



**Indian and Northern Affairs
Canada – BC Region**

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

Alexis Creek Indian Band

Prepared by:

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December 20, 2001
1-24-08238

**INDIAN AND NORTHERN AFFAIRS CANADA
ASSESSMENT STUDIES OF WATER AND WASTEWATER SYSTEMS AND
ASSOCIATED WATER MANAGEMENT PRACTICES – 2001
ALEXIS CREEK INDIAN BAND, BRITISH COLUMBIA**

APPENDIX C – HEALTH CANADA WATER SAMPLING RESULTS



ANALYTICAL SERVICES

15-May-01
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ANALYTICAL REPORT
Form 08051176

Client : HEALTH CANADA
Sampling site :

Philip ID : 11024579
Client ID : REDSTONE CS

| Sparcode | Parameter | Unit | MDL | CDWG | |
|--------------------|--------------------------------|-----------|-------|---------|---------|
| PHYSICAL | | | | | |
| 00041220 | pH | pH units | 0.1 | 6.5-8.5 | 7.7 |
| 00021300 | Color True | Col. Unit | 5 | 15 | 5 |
| 00111160 | Specific Conductance | uS/cm | 1 | --- | 327 |
| SCCACALC | Computed Conductance | uS/cm | | --- | 346 |
| CCPDCALC | Conductance % Diff. | % | | --- | 5.8 |
| 007H1035 | Residue Filterable 1.0u (TDS) | mg/L | 10 | 500 | 188 |
| CTDSCALC | Computed TDS | mg/L | | --- | 181 |
| TDSRCALC | TDS % Diff. | % | | --- | -3.6 |
| 00151140 | Turbidity | NTU | 0.10 | 1.0 | 0.88 |
| 0107CALC | Hardness Total -T | mg/L | | 500 | 130 |
| GENERAL INORGANICS | | | | | |
| 01011211 | Alkalinity Phen. 8.3 as CaCO3 | mg/L | 1 | --- | < 1 |
| 01021210 | Alkalinity Total as CaCO3 | mg/L | 1 | --- | 165 |
| CO3-CALC | Carbonate as CO3= | mg/L | | --- | < 0.5 |
| HCO3CALC | Bicarbonate as HCO3- | mg/L | | --- | 201 |
| OH-CALC | Hydroxide as OH- | mg/L | | --- | < 0.5 |
| ANIONS | | | | | |
| 11041334 | Chloride Dissolved | mg/L | 1.0 | < 250 | 1.9 |
| 11061341 | Fluoride Dissolved | mg/L | 0.10 | 1.5 | 0.15 |
| IonBCALC | Ion Balance | % | | --- | 1.6 |
| AnnxCALC | Total Anions | mcq/L | | --- | 3.56 |
| CtnxCALC | Total Cations | mcq/L | | --- | 3.67 |
| LmgCALC | Langelier Index | pH units | | --- | 0.0 |
| pHSACALC | Saturation pH | pH units | | --- | 7.7 |
| NITROGEN | | | | | |
| 1110CALC | Nitrate Nitrogen Dissolved (N) | mg/L | | 10.0 | 0.08 |
| 11091350 | Nitrate+Nitrite (N) | mg/L | 0.02 | 10.0 | 0.08 |
| 11111354 | Nitrite Nitrogen (N) | mg/L | 0.005 | 1.0 | < 0.005 |
| SULFATE | | | | | |
| 11211405 | Sulfate | mg/L | 1.0 | < 500 | 8.7 |

Matrix : Water
Sampled on: 01/05/03 16:00

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ANALYTICAL SERVICES

15-May-01
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ANALYTICAL REPORT
Form 08051176

Client : HEALTH CANADA
Sampling site :

Philip ID : 11024579
Client ID : REDSTONE CS

| Sparcode | Parameter | Unit | MDL | CDWG | |
|---------------------|-----------|------|---------|-------|-----------|
| METALS TOTAL | | | | | |
| Al-T0031 | Aluminum | mg/L | 0.02 | --- | < 0.02 |
| As-TMS31 | Arsenic | mg/L | 0.001 | 0.025 | 0.001 |
| Ba-T0031 | Barium | mg/L | 0.001 | 1.0 | 0.008 |
| B--T0031 | Boron | mg/L | 0.008 | 5.0 | 0.012 |
| Cd-TMS31 | Cadmium | mg/L | 0.0001 | 0.005 | < 0.0001 |
| Ca-T0031 | Calcium | mg/L | 0.05 | --- | 34.4 |
| Cr-T0031 | Chromium | mg/L | 0.002 | 0.05 | 0.003 |
| Cu-T0031 | Copper | mg/L | 0.001 | 1.0 | 0.006 |
| Fe-T0031 | Iron | mg/L | 0.005 | 0.3 | 0.108 |
| Pb-TMS31 | Lead | mg/L | 0.001 | 0.01 | 0.001 |
| Mg-T0031 | Magnesium | mg/L | 0.05 | --- | 10.6 |
| Mn-T0031 | Manganese | mg/L | 0.001 | 0.05 | 0.003 |
| Hg-T0310 | Mercury | mg/L | 0.00005 | 0.001 | < 0.00005 |
| K__T0031 | Potassium | mg/L | 0.4 | --- | 3.8 |
| Se-TMS31 | Selenium | mg/L | 0.001 | 0.01 | < 0.001 |
| Na-T0031 | Sodium | mg/L | 0.010 | 200 | 22.4 |
| U--TLLMS | Uranium | mg/L | 0.00001 | 0.1 | 0.00066 |
| Zn-T0031 | Zinc | mg/L | 0.002 | 5.0 | 0.090 |

Matrix : Water
Sampled on: 01/05/08 16:00

| | | | | |
|----------|-------------|------|------|----|
| 04/21/99 | | tntc | 3000 | 0 |
| 04/21/99 | s.19(1) | 2 | 0 | 0 |
| 04/21/99 | | 32 | 4 | 0 |
| 04/19/99 | School | 160 | 0 | 0 |
| 05/06/99 | Well # 2 | 4 | 0 | 0 |
| 05/06/99 | Band Office | 0 | 0 | 0 |
| 05/06/99 | School | 2 | 0 | 0 |
| 05/06/99 | Clinic | 0 | 0 | 0 |
| 05/06/99 | | 0 | 0 | 0 |
| 05/06/99 | | 0 | 0 | 0 |
| 05/06/99 | | 0 | 0 | 0 |
| 05/06/99 | | 0 | 0 | 0 |
| 05/06/99 | | 804 | 0 | 0 |
| 05/19/99 | Well # 2 | 2 | 0 | 0 |
| 05/19/99 | | 0 | 0 | 0 |
| 05/19/99 | s.19(1) | 0 | 0 | 0 |
| 05/19/99 | Store | 0 | 0 | 0 |
| 05/19/99 | | 536 | 8 | 0 |
| 05/19/99 | s.19(1) | 0 | 0 | 0 |
| 05/19/99 | | 18 | 14 | 0 |
| 06/16/99 | | 120 | 0 | 0 |
| 06/16/99 | School | 0 | 0 | 0 |
| 06/16/99 | | 0 | 0 | 0 |
| 06/16/99 | s.19(1) | 4 | 118 | 0 |
| 06/16/99 | | 0 | 20 | 20 |
| 06/16/99 | | 8 | 0 | 0 |
| 07/05/99 | Clinic | 0 | 0 | 0 |
| 07/06/99 | s.19(1) | 0 | 0 | 0 |

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|----------|-------------|---------|------|----|---|
| 08/25/99 | | | 4 | 0 | 0 |
| 09/09/99 | | | 96 | 10 | 2 |
| 09/09/99 | | | 100 | 0 | 0 |
| 09/09/99 | | | 0 | 0 | 0 |
| 09/09/99 | | | 18 | 0 | 0 |
| 09/09/99 | School | | 0 | 0 | 0 |
| 09/09/99 | | | 48 | 0 | 0 |
| 09/23/99 | | s.19(1) | 0 | 0 | 0 |
| 09/23/99 | | | 8 | 0 | 0 |
| 09/23/99 | Clinic | | 0 | 0 | 0 |
| 09/23/99 | | | 0 | 0 | 0 |
| 09/23/99 | | 9(1) | 1126 | 0 | 0 |
| 09/23/99 | | | 114 | 0 | 0 |
| 09/23/99 | School | | 0 | 0 | 0 |
| 09/23/99 | | | 0 | 0 | 0 |
| 09/23/99 | | | 112 | 0 | 0 |
| 10/07/99 | | | 0 | 0 | 0 |
| 10/07/99 | | | 0 | 0 | 0 |
| 10/07/99 | | 19(1) | 74 | 0 | 0 |
| 10/07/99 | | | 2 | 0 | 0 |
| 10/07/99 | | | 18 | 2 | 0 |
| 10/07/99 | | | 0 | 0 | 0 |
| 10/07/99 | Band Office | | 1474 | 0 | 0 |
| 10/21/99 | Store | | 0 | 0 | 0 |
| 10/21/99 | | | 0 | 0 | 0 |
| 10/21/99 | | | 0 | 0 | 0 |
| 10/21/99 | | s.19(1) | 0 | 0 | 0 |
| 10/21/99 | | | 72 | 0 | 0 |

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|----------|---------|--|----|---|---|
| 12/16/99 | s.19(1) | | 0 | 0 | 0 |
| 12/16/99 | | | 0 | 0 | 0 |
| 12/16/99 | | | 0 | 0 | 0 |
| 12/16/99 | | | 0 | 0 | 0 |
| 12/16/99 | | | 0 | 0 | 0 |
| 12/16/99 | | | 2 | 0 | 0 |
| 12/16/99 | | | 14 | 0 | 0 |
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Community ::

ALEXIS CREEK - REDSTONE

Sampling Year ::

2001

| DATE | LOCATION | GB | TC | FC |
|----------|----------|-----------|----|----|
| 01/09/01 | | 0 | 0 | 0 |
| 01/09/01 | | 0 | 0 | 0 |
| 01/09/01 | | 14 | 0 | 0 |
| 01/09/01 | | 0 | 0 | 0 |
| 01/09/01 | | 0 | 0 | 0 |
| 01/09/01 | | 0 | 0 | 0 |
| 01/09/01 | | 74 | 0 | 0 |
| 01/09/01 | | 0 | 0 | 0 |
| 01/24/01 | | 2 | 0 | 0 |
| 01/24/01 | | 2 | 0 | 0 |
| 01/24/01 | | 0 | 61 | 68 |
| 01/24/01 | | 10 | 0 | 0 |
| 01/24/01 | | 0 | 0 | 0 |
| 01/24/01 | | 4 | 0 | 0 |
| 01/24/01 | | 0 | 0 | 0 |
| 01/24/01 | | 17 | 0 | 0 |
| 01/24/01 | | 0 | 0 | 0 |
| 02/13/01 | | 0 | 0 | 0 |
| 02/13/01 | | 0 | 0 | 0 |
| 02/13/01 | School | 0 | 0 | 0 |
| 02/13/01 | | 0 | 0 | 0 |
| 02/13/01 | | s.19(1) 0 | 0 | 0 |
| 02/13/01 | | 0 | 0 | 0 |

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|----------|--|-------|---|---|
| 05/10/00 | School | 74 | 0 | 0 |
| 05/10/00 | Teacherage | 0 | 0 | 0 |
| 05/10/00 |  s.19(1) | 2 | 0 | 0 |
| 05/10/00 | Band Office | 2 | 0 | 0 |
| 05/10/00 |  | 0 | 0 | 0 |
| 05/10/00 |  s.19(1) | 162 | 0 | 0 |
| 05/10/00 |  | 48 | 0 | 0 |
| 05/10/00 |  | 20 | 0 | 0 |
| 05/30/00 | School Staffroom (Bottled Water) | 4610 | 0 | 0 |
| 05/30/00 | Band Office (Bottled Water) | 226 | 0 | 0 |
| 05/30/00 | School Grs 1,2,3 (Bottled Water) | 3000 | 0 | 0 |
| 05/30/00 | School Grs 4,5,6 (Bottled Water) | 3000 | 0 | 0 |
| 05/30/00 | Big Kids Class (Bottled Water) | 15008 | 0 | 0 |
| 05/30/00 | Band Office | 0 | 0 | 0 |
| 05/30/00 |  | 0 | 0 | 0 |
| 05/30/00 |  | 0 | 0 | 0 |
| 05/30/00 |  s.19(1) | 2 | 0 | 0 |
| 05/30/00 |  | 2 | 0 | 0 |
| 05/30/00 |  | 0 | 0 | 0 |
| 06/19/00 | School Staffroom (Bottled Water) | 1426 | 0 | 0 |
| 06/19/00 | Band Office (Bottled Water) | 1849 | 0 | 0 |
| 06/19/00 | School Grs 1,2,3 (Bottled Water) | 27872 | 0 | 0 |
| 06/19/00 | School Grs 4,5,6 (Bottled Water) | 3109 | 0 | 0 |
| 06/19/00 | Big Kids Class (Bottled Water) | 2948 | 0 | 0 |
| 06/19/00 |  | 2385 | 0 | 0 |
| 06/19/00 |  s.19(1) | 2466 | 2 | 0 |
| 06/19/00 |  | 12 | 2 | 0 |
| 06/19/00 |  | 0 | 0 | 0 |

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|----------|-------------------------------------|-------|------|----|---|
| 08/03/00 | | | 482 | 0 | 0 |
| 08/31/00 | | | 10 | 0 | 0 |
| 08/31/00 | | | 0 | 0 | 0 |
| 08/31/00 | | 1) | 0 | 0 | 0 |
| 08/31/00 | | | 2948 | 90 | 0 |
| 08/31/00 | | | 616 | 0 | 0 |
| 08/31/00 | | | 50 | 6 | 0 |
| 08/31/00 | | | 3000 | 76 | 0 |
| 09/13/00 | Clinic | | 0 | 0 | 0 |
| 09/13/00 | Gas Bar | | 0 | 0 | 0 |
| 09/13/00 | | | 52 | 2 | 0 |
| 09/13/00 | | | 0 | 0 | 0 |
| 09/13/00 | | | 3000 | 74 | 0 |
| 09/13/00 | | 19(1) | 0 | 0 | 0 |
| 09/13/00 | | | 16 | 0 | 0 |
| 09/13/00 | | | 0 | 0 | 0 |
| 09/26/00 | Band Office (Bottled Water) | | 3000 | 0 | 0 |
| 09/26/00 | School Grade 1 (Bottled Water) | | 3000 | 0 | 0 |
| 09/26/00 | School Grades 4 & 5 (Bottled Water) | | 0 | 0 | 0 |
| 09/26/00 | School Grades 6 & 7 | | 4 | 0 | 0 |
| 09/26/00 | | | 0 | 0 | 0 |
| 09/26/00 | | | 6 | 0 | 0 |
| 09/26/00 | | 19(1) | 0 | 0 | 0 |
| 09/26/00 | | | 0 | 0 | 0 |
| 09/26/00 | | | 4 | 0 | 0 |
| 09/26/00 | | | 858 | 4 | 0 |
| 09/26/00 | | | 0 | 0 | 0 |
| 09/26/00 | | | 92 | 0 | 0 |

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|----------|--------------------|---|---|---|
| 11/29/00 | [REDACTED] s.19(1) | 0 | 0 | 0 |
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|----------|-------------------------------------|--------|----|---|
| 02/13/01 | Band Office | 0 | 0 | 0 |
| 02/13/01 | s.19(1) | 0 | 0 | 0 |
| 02/13/01 | | 0 | 0 | 0 |
| 02/13/01 | | 478 | 4 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/02/01 | | 2 | 0 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/02/01 | | 2 | 0 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/02/01 | | 42 | 0 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/02/01 | | 6 | 0 | 0 |
| 03/02/01 | | 0 | 0 | 0 |
| 03/10/01 | | School | 0 | 0 |
| 03/10/01 | s.19(1) | 0 | 0 | 0 |
| 03/10/01 | Band Office | 0 | 0 | 0 |
| 03/10/01 | s.19(1) | 0 | 0 | 0 |
| 03/10/01 | School Grades 4 & 5 (Bottled Water) | 3000 | 0 | 0 |
| 03/10/01 | s.19(1) | 12 | 0 | 0 |
| 03/10/01 | Band Office (Bottled Water) | 1662 | 0 | 0 |
| 03/10/01 | s.19(1) | 2 | 0 | 0 |
| 03/10/01 | School Grades 7 & 8 (Bottled Water) | 60 | 0 | 0 |
| 03/10/01 | s.19(1) | 0 | 0 | 0 |
| 03/14/01 | | 0 | 0 | 0 |
| 03/14/01 | | 1046 | 64 | 0 |
| 03/14/01 | | 2 | 0 | 0 |
| 03/14/01 | | 0 | 0 | 0 |

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|----------|----------------------|---------|-------|---|---|
| 05/30/01 | | | 0 | 2 | 0 |
| 05/30/01 | | s.19(1) | 8 | 0 | 0 |
| 05/30/01 | | | 0 | 0 | 0 |
| 06/14/01 | Health Center | | 2 | 0 | 0 |
| 06/13/01 | Club | | 6 | 0 | 0 |
| 06/13/01 | | | 0 | 0 | 0 |
| 06/13/01 | | | 0 | 0 | 0 |
| 06/13/01 | | s.19(1) | 4502 | 0 | 0 |
| 06/13/01 | | | 144 | 0 | 0 |
| 06/13/01 | Justice (Old Clinic) | | 0 | 0 | 0 |
| 06/13/01 | Store | | 0 | 0 | 0 |
| 06/13/01 | | s.19(1) | 0 | 0 | 0 |
| 06/27/01 | Garage | | 0 | 0 | 0 |
| 06/27/01 | | | 0 | 0 | 0 |
| 06/27/01 | | | 0 | 0 | 0 |
| 06/27/01 | | | 26 | 0 | 0 |
| 06/27/01 | | | 0 | 0 | 0 |
| 06/27/01 | | | 0 | 0 | 0 |
| 07/19/01 | | | 2 | 0 | 0 |
| 07/19/01 | | | 0 | 0 | 0 |
| 07/19/01 | | | 0 | 0 | 0 |
| 07/19/01 | | | 2 | 0 | 0 |
| 07/19/01 | | | 4 | 0 | 0 |
| 07/19/01 | | | 8 | 0 | 0 |
| 07/19/01 | | | 0 | 0 | 0 |
| 07/19/01 | | | 422 | 0 | 0 |
| 07/24/01 | | | 21976 | 0 | 0 |

