

**Assessment Study of  
Water and Wastewater Systems and  
Associated Water Management Practices  
at the Nisga'a Village of Laxgalts'ap**

**for the  
Indian and Northern Affairs Canada  
BC Region**



**April, 2003**

**Appendix C**  
**Water Quality Test Results**

SR

# NORTHERN HEALTH

*authority*

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March 13, 2003

Lawrence Benjamin  
CH2M Hill Canada  
Suite 920 – 475 West Georgia  
Vancouver, B.C.  
V6B 4M9

**Re: Historical Nass Valley Water Bacteriology Results**

Dear Lawrence:

This is the best I could do from the files we received. Call if you need clarification on anything.

Yours truly,



Colin Merz BA, BSc, BTech, CPHI(C)  
Environmental Health Officer  
Northern Health Authority  
Nisga'a Valley Health Board

**RECEIVED**

**MAR 17 2003**

CH2MHILL CANADA LTD.

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**BACTERIOLOGY RESULTS - NORTHWEST COMMUNITY HEALTH SERVICES**

**Results codes:** TC = total coliforms FC = fecal coliforms  
 R = resample due to >200 CFU/100 ml background growth  
 P = sample age >30 hours; results may be invalid  
 N = sample time not given Bx = x non-coliform CFU/100 ml  
 TNTC = too numerous to count CFU = colony forming units  
 PS = presumptive Pseudomonas aeruginosa MPN = most probable number  
 V = low volume (less than 200 ml received)

**Date reported: December 23, 2002**

Lab #	Sample Source System Name/Site Name	Collected mm/dd/yy	Results (CFU/100 ml)
3987	Smithers CWS/Municipal office	12/17/02	TC<1 B1 FC<1
<del>3988</del> P	Greenville/Health Centre/Kitchen	12/16/02	TC<1 B1 FC<1
3998	South Hazelton CWS/Fire Hall	12/17/02	TC 1 B15 FC<1
4009	Thornhill CWS/School reservoir	12/18/02	TC<1 B58 FC<1

# BACTERIOLOGY RESULTS - NORTHWEST COMMUNITY HEALTH SERVICES

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 TNTC = too numerous to count CFU = colony forming units  
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 V = low volume (less than 200 ml received)

**Date reported:** January 10, 2003

Lab #	Sample Source System Name/Site Name	Collected mm/dd/yy	Results (MPN/100 ml)
0006 ✓	Lakes <sup>Carnaby</sup> District Maintenance/Carnaby Well	01/02/03	TC 3.6 FC<1.1

Lab #	Sample Source System Name/Site Name	Collected mm/dd/yy	Results (CFU/100 ml)
0013 ✓	Vogel Mobile Trailer Village/Well Head	01/06/03	TC<1 FC<1
0014 ✓	BC Parks/Lakelse Lk. Prov. Park/HQ Office	01/06/03	TC<1 FC<1
0015 ✓	Terrace-Kitimat Airport WS/CSB Kitchen	01/06/03	TC<1 FC<1
0016 ✓	Terrace CWS/City Hall	01/06/03	TC<1 FC<1
0017 ✓	Terrace CWS/NW Community College	01/06/03	TC<1 FC<1
0018 ✓	Terrace CWS/Pollution Control Centre	01/06/03	TC<1 FC<1

<del>0019</del>	Nass Camp/Tillicum Mini Mart Washroom	01/06/03	TC TNTC FC<1
<del>0020</del>	Greenville/Health Centre Kitchen Sink	01/06/03	TC<1 FC<1 N
<del>0021</del>	New Aiyansh/NVHB/Staff Lounge	01/06/03	TC<1 FC<1
<del>0022</del>	Gitwinksihlkw/Clinic Staff Room	01/06/03	TC TNTC FC<1
<del>0023</del>	Aiyansh/NVHC/South Residence	01/06/03	TC<1 FC<1
0028 ✓	Thornhill CWS/Firehall	01/07/03	TC<1 FC<1
0029 ✓	Thornhill CWS/Main Reservoir	01/07/03	TC<1 FC<1
0030 ✓	Thornhill CWS/PH #2	01/07/03	TC<1 FC<1

*Report mailed  
entered*





VILLAGE	LOCATION OF WATER SAMPLING	DATE		COLIFORMS/100%	
		SAMPLING	ANALYSIS	TOTAL	FECAL
	DISTILLED WATER	00/02/01	00/02/02	0	0
GREENVILLE	TAP @ COFFEE RM @ H.C.	00/02/01	00/02/02	0, 0	0, 0
NEW AIZYANSH	TAP @ KITCHEN @ 4903 GOSNELL	00/02/01	00/02/02	0, 0	0, 0
CANYON CITY	TAP @ WASHROOM @ H.C.	00/02/01	00/02/02	3cc, 4cc	0, 0
	DISTILLED WATER	00/02/07	00/02/08	0	0
CANYON CITY	TAP @ WASHROOM @ H.C.	00/02/07	00/02/08	14, 3cc	0, 0
	DISTILLED WATER	00/02/17	00/02/18	0	0
GREENVILLE	TAP @ COFFEE RM @ H.C.	00/02/17	00/02/18	0, 0	0, 0
CANYON CITY	TAP @ WASHROOM @ H.C.	00/02/17	00/02/18	0, 0	0, 0
NEW AIZYANSH	TAP @ KITCHEN @ 4903 GOSNELL CANYON	00/02/17	00/02/18	0, 0	0, 0
	DISTILLED WATER	00/02/21	00/02/22	0	0
CANYON CITY	TAP @ WASHROOM, H.C.	00/02/21	00/02/22	0, 0	0, 0
	DISTILLED WATER	00/03/07	00/03/08	0	0
GREENVILLE	TAP @ KITCHEN SINK @ 420-L LORAINA	00/03/07	00/03/08	0, 0	0, 0
CANYON CITY	TAP @ SINK @ WASHROOM @ H.C.	00/03/07	00/03/08	1cc, 1cc	0, 0
NEW AIZYANSH	TAP @ KITCHEN SINK @ 4903 GOSNELL	00/03/07	00/03/08	0, 0	0, 0
	DISTILLED WATER	00/03/13	00/03/14	0	0
CANYON CITY	TAP @ SINK @ WASHROOM @ H.C.	00/03/13	00/03/14	0, 0	0, 0
	DISTILLED H <sub>2</sub> O	00/03/26	00/03/27	10	0
LARGAULTS AP	TAP @ COFFEE RM @ H.C.	00/03/28	00/03/29	0, 0	0, 0
GREENVILLE	TAP @ COFFEE RM @ H.C.	00/03/28	00/03/29	0, 0	0, 0
NEW AIZYANSH	TAP @ KITCHEN @ 4903 GOSNELL	00/03/28	00/03/29	0, 0	0, 0
	DISTILLED H <sub>2</sub> O	00/04/11	00/04/12	0	0
LARGAULTS AP	TAP @ MALE/STAFF WASHROOM/SCHOOL	00/04/11	00/04/12	0, 0	0, 0
GETWINKSILKUN	TAP @ PUBLIC WASHROOM/H.C.	00/04/11	00/04/12	0, 0	0, 0
GETLAKTAMUKS	TAP @ KITCHEN @ 4903 GOSNELL	00/04/11	00/04/12	0, 0	0, 0
	DISTILLED H <sub>2</sub> O - BLANK	00/04/26	00/04/27	0	0
GETWINKSILKUN	TAP @ PUBLIC WASHROOM/H.C.	00/04/26	00/04/27	1cc, 1cc	1, 0
GETLAKTAMUKS	TAP @ KITCHEN SINK/4903 GOSNELL	00/04/26	00/04/27	0, 0	0, 0
	DISTILLED H <sub>2</sub> O	00/05/01	00/05/02	10	0
GETWINKSILKUN	TAP @ PUBLIC WASHROOM/H.C.	00/05/01	00/05/02	4cc, 3cc	3, 2
	DISTILLED H <sub>2</sub> O	00/05/09	00/05/10	10	0
LARGAULTS AP	H <sub>2</sub> O TAP @ COFFEE RM/H.C.	00/05/09	00/05/10	0, 0	0, 0
GETWINKSILKUN	TAP @ WASHROOM/H.C.	00/05/09	00/05/10	2cc, 2cc	2, 3
GETLAKTAMUKS	TAP @ KITCHEN/4903 GOSNELL LANG	00/05/09	00/05/10	0, 0	0, 0
	DISTILLED H <sub>2</sub> O	00/05/16	00/05/17	0	0
GETWINKSILKUN	TAP @ WASHROOM/H.C.	00/05/16	00/05/17	4cc, 6cc	16, 20
	DISTILLED H <sub>2</sub> O	00/05/23	00/05/30	10	0
GETWINKSILKUN	TAP @ WASHROOM/H.C.	00/05/23	00/05/30	11, 14	17, 11
NEW AIZYANSH	TAP @ KITCHEN @ 4903 GOSNELL CANYON	00/05/23	00/05/30	0, 0	0, 0

INSTALLED ON OCT. 6, 2000.

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C.O. REC 3, 1

VILLAGE	LOCATION OF WATER SAMPLING	DATE		COLIFORMS (FOUML)	
		SAMPLING	ANALYSIS	TOTAL	FECAL
	DISTILLED WATER				
GITWINKSIKAW	PUBLIC WASHROOM @ H.C.	00/06/20	00/06/21	0	0
	DISTILLED WATER	00/06/20	00/06/21	15, 12 cc	6, 8
LARGACTAP	COFFEE ROOM @ H.C.	00/06/26	00/06/27	0	0
GITWINKSIKAW	PUBLIC WASHROOM @ H.C.	00/06/26	00/06/27	0, 0	0, 0
NEW ANYANSH	COFFEE ROOM @ RCMP	00/06/26	00/06/27	0, 0	0, 0
	DISTILLED WATER	00/07/04	00/07/04	0, 0	0, 0
GITWINKSIKAW	PUBLIC WASHROOM @ H.C.	00/07/04	00/07/04	0, 0	0, 0
	DISTILLED WATER	00/07/12	00/07/13	0	0
NEW ANYANSH	NISSA'S FISH PLANT @ DOUBLE SINK	00/07/12	00/07/13	0, 0	0, 0
GITWINKSIKAW	PUBLIC WASHROOM @ H.C.	00/07/12	00/07/13	0, 0	0, 0
	DISTILLED WATER	00/1/1	00/1/1	1	1
	DISTILLED WATER	00/1/1	00/1/1	1	1
	DISTILLED WATER	00/1/1	00/1/1	1	1
GITWINKSIKAW	DISTILLED WATER	00/08/01	00/08/02	0	0
"	STAFF ROOM	00/08/01	00/08/02	0, 0	0, 0
NEW ANYANSH	DISTILLED WATER	00/08/01	00/08/02	0	0
"	LAB	00/08/01	00/08/02	0, 0	0, 0
GREENVILLE	DISTILLED WATER	00/08/08	00/08/09	0	0
"	STAFF ROOM	00/08/08	00/08/09	0, 0	0, 0
GITWINKSIKAW	DISTILLED WATER	00/08/08	00/08/09	0	0
"	STAFF ROOM	00/08/08	00/08/09	0, 0	0, 0
NEW ANYANSH	DISTILLED WATER	00/08/08	00/08/09	0	0
	LAB	00/08/08	00/08/09	0, 0	0, 0
	DISTILLED WATER	06/10/00	07/10/00	0	0
GITWINKSIKAW	WASHROOM @ H.C.	06/10/00	07/10/00	1, 2	2, 2
NEW ANYANSH	COFFEE RM @ RCMP	06/10/00	07/10/00	0, 0	0, 0
	DISTILLED WATER	10/10/00	11/10/00	0	0
GITWINKSIKAW	WASHROOM @ H.C.	10/10/00	11/10/00	1cc, 1cc	1, 1
LARGACTAP	COFFEE RM @ H.C.	10/10/00	11/10/00	0, 0	0, 0
	DISTILLED WATER	23/10/00	24/10/00	0	0
LARGACTAP	COFFEE RM @ H.C.	23/10/00	24/10/00	0, 0	0, 0
GITWINKSIKAW	WASHROOM @ H.C.	23/10/00	24/10/00	0, 0	0, 0
NEW ANYANSH	COFFEE RM @ RCMP BLDG	23/10/00	24/10/00	0, 0	0, 0
	DISTILLED WATER	31/10/00	01/11/00	0, 0	0, 0
CANYON BEG	WASHROOM @ H.C.	31/10/00	01/11/00	0, 0	0, 0
NASS CAMP	JUNE @ KITCHEN @ RESTAURANT	31/10/00	01/11/00	1cc, 7cc	0, 0
				2, 0	0, 0

VILLAGE	LOCATION OF SAMPLING	DATE		COLIFORMS/100ML	
		SAMPLING	ANALYSIS	TOTAL	FECAL
LAKGATS'AP	DISTILLED WATER	21/11/00	22/11/00	0	0
GETWINKSIAKU	SINK @ COFFEE RM @ HC	21/11/00	22/11/00	0	0
GETWINKSIAKU	" " WASHROOM @ "	21/11/00	22/11/00	1 ec	0
GETWINKSIAKU	DISTILLED WATER	07/12/00	08/12/00	0	0
GETWINKSIAKU	SINK @ WASHROOM @ H.C.	07/12/00	08/12/00	0	0
MASS CAMP	SINK @ " @ GOLONG STONE	07/12/00	08/12/00	0	0
LAKGATS'AP	DISTILLED WATER	27/12/00	28/12/00	0	0
GETWINKSIAKU	SINK @ COFFEE RM @ HC	27/12/00	28/12/00	0	0
MASS CAMP	SINK @ PUBLIC WASHROOM @ HC	27/12/00	28/12/00	0	0
MASS CAMP	SINK @ " " @ MINI-MART	27/12/00	28/12/00	0	0
NEW ARYANSH	SINK @ KITCHEN @ 4903 GOSNEL LAKE	27/12/00	28/12/00	0	0
LAKGATS'AP	DISTILLED WATER	02/01/01	03/01/01	0	0
GETWINKSIAKU	SINK @ COFFEE RM @ HC	02/01/01	03/01/01	0	1 ec
GETWINKSIAKU	SINK @ WASHROOM @ H.C.	02/01/01	03/01/01	0	0
GETWINKSIAKU	DISTILLED WATER	16/01/01	17/01/01	0	0
GETWINKSIAKU	SINK @ WASHROOM @ GELUNTEN SIAKU H.C.	16/01/01	17/01/01	0	0
GETWINKSIAKU	DISTILLED H <sub>2</sub> O	22/01/01	23/01/01	0	0
GETWINKSIAKU	SINK @ WASHROOM @ HC	22/01/01	23/01/01	0	0
NEW ARYANSH	SINK @ COFFEE RM @ DFO	22/01/01	23/01/01	0	0
BLANK	DISTILLED WATER	06/02/01	07/02/01	0	0
GETWINKSIAKU	SINK @ WASHROOM @ H.C.	06/02/01	07/02/01	0	0
NEW ARYANSH	SINK @ COFFEE RM @ REMP	06/02/01	07/02/01	0	0
GREENVILLE	DISTILLED WATER	13/02/01	14/02/01	0	0
GETWINKSIAKU	TAP @ WASHROOM @ H.C.	13/02/01	14/02/01	0	0
GETWINKSIAKU	TAP @ WASHROOM @ H.C.	13/02/01	14/02/01	0	0
MASS CAMP	TAP @ SINK @ WASHROOM @ FOOD STORE	13/02/01	14/02/01	0	0
GETWINKSIAKU	DISTILLED WATER	05/03/01	06/03/01	0	0
GETWINKSIAKU	TAP @ WASHROOM @ H.C.	05/03/01	06/03/01	0	0
LAKGATS'AP	TAP @ COFFEE RM @ HC	05/03/01	06/03/01	0	0
MASS CAMP	TAP @ WASHROOM @ MINI-MART	05/03/01	06/03/01	0	0
NEW ARYANSH	TAP @ COFFEE ROOM @ DFO HOUSE	05/03/01	06/03/01	0	0
GETWINKSIAKU	DISTILLED WATER	20/03/01	21/03/01	0	0
GETWINKSIAKU	TAP @ WASHROOM @ HC	20/03/01	21/03/01	0	0
ARYANSH	TAP @ KITCHEN @ MELES INN	20/03/01	21/03/01	0	0
ARYANSH	TAP @ KITCHEN @ 4903 GOSNEL	20/03/01	21/03/01	0	0
MASS CAMP	TAP @ WASHROOM @ MINI-MART	20/03/01	21/03/01	0	0
LAKGATS'AP	DISTILLED WATER	03/04/01	04/04/01	0	0
LAKGATS'AP	TAP @ COFFEE RM @ HC	03/04/01	04/04/01	0	0
GETWINKSIAKU	TAP @ WASHROOM @ HC	03/04/01	04/04/01	0	0
MASS CAMP	TAP @ WASHROOM @ MINI-MART	03/04/01	04/04/01	0	0
NEW ARYANSH	TAP @ KITCHEN @ 4903 GOSNEL LAKE	03/04/01	04/04/01	0	0

VILLAGE	LOCATION OF SAMPLING	DATE		COLIFORMS/100ML	
		SAMPLED	ANALYZED	TOTAL	FECAL
	DISTILLED WATER	10/04/01	11/04/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	12/04/01	11/04/01	0,0	0,0
	DISTILLED WATER	13/04/01	20/04/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	17/04/01	20/04/01	0,0	0,0
NEW AIZYASHI	TAP @ KITCHEN @ 4903 Goswell	17/04/01	20/04/01	0,0	0,0
	DISTILLED WATER	30/04/01	01/05/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	30/04/01	01/05/01	0,0	0,0
	DISTILLED WATER	10/05/01	11/05/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	10/05/01	11/05/01	0,0	0,0
	DISTILLED WATER	14/05/01	15/05/01	0	0
LAKALZAP	TAP @ COFFEE RM @ H.C.	14/05/01	15/05/01	0,0	0,0
	DISTILLED WATER	28/05/01	29/05/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	28/05/01	29/05/01	0,0	0,0
NEW AIZYASHI	TAP @ COFFEE RM @ DFO HQ	28/05/01	29/05/01	0,0	0,0
	DISTILLED WATER	31/05/01	01/06/01	0	0
LAKALZAP	TAP @ COFFEE RM @ H.C.	31/05/01	01/06/01	0,0	0,0
NASS CAMP	TAP @ WASHROOM @ MINE-MART	31/05/01	01/06/01	0,0	0,0
	DISTILLED WATER	12/06/01	13/06/01	0	0
MAEN LOGING CAMP	TAP @ SINK/KITCHEN	12/06/01	13/06/01	0	0
LAKALZAP	TAP @ COFFEE RM @ H.C.	12/06/01	13/06/01	0,0	0,0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	12/06/01	13/06/01	0,0	0,0
	DISTILLED WATER	18/06/01	19/06/01	0	0
NASS CAMP	TAP @ WASHROOM @ STORE	18/06/01	19/06/01	0,0	0,0
NEW AIZYASHI	TAP @ COFFEE RM @ DFO HQ	18/06/01	19/06/01	0,0	0,0
K'SEREN CAMP	TAP @ KITCHEN SINK @ CAMP	18/06/01	19/06/01	0,0	0,0
	DISTILLED WATER	09/07/01	10/07/01	0	0
NASS CAMP	TAP @ WASHROOM @ MINE-MART	09/07/01	10/07/01	0,0	0,0
LAKALZAP	TAP @ COFFEE RM @ H.C.	09/07/01	10/07/01	0,0	0,0
K'SEREN CAMP	TAP @ KITCHEN SINK	09/07/01	10/07/01	0,0	0,0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	09/07/01	10/07/01	0,0	0,0
	DISTILLED WATER	24/07/01	25/07/01	0	0
GETWINKSHUKU	TAP @ WASHROOM @ H.C.	24/07/01	25/07/01	0,0	0,0
NEW AIZYASHI	TAP @ COFFEE RM @ RCMP	24/07/01	25/07/01	0,0	0,0
NASS CAMP	TAP @ WASHROOM @ MINE-MART	24/07/01	25/07/01	0,0	0,0
	DISTILLED WATER	25/07/01	26/07/01	0	0
LAKALZAP	TAP @ KITCHEN SINK (T.S.)	25/07/01	26/07/01	0,0	0,0
MAEN LOGING	TAP @ WASHROOM @ BUNKHOUSE	25/07/01	26/07/01	0,0	0,0
	DISTILLED WATER	23/08/01	24/08/01	0	0
LAKALZAP	TAP @ KITCHEN FACILITY	23/08/01	24/08/01	0,0	0,0
LAKALZAP	TAP @ COFFEE RM @ H.C.	23/08/01	24/08/01	0,0	0,0
K'SEREN CAMP	TAP @ KITCHEN @ CAMP	23/08/01	24/08/01	0,0	0,0

Village	Location	DATE		COLIFORMS/100	
		SAMPLED	ANALYSES	TOTAL	FECA
Greenwich	TAP @ Washroom @ H.C.	23/08/01	24/08/01	0	0
New Aiyem	" " " " " "	23/08/01	24/08/01	0	0
Distilled Water				0	0
New Aiyem	TAP @ Kitchen @ 4903 Goswell Ln.	10/09/01	11/09/01	0	0
Greenwich	(CORNER OF TANKER RD & NESGAH HWY)	10/09/01	11/09/01	0	0
Nass Camp	TAP @ Mini-Mart	10/09/01	11/09/01	0	0
Greenwich	TAP @ Washroom @ H.C.	10/09/01	11/09/01	0	0
Distilled Water				0	0
Nass Camp	TAP @ Washroom @ Mini-Mart	10/10/01	11/10/01	160	160
New Aiyem	TAP @ Coffee Rm @ DFO Office	10/10/01	11/10/01	0	0
Greenwich	TAP @ Coffee Rm @ H.C.	10/10/01	11/10/01	0	0
Greenwich	TAP @ Kitchen @ Work Camp	10/10/01	11/10/01	0	0
Distilled Water				0	0
Nass Camp	TAP @ Washroom @ Mini-Mart	18/10/01	19/10/01	160	160
Distilled Water				0	0
Nass Camp	TAP @ Washroom @ Mini-Mart	25/10/01	26/10/01	0	0
Nass Camp	TAP @ TRILLI'S @ Kitchen Restaurant	25/10/01	26/10/01	160	160
Distilled Water				0	0
Greenwich	TAP @ Washroom @ H.C.	30/10/01	31/10/01	0	0
Nass Camp	TAP @ Kitchen	30/10/01	31/10/01	0	0
New Aiyem	TAP @ Kitchen	30/10/01	31/10/01	0	0
Distilled Water				0	0
New Aiyem	TAP @ Kitchen @ 4903 Goswell Lane	19/11/01	20/11/01	0	0
Nass Camp	TAP @ Washroom @ Mini-Mart	19/11/01	20/11/01	0	0
Greenwich	TAP @ " @ Health Ctr.	19/11/01	20/11/01	0	0
Distilled Water				0	0
Lx Ind. Camp	Washroom @ Kitchen/Hall	21/11/01	22/11/01	0	0
Lx Gallop	Coffee Room @ Health Ctr	21/11/01	22/11/01	0	0
Distilled Water				0	0
Lx Gallop	Washroom @ H.C.	05/11/01	06/11/01	0	0
" "	Industrial Camp @ Washroom/Kitchen	05/11/01	06/11/01	0	0
Greenwich	Washroom @ H.C.	05/11/01	06/11/01	0	0
New Aiyem	Coffee Rm @ RCMP	05/11/01	06/11/01	160	160
Distilled Water				0	0
Nass Camp	Washroom @ Mini-Mart	17/11/01	18/11/01	0	0
New Aiyem	Kitchen @ 4903 Goswell Lane	17/11/01	18/11/01	0	0
Greenwich	Washroom @ Health Ctr	17/11/01	18/11/01	0	0
Distilled Water				0	0
Nass Camp	Washroom @ Mini-Mart	27/12/01	28/12/01	0	0
Greenwich	Washroom @ H.C.	27/12/01	28/12/01	0	0
New Aiyem	Coffee Room @ RCMP Bldg	27/12/01	28/12/01	0	0

VILLAGE	LOCATION	DATE		COLIFORMS/100ML	
		SAMPLING	ANALYSIS	TOTAL	FECAL
NASS CAMP	TAP @ WASHROOM @ MINI-MART	15/01/02	16/01/02	0,0	0,0
GETUNKSHAKU	TAP @ " " " H.C.	15/01/02	16/01/02	0,0	0,0
LAKGATS'AP	" " " " "	15/01/02	16/01/02	0,0	0,0
	DISTILLED WATER	15/01/02	16/01/02	0	0
	DISTILLED WATER	30/01/02	31/01/02	0	0
GETUNKSHAKU	TAP @ COFFEE RM @ HC	30/01/02	31/01/02	0,0	0,0
LAKGATS'AP	TAP @ WASH ROOM @ HC	30/01/02	31/01/02	0,0	0,0
	DISTILLED WATER	12/02/02	13/02/02	0	0
GETUNKSHAKU	TAP @ WASHROOM @ H.C.	12/02/02	13/02/02	0,0	0,0
LAKGATS'AP	" " COFFEE RM @ "	12/02/02	13/02/02	0,0	0,0
NASS CAMP	" " WASHROOM @ MINI-MART	12/02/02	13/02/02	0,0	0,0
NEW AYAUSH	" " COFFEE RM @ DFO HQTRS	12/02/02	13/02/02	0,0	0,0
	DISTILLED WATER	28/02/02	01/03/02	0	0
NASS CAMP	TAP @ WASHROOM @ MINI-MART	28/02/02	01/03/02	0,0	0,0
NEW AYAUSH	TAP @ COFFEE RM @ RCMP HQ.	28/02/02	01/03/02	0,0	0,0
LAKGATS'AP	TAP @ " " @ HC	28/02/02	01/03/02	0,0	0,0
GETUNKSHAKU	TAP @ WASHROOM @ HC	28/02/02	01/03/02	0,0	0,0
	DISTILLED WATER	26/03/02	27/03/02	0	0
NASS CAMP	WASH ROOM @ TELUCUM MINI-MART	26/03/02	27/03/02	0,0	0,0
STEVE LADLAW'S RES. C.C.W. CORNER OF NESGA Hwy & PARKER		26/03/02	27/03/02	0,0	0,0
NEW AYAUSH	TAP @ KITCHEN @ 4903 GOSWELL	26/03/02	27/03/02	0,0	0,0
LAKGATS'AP	TAP @ COFFEE RM @ H.C.	26/03/02	27/03/02	0,0	0,0
GETUNKSHAKU	TAP @ WASH RM @ HC	26/03/02	27/03/02	0,0	0,0
	DISTILLED WATER	15/04/02	16/04/02	0	0
NASS CAMP	WASHROOM @ TELUCUM MINI-MART	15/04/02	16/04/02	2,0	0,0
NEW AYAUSH	TAP @ KITCHEN @ 4903 GOSWELL	15/04/02	16/04/02	0,0	0,0
LAKGATS'AP	TAP @ COFFEE RM @ HC	15/04/02	16/04/02	0,0	0,0
GETUNKSHAKU	TAP @ WASHROOM @ HC	15/04/02	16/04/02	0,0	0,0
	DISTILLED WATER	15/05/02	16/05/02	0	0
LAKGATS'AP	INDUSTRIAL CAMP @ WASHROOM/KITCHEN	15/05/02	16/05/02	0,0	0,0
LAKGATS'AP	HEALTH CTR. - @ COFFEE RM	15/05/02	16/05/02	0,0	0,0
GETUNKSHAKU	HEALTH CTR. - @ WASH ROOM	15/05/02	16/05/02	0,0	0,0
NEW AYAUSH	KITCHEN @ 4903 GOSWELL	15/05/02	16/05/02	0,0	0,0
NESGA FISHERIES	OUTSIDE TAP	15/05/02	16/05/02	0,0	0,0
NASS CAMP	WASHROOM @ TELUCUM MINI-MART	15/05/02	16/05/02	0,0	0,0
	DISTILLED WATER	20/06/02	21/06/02	0	0
NASS CAMP	WASH ROOM @ TELUCUM MINI-MART	20/06/02	21/06/02	0,0	0,0
NEW AYAUSH	TAP @ KITCHEN @ 4903 GOSWELL	20/06/02	21/06/02	0,0	0,0
GETUNKSHAKU	TAP @ WASH ROOM @ HEALTH CTR.	20/06/02	21/06/02	0,0	0,0
	DISTILLED WATER	09/10/02	10/10/02	0	0
LAKGATS'AP	COFFEE ROOM	09/10/02	10/10/02	0,0	0,0

Village	LOCATION	DATE		COLIFORMS/	
		SAMPLE	ANALYSIS	TOTAL	FECAL
NASS CAMP	WASHROOM @ MENE-MART	07/07/02	10/07/02	0/0	0/0
NEW ACRYASH	OUTDOOR TAP @ DEO ADMIN. BLDG	07/07/02	10/07/02	0/0	0/0
GETWINKSCHAU	WASHROOM @ HC	07/07/02	10/07/02	0/0	0/0
	DISTILLED WATER	13/07/02	24/07/02	0/0	0/0
LAKGASAP	COFFEE RM @ HC	23/07/02	24/07/02	0/0	0/0
GETWINKSCHAU	WASHROOM @ HC	23/07/02	24/07/02	0/0	0/0
NEW ACRYASH	KITCHEN @ 4903 GOSNELL	23/07/02	24/07/02	0/0	0/0
NASS CAMP	WASHROOM @ MENE-MART	23/07/02	24/07/02	0/0	0/0
	DISTILLED WATER	07/08/02	08/07/02	0/0	0/0
NASS CAMP	KITCHEN @ RESTAURANT	07/08/02	08/07/02	0/0	0/0
GETWINKSCHAU	WASHROOM @ HC	07/08/02	08/07/02	0/0	0/0
NEW ACRYASH	KITCHEN @ 4903 GOSNELL	07/08/02	08/07/02	0/0	0/0
LAKGASAP	KITCHEN @ INDUSTRIAL CAMP	07/08/02	08/07/02	0/0	0/0
LAKGASAP	COFFEE RM @ HC	07/08/02	08/07/02	0/0	0/0
	DISTILLED WATER	10/09/02	11/09/02	0/0	0/0
NASS CAMP	SINK @ WASHROOM @ MENE-MART	10/09/02	11/09/02	3436	0/0
GETWINKSCHAU	SINK " @ HC	10/09/02	11/09/02	0/0	0/0
NEW ACRYASH	" @ KITCHEN @ 4903 GOSNELL	10/09/02	11/09/02	0/0	0/0
	DISTILLED WATER	16/07/02	17/08/02	0/0	0/0
NASS CAMP	SINK @ KITCHEN @ RESTAURANT	16/07/02	17/08/02	0/0	0/0
GETWINKSCHAU	" @ WASHROOM @ HC	16/07/02	17/08/02	0/0	0/0
	DISTILLED WATER	24/07/02	25/08/02	0/0	0/0
LAKGASAP	INDUSTRIAL CAMP - WASHROOM @ RESTAURANT	24/07/02	25/08/02	0/0	0/0
LAKGASAP	HC - COFFEE RM	24/07/02	25/08/02	0/0	0/0
GETWINKSCHAU	HC - WASHROOM	24/07/02	25/08/02	0/0	0/0
GETWINKSCHAU	OUTSIDE TAP @ DEO H.Q.	24/07/02	25/08/02	0/0	0/0
PRIVATE RESIDENCE	KITCHEN @ GORD McINTYRE'S	24/08/02	25/08/02	0/0	0/0
NASS CAMP	KITCHEN @ RESTAURANT	24/08/02	25/08/02	1	0/0



**RESULTS OF ANALYSIS - Water**

File No. H4361

		New Aiyuash 97 06 13 08:45	Greenvi. Reservoir Dam 97 06 17 13:15	Canyon City Health 97 06 17 14:20
<b><u>Physical Tests</u></b>				
Colour	(CU)	<5	8	<5
Conductivity	(umhos/cm)	102	32	104
Total Dissolved Solids		56	20	56
Hardness	CaCO3	43.8	9.85	41.5
pH		7.55	6.95	7.22
Turbidity	(NTU)	<0.1	0.1	0.3
<b><u>Dissolved Anions</u></b>				
Alkalinity-Total	CaCO3	41	9	44
Chloride	Cl	0.9	<0.5	0.6
Fluoride	F	0.05	0.03	0.02
Sulphate	SO4	8	2	5
<b><u>Nutrients</u></b>				
Nitrate Nitrogen	N	0.014	0.010	<0.005
Nitrite Nitrogen	N	<0.001	<0.001	<0.001
<b><u>Total Metals</u></b>				
Aluminum	T-Al	<0.2	<0.2	<0.2
Arsenic	T-As	<0.0001	<0.0001	<0.0001
Barium	T-Ba	<0.01	<0.01	<0.01
Boron	T-B	<0.1	<0.1	<0.1
Cadmium	T-Cd	<0.0002	<0.0002	<0.0002
Calcium	T-Ca	13.2	3.61	15.1
Chromium	T-Cr	<0.01	<0.01	<0.01
Copper	T-Cu	0.01	<0.01	0.02
Iron	T-Fe	<0.03	<0.03	0.15
Lead	T-Pb	<0.001	0.001	<0.001
Magnesium	T-Mg	2.66	0.20	0.93
Manganese	T-Mn	<0.005	<0.005	0.011
Mercury	T-Hg	<0.00005	<0.00005	<0.00005
Potassium	T-K	<2	<2	<2
Selenium	T-Se	0.0006	<0.0005	<0.0005
Sodium	T-Na	<2	<2	<2
Zinc	T-Zn	0.006	<0.005	0.008

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.

Wally - Clark

**ASL**

**RESULTS OF ANALYSIS**

File No. 4827B  
Page 3

Gitwink- Green- sikhw ville  
Well Water Clinic  
Jan31/91 Jan30/91 Feb01/91  
New Aiyansh Drinking \*1 Water Guidelines

Physical Tests					
Colour	CU	11.0	9.0	<5.0	15.
Conductivity	umhos/cm	253	42.0	189	-
Hardness	CaCO3	115	16.5	89.9	- *2
pH		7.06	6.94	7.74	6.5-8.5
Turbidity	NTU	32.4	0.20	0.10	5.
Dissolved Anions					
Alkalinity	CaCO3	110	12.2	72.9	-
Chloride	Cl	2.5	0.9	0.9	250.
Fluoride	F	0.12	0.04	0.05	1.5
Silicate	SiO2	15.7	3.0	2.7	-
Sulphate	SO4	11.6	2.3	16.7	500.
Nutrients					
Nitrite/Nitrate Nitrogen	N	0.016	0.085	0.089	10.0
Total Metals					
Iron	T-Fe	2.20	<0.030	<0.030	0.30
Manganese	T-Mn	0.979	<0.005	<0.005	0.05
Dissolved Metals					
Arsenic	D-As	0.0009	<0.0001	<0.0001	0.05
Barium	D-Ba	0.045	<0.010	0.023	1.0
Cadmium	D-Cd	<0.0002	<0.0002	<0.0002	0.005
Calcium	D-Ca	36.6	6.01	26.2	-
Chromium	D-Cr	<0.015	<0.015	<0.015	0.05
Copper	D-Cu	<0.010	0.018	0.078	1.0
Iron	D-Fe	<0.030	<0.030	<0.030	-
Lead	D-Pb	<0.001	<0.001	<0.001	0.01
Magnesium	D-Mg	5.72	0.352	5.81	-
Manganese	D-Mn	0.955	<0.005	<0.005	-
Potassium	D-K	0.45	0.19	0.14	-
Sodium	D-Na	3.99	1.15	2.34	- *3
Zinc	D-Zn	0.032	<0.005	<0.005	5.0

< = Less than T = Total D = Dissolved  
 NO<sub>3</sub>/NO<sub>2</sub> = Nitrate/nitrite nitrogen  
 Results expressed as milligrams per litre except for pH,  
 Conductivity (umhos/cm), Colour (CU), and Turbidity (NTU).  
 \*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. Not a  
 health consideration.  
 \*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.

**Appendix D**  
**Wastewater Quality Test Results**  
**and WLAP Permit PE07330**

There are no wastewater test results.



MINISTRY OF ENVIRONMENT,  
LANDS AND PARKS

PERMIT  
PE07330

*Under the Provisions of the Waste Management Act*

**Laxgalts'ap Village Government**  
**Greenville, British Columbia**  
**VOJ 1X0**

is authorized to discharge effluent from a municipal sewage treatment facility located at Greenville, British Columbia, to ground, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Waste Management Act* and may result in prosecution.

1. AUTHORIZED DISCHARGES

1.1 The discharge of effluent to which this Sub-Section is applicable is from two lined starter ponds serving two septic tanks as shown on the attached Site Plan. The Environmental Protection reference number (S.E.A.M. site number) for this discharge is E220208.

1.1.1 The maximum rate at which effluent may be discharged is 230 m<sup>3</sup>/day.

1.1.2 The characteristics of the effluent shall be equivalent to or better than:

BOD <sub>5</sub>	130 mg/L
TSS	130 mg/L

1.1.3 The works authorized are two septic tanks, two lined starter ponds, two exfiltration lagoons and related appurtenances approximately located as shown on the attached Site Plan.

1.1.4 The location of the facilities from which the discharge originates is Lachkaltsap Indian Reserve No. 9, District Lot 1044, Cassiar District.

1.1.5 The location of the point of discharge is Lachkaltsap Indian Reserve No. 9, District Lot 1044, Cassiar District.

F. Rhebergen, P. Eng.  
Assistant Regional Waste Manager

Date issued: October 18, 1988

Amendment Date:  
(most recent) **MAR 30 1994**

Page: 1 of 5

PERMIT NO.: PE07330  
003267

## 2. GENERAL REQUIREMENTS

### 2.1 Sludge and Scum Removal

Sludge and scum shall be removed from the works semi annually, or at other frequencies as the Regional Waste Manager may allow, for disposal at a suitable site. The disposal arrangements require the consent of the Regional Waste Manager. Records of sludge and scum removal shall be maintained for inspection.

### 2.2 Exfiltration Lagoons

2.2.1 There shall be no overflow from the exfiltration lagoons to the receiving environment.

2.2.2 Surface drainage shall be diverted away from the exfiltration lagoons.

2.2.3 The residue, removed from the exfiltration lagoons shall be disposed of in a manner authorized by the Regional Waste Manager.

2.2.4 Vegetation shall be removed from the berms and the exfiltration lagoons at least once a year to allow exfiltration to occur.

### 2.3 Maintenance of Works and Emergency Procedures

The Permittee shall inspect the pollution control works regularly and maintain them in good working order. In the event of an emergency or condition beyond the control of the Permittee which prevents continuing operation of the approved method of pollution control, the Permittee shall immediately notify the Regional Waste Manager and take appropriate remedial action.

### 2.4 Bypasses

The discharge of effluent which has bypassed the designated treatment works is prohibited unless the consent of the Regional Waste Manager is obtained and confirmed in writing.

### 2.5 Process Modifications

The Permittee shall notify the Regional Waste Manager prior to implementing any changes that may affect the quality and/or quantity of the discharge.

Date issued: October 19, 1988

Amendment Date:

(most recent)  
Page: 2 of 5

MAR 30 1994



F. Rhabergan, P. Eng.  
Assistant Regional Waste Manager

PERMIT NO. : PE07330

003268

## 2.6 Future Upgrading of Works

The Regional Waste Manager may require future upgrading of the pollution control works to protect the environment.

## 3. MONITORING AND REPORTING REQUIREMENTS

### 3.1 Grab Sampling

The Permittee shall provide a suitable sampling facility and obtain a grab sample of the effluent from the starter ponds on a quarterly basis. Proper care should be taken in sampling, storing and transporting the samples to adequately control temperature and avoid contamination, breakage, etc.

### 3.2 Analyses

Obtain analyses of the sample for BOD<sub>5</sub> and TSS.

Analyses are to be carried out in accordance with procedures described in the second edition of "A Laboratory Manual for the Chemical Analysis of Waters, Wastewaters, Sediments and Biological Materials, (1976 edition including updates)", April 1979, 615 pp., or by suitable alternative procedures as authorized by the Regional Waste Manager.

Copies of the above manual are available from the Environmental Protection Division, Ministry of Environment, Lands and Parks, 777 Broughton Street, Victoria, British Columbia, V8V 1X5, at a cost of \$70.00, or if Part 1 only, 1976 edition, 389 pp., \$40.00 and Part 2 only, supplement, 226 pp., \$40.00, and are also available for inspection at all Environmental Protection Program Offices.

### 3.3 Environmental Impact

Inspections of the discharge will be carried out by Environmental Protection Program personnel as a part of the routine permit inspection procedure. Based on these inspections and any other information available to the Regional Waste Manager on the effect of the discharge on the receiving environment, the Permittee may be required to undertake additional monitoring and/or install additional pollution control works.

Date issued: October 19, 1988

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F. Rhebergen, P. Eng.  
Assistant Regional Waste Manager

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### 3.4 Reporting

Maintain data of analyses and flow measurements for inspection and submit the data, suitably tabulated, to the Regional Waste Manager on a quarterly frequency. The first report is to be submitted by April 31, 1994. All reports shall be submitted within 31 days of the end of the subject monitoring period.

Date Issued: October 19, 1988

Amendment Date:

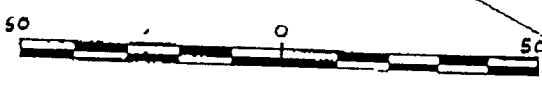
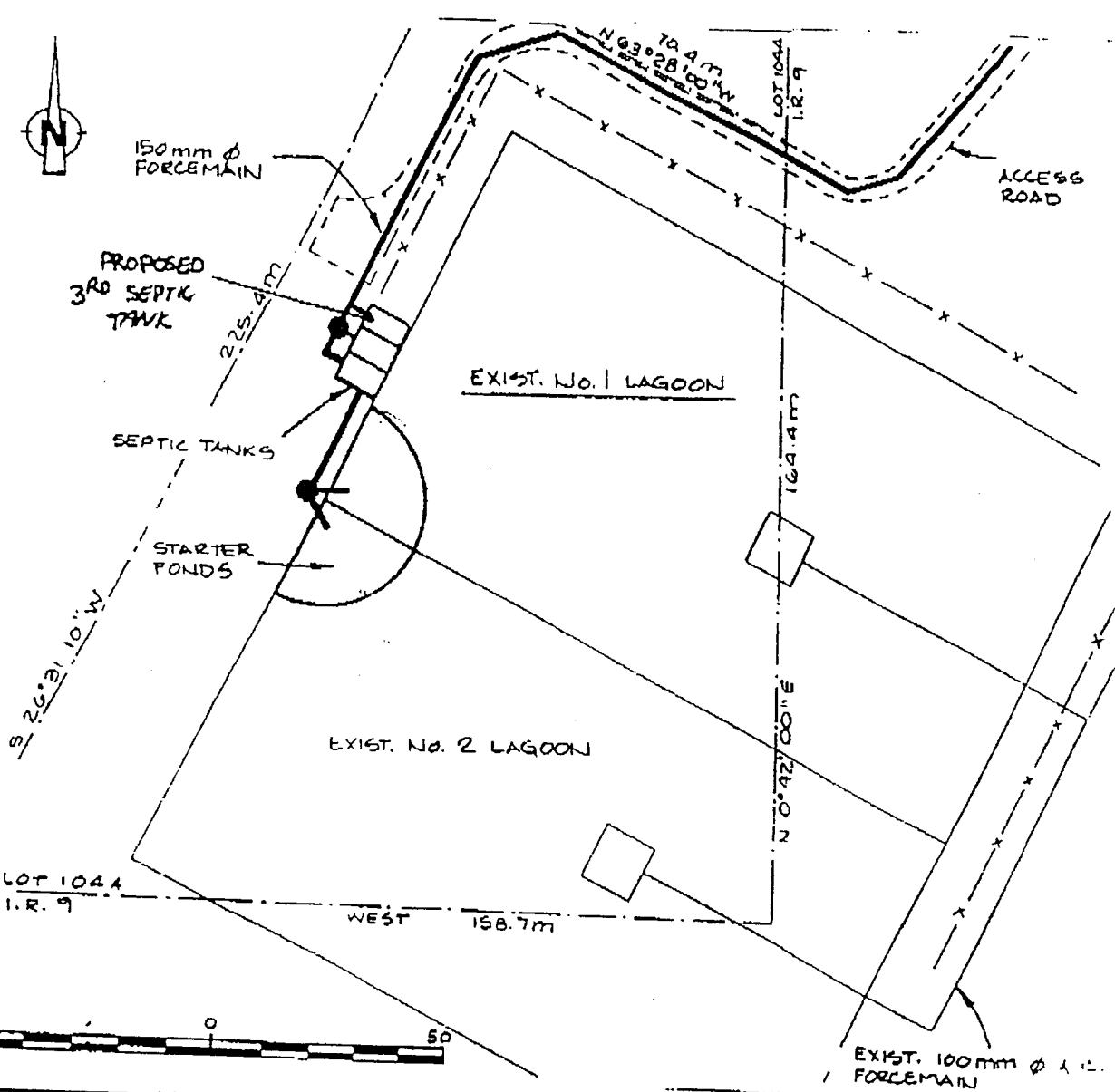
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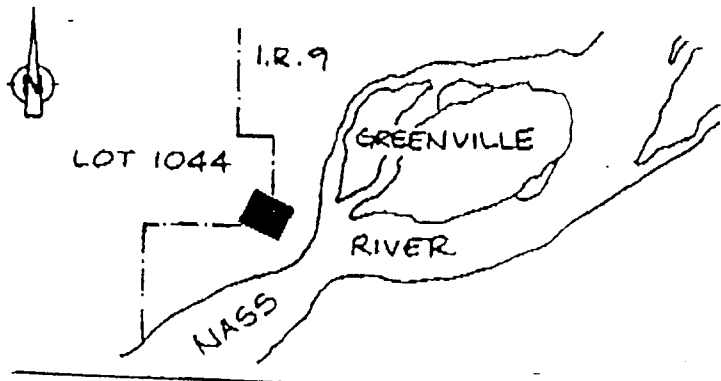


F. Rhebergen, P. Eng.  
Assistant Regional Waste Manager

# SITE PLAN



Location Map



Permit No.: PE07330

Date: **MAR 30 1994**

*F. Rhebergen*  
 F. Rhebergen, R. Eng.  
 Assistant Regional Waste Manager