

**ASSESSMENT STUDY OF WATER AND WASTEWATER SYSTEMS  
AND ASSOCIATED WATER MANAGEMENT PRACTICES  
AT KAMLOOPS FIRST NATION IR NO. 1**

**For**

**Indian and Northern Affairs Canada  
British Columbia Region**

**By**

**UMA Engineering Ltd.  
3030 Gilmore Diversion  
Burnaby, British Columbia  
V5G 3B4**

**February 2002**

Assessment Study of Water and Wastewater Systems  
Kamloops First Nation IR No. 1

## Appendix D

# WATER TESTING RESULTS

(CHEMICAL/PHYSICAL/BACTERIOLOGICAL)  
WITH COMPARISONS TO THE  
*GUIDELINES FOR CANADIAN DRINKING WATER QUALITY (GCDWQ)*

**Page(s) 003605 to\à 003611**

**Is(are) under consultation**

KIB./WTP. Colilert present — absent test results.

Date	Location.	or - Plant	Result.	Operator
Feb 8	Mt. Paul	Lab	NEG	D.G.
FEB 9	MT PAUL	PLANT	NEG	DKB
Feb 10	East Shuswap	PLANT	NEG.	DKB
Feb 11	Mt Paul	Plant	Neg	T. for DB
Feb 12	Mt Paul	Plant	Neg	T.
Feb 13	Mt Paul	Plant	Neg	T.
FEB 14	Mt Paul	Plant	Neg	DKB
FEB 15	Mt Paul	Plant	Neg	G.E.
FEB 15	Mt Paul	1184 Kamloops	Neg	DKB
Feb 16	Mt Paul	Plant	Neg	D.G.
Feb 17	Mt. Paul	Plant	Neg	D.G.
Feb 18	E. Shuswap	Plant	Neg	D.G.
Feb 19	Mt Paul	Plant	Neg	T. for DG
Feb 20	"	Plant	Neg	R.
Feb 21	"	Plant		
FEB 22	Mt Paul	PLANT	NEG	DKB
FEB 23	1184 KAMLOOPA WAY	Mt Paul System	NEG	DKB
FEB 23	Mt Paul	PLANT	NEG	DKB
Feb 23	Mt Paul	Plant	Neg	T. for DB.
Feb 24	Mt. Paul	Plant	Neg	T.
Feb 25	Mt. Paul	Plant	Neg	D.G.
Feb 26	Mt. Paul	Plant	Neg	T. for DG
Feb 27	Mt. Paul	Plant	Neg	T.
Feb 27	#1-1225 Kamloops		Neg	T. for DG.
Feb 28	Mt Paul System	PLANT	NEG.	DB.
Mar 1/01	Mt Paul System	Plant	Neg	T. for DB
Mar 2/01	Mt Paul System	Plant		
Mar 3/01	Mt Paul System	Plant	Neg	T.
Mar 4/01	Mt Paul System	Plant	Neg	T.
Mar 5/01	Mt. Paul	Plant	Neg	D.G.
Mar 6/01	E. Shuswap	Plant	Neg	T. for DG.
Mar 7/01	Mt. Paul	Plant	Neg	R.
Mar 8/01	Mt. Paul	Plant	Neg	T.



Sample 283

**LABORATORY REQUISITION - CYST DETECTION TEST  
PACIFIC REGION GIARDIA/CRYPTOSPORIDIUM PROGRAM**

220 - 177 Victoria Street

Prince George, B.C.

V2L 5R8

Phone (250) 561-5379

Fax (250) 564-3272

1. **GENERAL**

District Central District  
 Address 202 - 1315 Summit Drive, Kamloops, B.C. V2C 5R9  
 EHO Contact Jan McLean Phone 250-851-4831  
 Band Contact \_\_\_\_\_

2. **DRINKING WATER SAMPLE**

Name of Community Tested Kamloops Indian Band  
 Name of Water Source South Thompson River  
 Date of Sample (M/D/Y) 22<sup>nd</sup> August 2001  
 Exact Sampling site. KIB Treatment Plant  
 Water at Site Sampled  Raw  Treated  
 Start Filtration (time) 10:40am Stop (time) 2:40pm  
 Water Meter at Start Time 44,3031 m<sup>3</sup> or \_\_\_\_\_ litres  
 Water Meter at Stop Time 44,8024 m<sup>3</sup> or \_\_\_\_\_ litres  
 Total Volume of Filtered Water 0.4993m<sup>3</sup>  
 Flow Rate Through Filter (start) 2 L/m. (stop) \_\_\_\_\_ L/m  
 Ambient Temperature 20 °C Water Temperature 20 °C  
 pH 8.7 Turbidity 0.065,26 Cl<sub>2</sub> 0.45 ppm  
 Flow Rate of Water Source:  
 Very Noticeable Movement  Little Movement  
 Noticeable Movement  No Noticeable Movement  
 Estimated Rate of Flow \_\_\_\_\_ litres /Min.  
 Water Treatment at Consumer Tap:  None (Raw)  Chlorination  
 Ozone  Filtration (specify type) \_\_\_\_\_  
 Other Type of Treatment pH adjustment  
 Water System Tested:  Municipal  Band Operated  
 Small System (<3 connections)  
 Private Utility  
 Other Type of Water System \_\_\_\_\_

LABORATORY REPORT OF WATER FILTER ANALYSIS  
PRINCE GEORGE WATER ASSAY  
PO Box 2832 Station B  
Prince George, BC V2N 4T6

CONFIDENTIAL

To: Environmental Services  
Health Canada, Medical Services Branch  
220 - 177 Victoria Street  
Prince George, BC V2S 5R8

Sample Number: 283

FAXED

Examination for *Giardia* cysts and *Cryptosporidium* oocysts using the procedures which are described in section 9711B of Standard Methods 19th Ed., 1995.

Date of Sample: 08/22/01

Sample Source: South Thompson River

Sample Site: KIB Treatment Plant

Treatment at Tap: Chlorination

Sample sent by: Ian McLean

Volume Filtered: 499.3 l

Date & Time Received: 08/23/01 21:00h

Date Processed / Preserved: 08/23/01

Condition of Filter: Filter not discoloured but flared at both ends

Filter Type:  Filterite  Cotton

Slides Analysed: 1

Temperature on Receipt:  < 5 °C,  5 - 10 °C,  10 - 20 °C,  > 20 °C

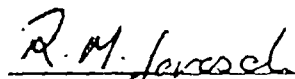
Observations: The sample was received in 325 ml of residual water which was discarded. A total of 1600 ml of elutant was used to process the sample. Processing resulted in 4 x 0.05 ml or less of dark brown ppt. which was preserved with 10% Formalin to a final volume of 4 ml. One ml of the concentrate volume representing ~ 125 l of sample was use to make the slide. The slide was comprised mostly of algae with few species represented. There were very few conidia, pollen grains or crustaceans. The effects of the treatment of the water could be seen as most of the algae etc were either dead or degraded into partially recognizable organic masses.

*Giardia* Result:  Positive  Presumptive  Negative

*Cryptosporidium* Result:  Positive  Presumptive  Negative

Summary and Conclusion: No presumptive or confirmed *Giardia* cysts or confirmed or presumptive *Cryptosporidium* oocysts were found.

Results Certified by:

  
R. M. Jarosch  
Prince George Water Assay

Date: September 9, 2001

2. Sample 285

**DRINKING WATER SAMPLE**

Type of Source Tested:  Large Lake  Small Lake

Large River (>6m diam.)  Creek or Stream (<6m diam.)

Spring  Reservoir

Further description of Water-Source \_\_\_\_\_

Sampling Site in Relationship to Water Intake (i.e. upstream, distance away, same shore, same branch of stream etc) Water Treatment Plant within 20m of South Thompson River

Other Comments \_\_\_\_\_

Number of Persons on System 500 and leases

General Description of Site:  Farmland/Ranchland  Mountainous at water shed site

Residential  Forested  Industrial  Other (describe)

Wild Animals Present in Watershed:  Beaver  Muskrat  Migratory Fowl

Other Various - open water shed, cattle, horses

Farm and Domestic Animals Present in Watershed  Dogs  Cats

Cattle  Other (describe) \_\_\_\_\_

Animals Observed Actually in Water-Source: \_\_\_\_\_

Is Water Used for Recreational Purposes?  Yes  No

Describe Activities:  Hiking  Camping

Boating  Swimming  Fishing

Other (describe) \_\_\_\_\_

Humans in/on Water-Source:  Yes  No

Humans near Water-Source:  Yes  No

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## Appendix E

# WASTEWATER TESTING RESULTS

(CHEMICAL/PHYSICAL/BACTERIOLOGICAL)  
WITH COMPARISONS TO THE  
*GUIDELINES FOR EFFLUENT QUALITY AND WASTEWATER TREATMENT AT  
FEDERAL ESTABLISHMENTS*

Nil.