0.612	0.031
Pb-TMS31	Lead	mg/L	0.001	0.01	< 0.005	0.036
Mg-T0031	Magnesium	mg/L	0.05	--	< 0.001	< 0.001
Mn-T0031	Manganese	mg/L	0.001	0.05	3.42	32.2
Hg-T0310	Mercury	mg/L	0.00005	0.001	0.002	0.029
Mo-T0031	Molybdenum	mg/L	0.005	--	< 0.00005	< 0.00005
Ni-T0031	Nickel	mg/L	0.008	--	< 0.005	0.012
K_T0031	Potassium	mg/L	0.4	--	< 0.008	< 0.008
Se-TMS31	Selenium	mg/L	0.001	0.01	0.4	3.1
Ag-T0031	Silver	mg/L	0.01	--	< 0.001	< 0.001
Na_T0031	Sodium	mg/L	0.05	200	< 0.01	< 0.01
U--TLLMS	Uranium	mg/L	0.00001	0.1	2.15	61.2
V--T0031	Vanadium	mg/L	0.003	--	0.00002	0.00031
Zn-T0031	Zinc	mg/L	0.002	5.0	< 0.003	< 0.003
					0.008	< 0.002

Matrix : Water
Sampled on: 02/02/16 02:30 02/02/16 04:15

CONTINUED on page 4



ANALYTICAL SERVICES

02-Mar-02
Page 4 of 12

ANALYTICAL REPORT

Client : HEALTH CANADA
Project : TL'AZT'EN - TACHIE (41) HEALTH CENTRE
Sampling site :
Submitted by : C.VON SCHILLING

Philip ID : 12009399
Client ID : TACHIE BINCHIE

Sparcode	Parameter	Unit	MDL	CDWG		
CHLORINATED PHENOLS						
EX9946Z7	Water Prep for CPs	date			02/02/22	02/02/22
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
CPE1CPWA	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	2,5-Dichlorophenol	mg/L	0.0001	---	< 0.0001	< 0.0001
CP09CPWA	2,6-Dichlorophenol	mg/L	0.0001	---	< 0.0001	< 0.0001
CPE3CPWA	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	mg/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
P022CPWA	Pentachlorophenol	mg/L	0.0001	---	< 0.0001	< 0.0001
SURROGATE RECOVERY						
DC01SURR	CL2 Phenylaceticacid	%		---	91	83
BR3-CPWA	Tribromophenol	%	40	---	101	104
HERBICIDES						
EX995351	Prep for Glyphosate	date			02/02/21	02/02/21
A001P012	AMPA	mg/L	0.05	---	< 0.05	< 0.05
HYDROCARBONS						
H099PT11	VH C6-C10	mg/L	0.1	---	< 0.1	< 0.1
H097CALC	VPHw	mg/L		---	< 0.1	< 0.1
POLYCYCLIC AROMATIC HYDROCARBONS						
EX9946Z4	PAH Extraction-Water	date			02/02/21	02/02/21
PA05MW02	Benzo(a)pyrene	mg/L	0.00001	0.00001	< 0.00001	< 0.00001

Matrix : Water Water
Sampled on: 02/02/16 02:30 02/02/16 04:15

CONTINUED on page 5



ANALYTICAL SERVICES

02-Mar-02
Page 5 of 12

ANALYTICAL REPORT

Client : HEALTH CANADA
Project : TL'AZT'EN - TACHIE (41) HEALTH CENTRE
Sampling site :
Submitted by : C.VON SCHILLING

Phillp ID : 12009399
Client ID : TACHIE

12009398
BINCHIE

Sparcode	Parameter	Unit	MDL	CDWG		
VOLATILE ORGANICS-MAH						
B020MS11	Benzene	ug/L	0.5	5.0	< 0.5	< 0.5
V919MS11	Chlorobenzene	ug/L	0.5	80.0	< 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_8842_5	Xylenes	ug/L	0.5	300.0	< 0.5	< 0.5
X003MS11	m,p - Xylene	ug/L	0.5	---	< 0.5	< 0.5
X002MS11	o - Xylene	ug/L	0.5	---	< 0.5	< 0.5
VOLATILE ORGANICS-CHLORINATED ALIPHATIC						
EX995172	Volat. Wat. Pre-Scr.	date			02/02/21	02/02/21
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-Dichloropropene	ug/L	0.4	---	< 0.4	< 0.4
V916MS11	trans-1,3-Dichloropropene	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-Trichloroethane	ug/L	0.5	---	< 0.5	< 0.5
T029MS11	Trichloroethene	ug/L	0.6	50.0	< 0.6	< 0.6

Matrix : Water
Sampled on: 02/02/16 02:30 02/02/16 04:15

CONTINUED on page 6

007375



ANALYTICAL SERVICES

02-Mar-02
Page 6 of 12

ANALYTICAL REPORT

Client : HEALTH CANADA
Project : TL'AZT'EN - TACHIE (41) HEALTH CENTRE
Sampling site :
Submitted by : C.VON SCHILLING

Phillip ID : 12009399
Client ID : TACHIE
12009398
BINCHIE

Sparcode	Parameter	Unit	MDL	CDWG		
V905MS11	Trichlorofluoromethane	ug/L	4	---	< 4	< 4
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	16	< 0.6
C033MS11	Dibromochloromethane	ug/L	0.4	100.0	< 0.4	< 0.4
VOC SURROGATE RECOVERY						
VS01VSUR	Bromofluorobenzene	%	0	---	97	97
VS02VSUR	d4-1,2-dichloroethane	%	0	---	111	108
VS03VSUR	d8-Toluene	%	0	---	100	100

Matrix : Water
Sampled on: 02/02/16 02:30
Water
02/02/16 04:15

	binche	location	date	gen.bact	t.colif	fecal.c
s.19(1)	1	KT	01/30/01	30	0	0
	2	KT Hot Water	03/02/01	670	0	0
	3	KT Cold Water	03/02/01	0	0	0
	4		03/02/01	0	0	0
	5	BT	03/14/01	0	0	0
	6	Cold Water	03/14/01	0	0	0
	7	Clinic BT	04/03/01	0	0	0
	8	KT	05/01/01	0	0	0
	9	KT	05/01/01	0	0	0
	10		06/11/01	0	0	0
	11	KT	06/11/01	498	0	0
	12	Bridge Binche Turnoff	06/11/01	4985	0	0
	13	KT	06/27/01	0	0	0
	14	OT	06/27/01	12	0	0
	15	KT	07/16/01	3000	0	0
	16	KT	07/25/01	3270	0	0
	17	KT	07/25/01	0	0	0
	18	KT	08/15/01	0	0	0
	19	KT	08/15/01	0	0	0
	20		09/11/01	0	0	0
	21	KT	09/11/01	0	0	0
	22	KT	09/11/01	134	20	2
	23		09/05/01	0	138	32
	24		09/18/01	2	0	0
	25		09/18/01	204	0	0
	26	KT	10/23/01	0	0	0
	27		10/23/01	0	0	0
	28		10/23/01	0	0	0
	29	KT	11/06/01	4	0	0

s.19(1)

	binche	location	date	gen.bact	t.colif	fecal.c
30		KT	11/06/01	0	0	2
31		KT	11/13/01	6	0	0
32	Health Clinic	KT	11/13/01	0	0	0
33		KT	11/13/01	0	0	0
34		KT	12/10/01	2	0	0
35		KT	12/10/01	132	0	0

s.19(1)

	binche	location	date	gen.bact	t.colif	fecal.c
1		KT	02/04/02	0	0	0
2		KT	02/04/02	20	0	0
3			03/26/02	0	0	0
4			04/24/02	18	0	0
5			04/25/02	0	0	0
6	Health Clinic BT		04/25/02	0	0	0
7			05/16/02	0	0	0
8			05/16/02	0	0	0
9			06/03/02	0	0	0
10		KT, Hot Water	06/03/02	178	0	0
11		KT	07/15/02	0	0	0
12		KT	07/17/02	0	0	0
13		KT	07/17/02	0	0	0
14		KT	08/22/02	400	0	0
15		KT	08/22/02	2	0	0
16		KT	08/22/02	2	0	0
17		Raw	08/22/02	2800	748	16
18		KT	10/22/02	2	23	0
19		KT	10/22/02	0	0	0
20			10/22/02	118	0	2
21			10/22/02	0	0	0
22			10/22/02	0	0	0