

CERTIFICATE OF ANALYSIS



CLIENT **Regional District of Thompson Nicola**
300 - 465 Victoria Street
Kamloops BC TEL 1-250-377-8673
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ATTENTION **Denise Roberts**

RECEIVED / TEMP Nov-30-11 12:45 / 14.0 °C **WORK ORDER** K1K1163
REPORTED Dec-06-11 **PROJECT** Vavenby System CWS
COC #(s) 40837.5581

General Comments:

CARO Analytical Services employs methods which are based on those found in "Standard Methods for the Examination of Water and Wastewater", 21st Edition, 2005, published by the American Public Health Association (APHA); US EPA protocols found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846", 3rd Edition; protocols published by the British Columbia Ministry of Environment (BCMOE); and/or CCME Canada-wide Standard Reference methods.

Methods not described in these publications are conducted according to procedures accepted by appropriate regulatory agencies, and/or are done in accordance with recognized professional standards using accepted testing methodologies and quality control efforts except where otherwise agreed to by the client.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. CARO is not responsible for any loss or damage resulting directly or indirectly from error or omission in the conduct of testing. Liability is limited to the cost of analysis. Samples will be disposed of 30 days after the test report has been issued unless otherwise agreed to in writing.

- All solids results are reported on a dry weight basis unless otherwise noted
- Units:
 - mg/kg = milligrams per kilogram, equivalent to parts per million (ppm)
 - mg/L = milligrams per litre, equivalent to parts per million (ppm)
 - ug/L = micrograms per litre, equivalent to parts per billion (ppb)
 - ug/g = micrograms per gram, equivalent to parts per million (ppm)
 - ug/m3 = micrograms per cubic meter of air
- "RDL" Reported detection limit
- "<" Less than reported detection limit
- "AO" Aesthetic objective
- "MAC" Maximum acceptable concentration (health-related guideline)
- "LAB" RMD = Richmond location, KEL = Kelowna location, EDM = Edmonton location, SUB = Subcontracted

Please contact CARO if more information is needed or to provide feedback on our services.

CARO Analytical Services

Final Review Per: **Sarah Speier, B.Sc. For Jennifer Shanko, ASCT**
Administration Coordinator

CARO Analytical Services

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SAMPLE DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | RDL | Units | Prepared | Analyzed | Notes |
|---------|--------|-----|-------|----------|----------|-------|
|---------|--------|-----|-------|----------|----------|-------|

General Parameters

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45

| | | | | | | |
|----------------------------------|--------|-------|------------|-----------|-----------|------|
| Alkalinity, Total as CaCO3 | 182 | 1.0 | mg/L | Nov-30-11 | Dec-02-11 | |
| Alkalinity, Carbonate as CaCO3 | < 1.0 | 1.0 | mg/L | Nov-30-11 | Dec-02-11 | |
| Alkalinity, Bicarbonate as CaCO3 | 182 | 1.0 | mg/L | Nov-30-11 | Dec-02-11 | |
| Alkalinity, Hydroxide as CaCO3 | < 1.0 | 1.0 | mg/L | Nov-30-11 | Dec-02-11 | |
| Chloride | 34.8 | 0.10 | mg/L | Nov-30-11 | Nov-30-11 | |
| Colour, True | < 5 | 5 | Color Unit | Dec-02-11 | Dec-05-11 | |
| Conductivity (EC) | 518 | 2 | uS/cm | Nov-30-11 | Dec-01-11 | |
| Fluoride | < 0.10 | 0.10 | mg/L | Nov-30-11 | Nov-30-11 | |
| Hardness, Total (Total as CaCO3) | 240 | 5.00 | mg/L | N/A | N/A | |
| Hardness, Total (Diss. as CaCO3) | 223 | 4.99 | mg/L | N/A | N/A | |
| Nitrogen, Ammonia as N | 0.01 | 0.01 | mg/L | Nov-30-11 | Nov-30-11 | PRES |
| Nitrogen, Nitrate+Nitrite as N | 1.62 | 0.020 | mg/L | N/A | N/A | |
| Nitrogen, Nitrate as N | 1.62 | 0.010 | mg/L | Nov-30-11 | Nov-30-11 | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | Nov-30-11 | Nov-30-11 | |
| Solids, Total Dissolved | 287 | 5 | mg/L | Dec-01-11 | Dec-02-11 | |
| Sulfate | 28.4 | 1.0 | mg/L | Nov-30-11 | Nov-30-11 | |
| UV Transmittance @ 254nm | 89.2 | 0.1 | % | Dec-05-11 | Dec-06-11 | |

Dissolved Metals

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45

| | | | | | | |
|-----------------------|-----------|---------|------|-----------|-----------|--|
| Aluminum, dissolved | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Antimony, dissolved | < 0.0200 | 0.0200 | mg/L | Dec-01-11 | Dec-01-11 | |
| Arsenic, dissolved | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Barium, dissolved | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Beryllium, dissolved | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Bismuth, dissolved | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Boron, dissolved | < 0.040 | 0.040 | mg/L | Dec-01-11 | Dec-01-11 | |
| Cadmium, dissolved | < 0.00010 | 0.00010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Calcium, dissolved | 58.2 | 2.0 | mg/L | Dec-01-11 | Dec-01-11 | |
| Chromium, dissolved | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Cobalt, dissolved | < 0.00050 | 0.00050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Copper, dissolved | 0.0182 | 0.0020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Iron, dissolved | < 0.10 | 0.10 | mg/L | Dec-01-11 | Dec-01-11 | |
| Lead, dissolved | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Lithium, dissolved | 0.0067 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Magnesium, dissolved | 18.8 | 0.10 | mg/L | Dec-01-11 | Dec-01-11 | |
| Manganese, dissolved | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Mercury, dissolved | < 0.00020 | 0.00020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Molybdenum, dissolved | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Nickel, dissolved | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Phosphorus, dissolved | < 0.20 | 0.20 | mg/L | Dec-01-11 | Dec-01-11 | |
| Potassium, dissolved | 4.10 | 0.20 | mg/L | Dec-01-11 | Dec-01-11 | |
| Selenium, dissolved | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Silicon, dissolved | < 5.0 | 5.0 | mg/L | Dec-01-11 | Dec-01-11 | |
| Silver, dissolved | < 0.00050 | 0.00050 | mg/L | Dec-01-11 | Dec-01-11 | |

SAMPLE DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | RDL | Units | Prepared | Analyzed | Notes |
|---------|--------|-----|-------|----------|----------|-------|
|---------|--------|-----|-------|----------|----------|-------|

Dissolved Metals, Continued

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45, Continued

| | | | | | | |
|----------------------|----------------|---------|------|-----------|-----------|--|
| Sodium, dissolved | 22.3 | 0.20 | mg/L | Dec-01-11 | Dec-01-11 | |
| Strontium, dissolved | 0.424 | 0.010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Tellurium, dissolved | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Thallium, dissolved | < 0.00020 | 0.00020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Thorium, dissolved | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Tin, dissolved | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Titanium, dissolved | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-01-11 | |
| Uranium, dissolved | 0.00681 | 0.00020 | mg/L | Dec-01-11 | Dec-01-11 | |
| Vanadium, dissolved | < 0.010 | 0.010 | mg/L | Dec-01-11 | Dec-01-11 | |
| Zinc, dissolved | < 0.040 | 0.040 | mg/L | Dec-01-11 | Dec-01-11 | |
| Zirconium, dissolved | < 0.001 | 0.001 | mg/L | Dec-01-11 | Dec-01-11 | |

Total Recoverable Metals

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45

| | | | | | | |
|------------|---------------|---------|------|-----------|-----------|--|
| Aluminum | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Antimony | < 0.0200 | 0.0200 | mg/L | Dec-01-11 | Dec-02-11 | |
| Arsenic | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Barium | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Beryllium | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Bismuth | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Boron | < 0.040 | 0.040 | mg/L | Dec-01-11 | Dec-02-11 | |
| Cadmium | < 0.00010 | 0.00010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Calcium | 63.2 | 2.0 | mg/L | Dec-01-11 | Dec-02-11 | |
| Chromium | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Cobalt | < 0.00050 | 0.00050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Copper | 0.0176 | 0.0020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Iron | < 0.10 | 0.10 | mg/L | Dec-01-11 | Dec-02-11 | |
| Lead | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Lithium | 0.0077 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Magnesium | 19.8 | 0.10 | mg/L | Dec-01-11 | Dec-02-11 | |
| Manganese | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Mercury | < 0.00020 | 0.00020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Molybdenum | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Nickel | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Phosphorus | < 0.20 | 0.20 | mg/L | Dec-01-11 | Dec-02-11 | |
| Potassium | 4.25 | 0.20 | mg/L | Dec-01-11 | Dec-02-11 | |
| Selenium | < 0.0050 | 0.0050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Silicon | < 5.0 | 5.0 | mg/L | Dec-01-11 | Dec-02-11 | |
| Silver | < 0.00050 | 0.00050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Sodium | 26.4 | 0.20 | mg/L | Dec-01-11 | Dec-02-11 | |
| Strontium | 0.427 | 0.010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Tellurium | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Thallium | < 0.00020 | 0.00020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Thorium | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Tin | < 0.0020 | 0.0020 | mg/L | Dec-01-11 | Dec-02-11 | |

SAMPLE DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | RDL | Units | Prepared | Analyzed | Notes |
|---------|--------|-----|-------|----------|----------|-------|
|---------|--------|-----|-------|----------|----------|-------|

Total Recoverable Metals, Continued

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45, Continued

| | | | | | | |
|-----------|----------------|---------|------|-----------|-----------|--|
| Titanium | < 0.050 | 0.050 | mg/L | Dec-01-11 | Dec-02-11 | |
| Uranium | 0.00671 | 0.00020 | mg/L | Dec-01-11 | Dec-02-11 | |
| Vanadium | < 0.010 | 0.010 | mg/L | Dec-01-11 | Dec-02-11 | |
| Zinc | < 0.040 | 0.040 | mg/L | Dec-01-11 | Dec-02-11 | |
| Zirconium | < 0.0010 | 0.0010 | mg/L | Dec-01-11 | Dec-02-11 | |

Volatile Organic Compounds

3116 Ball Rd. Vavenby CWS (K1K1163-01) Matrix: Water Sampled: Nov-29-11 10:45

| | | | | | | |
|--|--------------|---------------|------|------------------|------------------|--|
| Bromodichloromethane | 0.004 | 0.001 | mg/L | Dec-01-11 | Dec-02-11 | |
| Bromoform | < 0.001 | 0.001 | mg/L | Dec-01-11 | Dec-02-11 | |
| Chloroform | 0.005 | 0.001 | mg/L | Dec-01-11 | Dec-02-11 | |
| Dibromochloromethane | < 0.001 | 0.001 | mg/L | Dec-01-11 | Dec-02-11 | |
| Trihalomethanes (total) | 0.010 | 0.004 | mg/L | Dec-01-11 | Dec-02-11 | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>81 %</i> | <i>80-120</i> | | <i>Dec-01-11</i> | <i>Dec-02-11</i> | |

Sample Qualifiers:

F1 The sample was not field-filtered and was therefore filtered (0.45um) in the laboratory prior to analysis.
 PRES Sample has been Preserved

ANALYSIS / REPORT INFORMATION



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analysis Description | Method Reference(s) (* = modified from) | | LAB |
|-------------------------------|---|-------------------|-----|
| | Preparation | Analysis | |
| Dissolved Metals | N/A | EPA 6020A | RMD |
| Alkalinity, all | N/A | APHA 2320 B * | KEL |
| Chloride by IC | N/A | APHA 4110 B | KEL |
| True Colour | N/A | APHA 2120 B | KEL |
| Conductivity-Water | N/A | APHA 2510 B | KEL |
| Fluoride by IC | N/A | APHA 4110 B | KEL |
| Ammonia-N | N/A | APHA 4500-NH3 G * | KEL |
| Nitrate by IC | N/A | APHA 4110 B | KEL |
| Nitrate+Nitrite-N | | [CALC] | KEL |
| Nitrite by IC | N/A | APHA 4110 B | KEL |
| Total Dissolved Solids (180C) | N/A | APHA 2540 C * | KEL |
| Sulfate by IC | N/A | APHA 4110 B | KEL |
| UV Transmittance at 254nm | N/A | APHA 5910 B | KEL |
| Total Recoverable Metals | EPA 200.2 * | EPA 6020A | RMD |
| Trihalomethanes | EPA 5030B | EPA 8260B | RMD |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

The following section reports quality control (QC) data that is associated with your sample data. Groups of samples are prepared in "batches" and analyzed in conjunction with quality control samples that ensure your data is of the highest quality. Common QC types include:

- Method Blank (Blk): Laboratory reagent water is carried through sample preparation and analysis steps. Method Blanks indicate that results are free from contamination, i.e. not biased high from sources such as the sample container or the laboratory environment
- Duplicate (Dup): Preparation and analysis of a replicate aliquot of a sample. Duplicates provide a measure of the analytical method's precision, i.e. how reproducible a result is. Duplicates are only reported if they are associated with your sample data.
- Blank Spike (BS): A known amount of standard is carried through sample preparation and analysis steps. Blank Spikes, also known as laboratory control samples (LCS), are prepared from a different source of standard than used for the calibration. They ensure that the calibration is acceptable (i.e. not biased high or low) and also provide a measure of the analytical method's accuracy (i.e. closeness of the result to a target value).
- Standard Reference Material (SRM): A material of similar matrix to the samples, externally certified for the parameter(s) listed. Standard Reference Materials ensure that the preparation steps in the method are adequate to achieve acceptable recoveries of the parameter(s) tested for.

Each QC type is analyzed at a 5-10% frequency, i.e. one blank/duplicate/spike for every 10 samples. For all types of QC, the specified recovery (% Rec) and relative percent difference (RPD) limits are derived from long-term method performance averages and/or prescribed by the reference method.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | % REC | % RPD | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-------|-------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-------|-------|-------|

Dissolved Metals, Batch B1L0004

Blank (B1L0004-BLK1)

Prepared: Dec-01-11, Analyzed: Dec-01-11

| | | | | | | | | |
|-----------------------|-----------|---------|------|--|--|--|--|--|
| Aluminum, dissolved | < 0.050 | 0.050 | mg/L | | | | | |
| Antimony, dissolved | < 0.0200 | 0.0200 | mg/L | | | | | |
| Arsenic, dissolved | < 0.0050 | 0.0050 | mg/L | | | | | |
| Barium, dissolved | < 0.050 | 0.050 | mg/L | | | | | |
| Beryllium, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Bismuth, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Boron, dissolved | < 0.040 | 0.040 | mg/L | | | | | |
| Cadmium, dissolved | < 0.00010 | 0.00010 | mg/L | | | | | |
| Calcium, dissolved | < 2.0 | 2.0 | mg/L | | | | | |
| Chromium, dissolved | < 0.0050 | 0.0050 | mg/L | | | | | |
| Cobalt, dissolved | < 0.00050 | 0.00050 | mg/L | | | | | |
| Copper, dissolved | < 0.0020 | 0.0020 | mg/L | | | | | |
| Iron, dissolved | < 0.10 | 0.10 | mg/L | | | | | |
| Lead, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Lithium, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Magnesium, dissolved | < 0.10 | 0.10 | mg/L | | | | | |
| Manganese, dissolved | < 0.0020 | 0.0020 | mg/L | | | | | |
| Mercury, dissolved | < 0.00020 | 0.00020 | mg/L | | | | | |
| Molybdenum, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Nickel, dissolved | < 0.0020 | 0.0020 | mg/L | | | | | |
| Phosphorus, dissolved | < 0.20 | 0.20 | mg/L | | | | | |
| Potassium, dissolved | < 0.20 | 0.20 | mg/L | | | | | |
| Selenium, dissolved | < 0.0050 | 0.0050 | mg/L | | | | | |
| Silicon, dissolved | < 5.0 | 5.0 | mg/L | | | | | |
| Silver, dissolved | < 0.00050 | 0.00050 | mg/L | | | | | |
| Sodium, dissolved | < 0.20 | 0.20 | mg/L | | | | | |
| Strontium, dissolved | < 0.010 | 0.010 | mg/L | | | | | |
| Tellurium, dissolved | < 0.0020 | 0.0020 | mg/L | | | | | |
| Thallium, dissolved | < 0.00020 | 0.00020 | mg/L | | | | | |
| Thorium, dissolved | < 0.0010 | 0.0010 | mg/L | | | | | |
| Tin, dissolved | < 0.0020 | 0.0020 | mg/L | | | | | |
| Titanium, dissolved | < 0.050 | 0.050 | mg/L | | | | | |
| Uranium, dissolved | < 0.00020 | 0.00020 | mg/L | | | | | |
| Vanadium, dissolved | < 0.010 | 0.010 | mg/L | | | | | |
| Zinc, dissolved | < 0.040 | 0.040 | mg/L | | | | | |
| Zirconium, dissolved | < 0.001 | 0.001 | mg/L | | | | | |

Reference (B1L0004-SRM1)

Prepared: Dec-01-11, Analyzed: Dec-01-11

| | | | | | | |
|---------------------|--------|--------|------|--------|----|--------|
| Aluminum, dissolved | 0.206 | 0.050 | mg/L | 0.209 | 99 | 74-127 |
| Antimony, dissolved | 0.0377 | 0.0200 | mg/L | 0.0400 | 94 | 86-116 |
| Arsenic, dissolved | 0.396 | 0.0050 | mg/L | 0.404 | 98 | 84-111 |
| Barium, dissolved | 3.10 | 0.050 | mg/L | 3.12 | 99 | 87-114 |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit Units | Spike Level | Source Result | % REC | % REC Limits | % RPD | % RPD Limit | Notes |
|---------|--------|-----------------------|-------------|---------------|-------|--------------|-------|-------------|-------|
|---------|--------|-----------------------|-------------|---------------|-------|--------------|-------|-------------|-------|

Dissolved Metals, Batch B1L0004, Continued

Reference (B1L0004-SRM1), Continued

Prepared: Dec-01-11, Analyzed: Dec-01-11

| | | | | | |
|-----------------------|--------|--------------|--------|-----|--------|
| Beryllium, dissolved | 0.208 | 0.0010 mg/L | 0.197 | 106 | 78-127 |
| Boron, dissolved | 1.60 | 0.040 mg/L | 1.61 | 99 | 74-117 |
| Cadmium, dissolved | 0.197 | 0.00010 mg/L | 0.200 | 98 | 89-110 |
| Calcium, dissolved | 6.6 | 2.0 mg/L | 6.50 | 102 | 83-128 |
| Chromium, dissolved | 0.403 | 0.0050 mg/L | 0.401 | 100 | 87-112 |
| Cobalt, dissolved | 0.120 | 0.00050 mg/L | 0.119 | 101 | 88-113 |
| Copper, dissolved | 0.819 | 0.0020 mg/L | 0.781 | 105 | 91-115 |
| Iron, dissolved | 1.34 | 0.10 mg/L | 1.17 | 114 | 81-117 |
| Lead, dissolved | 0.0957 | 0.0010 mg/L | 0.102 | 94 | 90-114 |
| Lithium, dissolved | 0.104 | 0.0010 mg/L | 0.0960 | 109 | 77-134 |
| Magnesium, dissolved | 6.40 | 0.10 mg/L | 6.11 | 105 | 79-122 |
| Manganese, dissolved | 0.318 | 0.0020 mg/L | 0.318 | 100 | 86-114 |
| Molybdenum, dissolved | 0.386 | 0.0010 mg/L | 0.387 | 100 | 92-113 |
| Nickel, dissolved | 0.790 | 0.0020 mg/L | 0.789 | 100 | 89-114 |
| Phosphorus, dissolved | 0.35 | 0.20 mg/L | 0.448 | 78 | 60-117 |
| Potassium, dissolved | 2.75 | 0.20 mg/L | 2.84 | 97 | 80-113 |
| Selenium, dissolved | 0.0334 | 0.0050 mg/L | 0.0300 | 111 | 84-120 |
| Sodium, dissolved | 16.4 | 0.20 mg/L | 17.4 | 95 | 78-118 |
| Strontium, dissolved | 0.948 | 0.010 mg/L | 0.979 | 97 | 88-113 |
| Thallium, dissolved | 0.0361 | 0.00020 mg/L | 0.0350 | 103 | 96-129 |
| Uranium, dissolved | 0.175 | 0.00020 mg/L | 0.244 | 72 | 68-95 |
| Vanadium, dissolved | 0.762 | 0.010 mg/L | 0.798 | 95 | 83-110 |
| Zinc, dissolved | 0.804 | 0.040 mg/L | 0.800 | 101 | 90-115 |

General Parameters, Batch K105242

Blank (K105242-BLK1)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK2)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK3)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK4)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK5)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK6)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK7)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

Blank (K105242-BLK8)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | |
|------------------------|--------|-----------|
| Nitrogen, Ammonia as N | < 0.01 | 0.01 mg/L |
|------------------------|--------|-----------|

LCS (K105242-BS1)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | | | | |
|------------------------|------|-----------|------|-----|--------|
| Nitrogen, Ammonia as N | 10.3 | 0.10 mg/L | 10.0 | 103 | 86-111 |
|------------------------|------|-----------|------|-----|--------|

LCS (K105242-BS2)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | | | | |
|------------------------|------|-----------|------|----|--------|
| Nitrogen, Ammonia as N | 9.83 | 0.10 mg/L | 10.0 | 98 | 86-111 |
|------------------------|------|-----------|------|----|--------|

LCS (K105242-BS3)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | | | | |
|------------------------|------|-----------|------|----|--------|
| Nitrogen, Ammonia as N | 9.87 | 0.10 mg/L | 10.0 | 99 | 86-111 |
|------------------------|------|-----------|------|----|--------|

LCS (K105242-BS4)

Prepared: Nov-28-11, Analyzed: Nov-30-11

| | | | | | |
|------------------------|------|-----------|------|----|--------|
| Nitrogen, Ammonia as N | 9.62 | 0.10 mg/L | 10.0 | 96 | 86-111 |
|------------------------|------|-----------|------|----|--------|

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | % REC | Limit | % RPD | Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-------|-------|-------|-------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-------|-------|-------|-------|-------|

General Parameters, Batch K105242, Continued

| LCS (K105242-BS5) | | Prepared: Nov-28-11, Analyzed: Nov-30-11 | | | | | | | | |
|--------------------------|------|--|------|------|--|----|--------|--|--|--|
| Nitrogen, Ammonia as N | 9.70 | 0.10 | mg/L | 10.0 | | 97 | 86-111 | | | |
| LCS (K105242-BS6) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Nitrogen, Ammonia as N | 9.90 | 0.10 | mg/L | 10.0 | | 99 | 86-111 | | | |
| LCS (K105242-BS7) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Nitrogen, Ammonia as N | 9.60 | 0.10 | mg/L | 10.0 | | 96 | 86-111 | | | |
| LCS (K105242-BS8) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Nitrogen, Ammonia as N | 9.80 | 0.10 | mg/L | 10.0 | | 98 | 86-111 | | | |

General Parameters, Batch K105264

| Blank (K105264-BLK1) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
|-----------------------------|---------|--|------|------|--|-----|--------|--|--|--|
| Chloride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Fluoride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Nitrogen, Nitrate as N | < 0.010 | 0.010 | mg/L | | | | | | | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | | | | | | | |
| Sulfate | < 1.0 | 1.0 | mg/L | | | | | | | |
| Blank (K105264-BLK2) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Fluoride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Nitrogen, Nitrate as N | < 0.010 | 0.010 | mg/L | | | | | | | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | | | | | | | |
| Sulfate | < 1.0 | 1.0 | mg/L | | | | | | | |
| Blank (K105264-BLK3) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Fluoride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Nitrogen, Nitrate as N | < 0.010 | 0.010 | mg/L | | | | | | | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | | | | | | | |
| Sulfate | < 1.0 | 1.0 | mg/L | | | | | | | |
| Blank (K105264-BLK4) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Fluoride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Nitrogen, Nitrate as N | < 0.010 | 0.010 | mg/L | | | | | | | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | | | | | | | |
| Sulfate | < 1.0 | 1.0 | mg/L | | | | | | | |
| Blank (K105264-BLK5) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Fluoride | < 0.10 | 0.10 | mg/L | | | | | | | |
| Nitrogen, Nitrate as N | < 0.010 | 0.010 | mg/L | | | | | | | |
| Nitrogen, Nitrite as N | < 0.01 | 0.01 | mg/L | | | | | | | |
| Sulfate | < 1.0 | 1.0 | mg/L | | | | | | | |
| LCS (K105264-BS1) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | 4.03 | 0.10 | mg/L | 4.00 | | 101 | 85-115 | | | |
| Fluoride | 4.08 | 0.10 | mg/L | 4.00 | | 102 | 85-115 | | | |
| Nitrogen, Nitrate as N | 4.10 | 0.010 | mg/L | 4.00 | | 102 | 85-115 | | | |
| Nitrogen, Nitrite as N | 3.96 | 0.01 | mg/L | 4.00 | | 99 | 85-115 | | | |
| Sulfate | 3.9 | 1.0 | mg/L | 4.00 | | 97 | 85-115 | | | |
| LCS (K105264-BS2) | | Prepared: Nov-30-11, Analyzed: Nov-30-11 | | | | | | | | |
| Chloride | 4.00 | 0.10 | mg/L | 4.00 | | 100 | 85-115 | | | |
| Fluoride | 4.09 | 0.10 | mg/L | 4.00 | | 102 | 85-115 | | | |
| Nitrogen, Nitrate as N | 4.11 | 0.010 | mg/L | 4.00 | | 103 | 85-115 | | | |
| Nitrogen, Nitrite as N | 3.93 | 0.01 | mg/L | 4.00 | | 98 | 85-115 | | | |
| Sulfate | 3.9 | 1.0 | mg/L | 4.00 | | 96 | 85-115 | | | |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit Units | Spike Level | Source Result | % REC Limits | % RPD Limit | Notes |
|---------|--------|-----------------------|-------------|---------------|--------------|-------------|-------|
|---------|--------|-----------------------|-------------|---------------|--------------|-------------|-------|

General Parameters, Batch K105264, Continued

LCS (K105264-BS3)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|------------------------|------|------------|------|--|-----|--------|--|
| Chloride | 4.00 | 0.10 mg/L | 4.00 | | 100 | 85-115 | |
| Fluoride | 4.05 | 0.10 mg/L | 4.00 | | 101 | 85-115 | |
| Nitrogen, Nitrate as N | 4.13 | 0.010 mg/L | 4.00 | | 103 | 85-115 | |
| Nitrogen, Nitrite as N | 3.93 | 0.01 mg/L | 4.00 | | 98 | 85-115 | |
| Sulfate | 3.9 | 1.0 mg/L | 4.00 | | 97 | 85-115 | |

LCS (K105264-BS4)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|------------------------|------|------------|------|--|-----|--------|--|
| Chloride | 4.05 | 0.10 mg/L | 4.00 | | 101 | 85-115 | |
| Fluoride | 4.07 | 0.10 mg/L | 4.00 | | 102 | 85-115 | |
| Nitrogen, Nitrate as N | 4.15 | 0.010 mg/L | 4.00 | | 104 | 85-115 | |
| Nitrogen, Nitrite as N | 3.94 | 0.01 mg/L | 4.00 | | 99 | 85-115 | |
| Sulfate | 3.9 | 1.0 mg/L | 4.00 | | 98 | 85-115 | |

LCS (K105264-BS5)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|------------------------|------|------------|------|--|-----|--------|--|
| Chloride | 4.14 | 0.10 mg/L | 4.00 | | 103 | 85-115 | |
| Fluoride | 4.07 | 0.10 mg/L | 4.00 | | 102 | 85-115 | |
| Nitrogen, Nitrate as N | 4.24 | 0.010 mg/L | 4.00 | | 106 | 85-115 | |
| Nitrogen, Nitrite as N | 4.00 | 0.01 mg/L | 4.00 | | 100 | 85-115 | |
| Sulfate | 4.0 | 1.0 mg/L | 4.00 | | 101 | 85-115 | |

General Parameters, Batch K105286

Blank (K105286-BLK1)

Prepared: Nov-30-11, Analyzed: Dec-02-11

| | | | | | | | |
|----------------------------------|-------|----------|--|--|--|--|--|
| Alkalinity, Total as CaCO3 | < 1.0 | 1.0 mg/L | | | | | |
| Alkalinity, Carbonate as CaCO3 | < 1.0 | 1.0 mg/L | | | | | |
| Alkalinity, Bicarbonate as CaCO3 | < 1.0 | 1.0 mg/L | | | | | |
| Alkalinity, Hydroxide as CaCO3 | < 1.0 | 1.0 mg/L | | | | | |

LCS (K105286-BS1)

Prepared: Nov-30-11, Analyzed: Dec-02-11

| | | | | | | | |
|----------------------------|-----|----------|-----|--|-----|--------|--|
| Alkalinity, Total as CaCO3 | 102 | 1.0 mg/L | 100 | | 102 | 97-108 | |
|----------------------------|-----|----------|-----|--|-----|--------|--|

General Parameters, Batch K105288

Blank (K105288-BLK1)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|-----|---------|--|--|--|--|--|
| Conductivity (EC) | < 2 | 2 uS/cm | | | | | |
|-------------------|-----|---------|--|--|--|--|--|

Blank (K105288-BLK2)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|-----|---------|--|--|--|--|--|
| Conductivity (EC) | < 2 | 2 uS/cm | | | | | |
|-------------------|-----|---------|--|--|--|--|--|

Blank (K105288-BLK3)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|-----|---------|--|--|--|--|--|
| Conductivity (EC) | < 2 | 2 uS/cm | | | | | |
|-------------------|-----|---------|--|--|--|--|--|

Blank (K105288-BLK4)

Prepared: Nov-30-11, Analyzed: Dec-01-11

| | | | | | | | |
|-------------------|-----|---------|--|--|--|--|--|
| Conductivity (EC) | < 2 | 2 uS/cm | | | | | |
|-------------------|-----|---------|--|--|--|--|--|

LCS (K105288-BS5)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|------|---------|------|--|-----|--------|--|
| Conductivity (EC) | 1400 | 2 uS/cm | 1410 | | 100 | 93-104 | |
|-------------------|------|---------|------|--|-----|--------|--|

LCS (K105288-BS6)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|------|---------|------|--|-----|--------|--|
| Conductivity (EC) | 1410 | 2 uS/cm | 1410 | | 100 | 93-104 | |
|-------------------|------|---------|------|--|-----|--------|--|

LCS (K105288-BS7)

Prepared: Nov-30-11, Analyzed: Nov-30-11

| | | | | | | | |
|-------------------|------|---------|------|--|-----|--------|--|
| Conductivity (EC) | 1410 | 2 uS/cm | 1410 | | 100 | 93-104 | |
|-------------------|------|---------|------|--|-----|--------|--|

LCS (K105288-BS8)

Prepared: Nov-30-11, Analyzed: Dec-01-11

| | | | | | | | |
|-------------------|------|---------|------|--|-----|--------|--|
| Conductivity (EC) | 1410 | 2 uS/cm | 1410 | | 100 | 93-104 | |
|-------------------|------|---------|------|--|-----|--------|--|

General Parameters, Batch K105300

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | % REC | Limits | % RPD | Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-------|--------|-------|-------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-------|--------|-------|-------|-------|

General Parameters, Batch K105300, Continued

| | | | | | | | | | | |
|---------------------------------|-----|---|------|--|--|-----|--------|--|--|--|
| Blank (K105300-BLK1) | | | | Prepared: Dec-01-11, Analyzed: Dec-02-11 | | | | | | |
| Solids, Total Dissolved | < 5 | 5 | mg/L | | | | | | | |
| Blank (K105300-BLK2) | | | | Prepared: Dec-01-11, Analyzed: Dec-02-11 | | | | | | |
| Solids, Total Dissolved | < 5 | 5 | mg/L | | | | | | | |
| Reference (K105300-SRM1) | | | | Prepared: Dec-01-11, Analyzed: Dec-02-11 | | | | | | |
| Solids, Total Dissolved | 243 | 5 | mg/L | 240 | | 101 | 85-115 | | | |
| Reference (K105300-SRM2) | | | | Prepared: Dec-01-11, Analyzed: Dec-02-11 | | | | | | |
| Solids, Total Dissolved | 240 | 5 | mg/L | 240 | | 100 | 85-115 | | | |

General Parameters, Batch K105322

| | | | | | | | | | | |
|-----------------------------|-----|---|------------|--|--|-----|--------|--|--|--|
| Blank (K105322-BLK1) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | < 5 | 5 | Color Unit | | | | | | | |
| Blank (K105322-BLK2) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | < 5 | 5 | Color Unit | | | | | | | |
| Blank (K105322-BLK3) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | < 5 | 5 | Color Unit | | | | | | | |
| Blank (K105322-BLK4) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | < 5 | 5 | Color Unit | | | | | | | |
| LCS (K105322-BS1) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | 25 | 5 | Color Unit | 25.0 | | 100 | 81-118 | | | |
| LCS (K105322-BS2) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | 25 | 5 | Color Unit | 25.0 | | 100 | 81-118 | | | |
| LCS (K105322-BS3) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | 25 | 5 | Color Unit | 25.0 | | 100 | 81-118 | | | |
| LCS (K105322-BS4) | | | | Prepared: Dec-02-11, Analyzed: Dec-05-11 | | | | | | |
| Colour, True | 25 | 5 | Color Unit | 25.0 | | 100 | 81-118 | | | |

General Parameters, Batch K105347

| | | | | | | | | | | |
|---------------------------------|-------|-----|---|--|--|-----|--------|--|--|--|
| Blank (K105347-BLK1) | | | | Prepared: Dec-05-11, Analyzed: Dec-06-11 | | | | | | |
| UV Transmittance @ 254nm | < 0.1 | 0.1 | % | | | | | | | |
| Blank (K105347-BLK2) | | | | Prepared: Dec-05-11, Analyzed: Dec-06-11 | | | | | | |
| UV Transmittance @ 254nm | < 0.1 | 0.1 | % | | | | | | | |
| Reference (K105347-SRM1) | | | | Prepared: Dec-05-11, Analyzed: Dec-06-11 | | | | | | |
| UV Transmittance @ 254nm | 32.8 | 0.1 | % | 32.4 | | 101 | 90-110 | | | |
| Reference (K105347-SRM2) | | | | Prepared: Dec-05-11, Analyzed: Dec-06-11 | | | | | | |
| UV Transmittance @ 254nm | 32.7 | 0.1 | % | 32.4 | | 101 | 90-110 | | | |

Total Recoverable Metals, Batch B1L0007

| | | | | | | | | | | |
|-----------------------------|----------|--------|------|--|--|--|--|--|--|--|
| Blank (B1L0007-BLK1) | | | | Prepared: Dec-01-11, Analyzed: Dec-02-11 | | | | | | |
| Aluminum | < 0.050 | 0.050 | mg/L | | | | | | | |
| Antimony | < 0.0200 | 0.0200 | mg/L | | | | | | | |
| Arsenic | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Barium | < 0.050 | 0.050 | mg/L | | | | | | | |
| Beryllium | < 0.0010 | 0.0010 | mg/L | | | | | | | |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | % REC | Limits | % RPD | Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-------|--------|-------|-------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-------|--------|-------|-------|-------|

Total Recoverable Metals, Batch B1L0007, Continued

Blank (B1L0007-BLK1), Continued

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | | | | | | |
|------------|-----------|---------|------|--|--|--|--|--|--|--|
| Bismuth | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Boron | < 0.040 | 0.040 | mg/L | | | | | | | |
| Cadmium | < 0.00010 | 0.00010 | mg/L | | | | | | | |
| Calcium | < 2.0 | 2.0 | mg/L | | | | | | | |
| Chromium | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Cobalt | < 0.00050 | 0.00050 | mg/L | | | | | | | |
| Copper | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Iron | < 0.10 | 0.10 | mg/L | | | | | | | |
| Lead | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Lithium | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Magnesium | < 0.10 | 0.10 | mg/L | | | | | | | |
| Manganese | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Mercury | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Molybdenum | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Nickel | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Phosphorus | < 0.20 | 0.20 | mg/L | | | | | | | |
| Potassium | < 0.20 | 0.20 | mg/L | | | | | | | |
| Selenium | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Silicon | < 5.0 | 5.0 | mg/L | | | | | | | |
| Silver | < 0.00050 | 0.00050 | mg/L | | | | | | | |
| Sodium | < 0.20 | 0.20 | mg/L | | | | | | | |
| Strontium | < 0.010 | 0.010 | mg/L | | | | | | | |
| Tellurium | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Thallium | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Thorium | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Tin | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Titanium | < 0.050 | 0.050 | mg/L | | | | | | | |
| Uranium | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Vanadium | < 0.010 | 0.010 | mg/L | | | | | | | |
| Zinc | < 0.040 | 0.040 | mg/L | | | | | | | |
| Zirconium | < 0.0010 | 0.0010 | mg/L | | | | | | | |

Blank (B1L0007-BLK2)

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | | | | | | |
|------------|-----------|---------|------|--|--|--|--|--|--|--|
| Aluminum | < 0.050 | 0.050 | mg/L | | | | | | | |
| Antimony | < 0.0200 | 0.0200 | mg/L | | | | | | | |
| Arsenic | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Barium | < 0.050 | 0.050 | mg/L | | | | | | | |
| Beryllium | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Bismuth | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Boron | < 0.040 | 0.040 | mg/L | | | | | | | |
| Cadmium | < 0.00010 | 0.00010 | mg/L | | | | | | | |
| Calcium | < 2.0 | 2.0 | mg/L | | | | | | | |
| Chromium | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Cobalt | < 0.00050 | 0.00050 | mg/L | | | | | | | |
| Copper | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Iron | < 0.10 | 0.10 | mg/L | | | | | | | |
| Lead | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Lithium | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Magnesium | < 0.10 | 0.10 | mg/L | | | | | | | |
| Manganese | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Mercury | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Molybdenum | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Nickel | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Phosphorus | < 0.20 | 0.20 | mg/L | | | | | | | |
| Potassium | < 0.20 | 0.20 | mg/L | | | | | | | |
| Selenium | < 0.0050 | 0.0050 | mg/L | | | | | | | |
| Silicon | < 5.0 | 5.0 | mg/L | | | | | | | |
| Silver | < 0.00050 | 0.00050 | mg/L | | | | | | | |
| Sodium | < 0.20 | 0.20 | mg/L | | | | | | | |
| Strontium | < 0.010 | 0.010 | mg/L | | | | | | | |
| Tellurium | < 0.0020 | 0.0020 | mg/L | | | | | | | |
| Thallium | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Thorium | < 0.0010 | 0.0010 | mg/L | | | | | | | |
| Tin | < 0.0020 | 0.0020 | mg/L | | | | | | | |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | % REC | % REC Limits | % RPD | % RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|-------|--------------|-------|-------------|-------|
|---------|--------|-----------------|-------|-------------|---------------|-------|--------------|-------|-------------|-------|

Total Recoverable Metals, Batch B1L0007, Continued

Blank (B1L0007-BLK2), Continued

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | | | | | | |
|-----------|-----------|---------|------|--|--|--|--|--|--|--|
| Titanium | < 0.050 | 0.050 | mg/L | | | | | | | |
| Uranium | < 0.00020 | 0.00020 | mg/L | | | | | | | |
| Vanadium | < 0.010 | 0.010 | mg/L | | | | | | | |
| Zinc | < 0.040 | 0.040 | mg/L | | | | | | | |
| Zirconium | < 0.0010 | 0.0010 | mg/L | | | | | | | |

Reference (B1L0007-SRM1)

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | | | | | | |
|------------|---------|---------|------|---------|--|-----|--------|--|--|--|
| Aluminum | 0.341 | 0.050 | mg/L | 0.296 | | 115 | 81-129 | | | |
| Antimony | 0.0469 | 0.0200 | mg/L | 0.0505 | | 93 | 88-114 | | | |
| Arsenic | 0.123 | 0.0050 | mg/L | 0.122 | | 101 | 88-114 | | | |
| Barium | 0.779 | 0.050 | mg/L | 0.777 | | 100 | 72-104 | | | |
| Beryllium | 0.0532 | 0.0010 | mg/L | 0.0488 | | 109 | 76-131 | | | |
| Boron | 3.48 | 0.040 | mg/L | 3.40 | | 102 | 75-121 | | | |
| Cadmium | 0.0516 | 0.00010 | mg/L | 0.0490 | | 105 | 89-111 | | | |
| Calcium | 11.6 | 2.0 | mg/L | 10.2 | | 114 | 86-121 | | | |
| Chromium | 0.253 | 0.0050 | mg/L | 0.242 | | 105 | 89-114 | | | |
| Cobalt | 0.0390 | 0.00050 | mg/L | 0.0366 | | 106 | 91-113 | | | |
| Copper | 0.514 | 0.0020 | mg/L | 0.487 | | 105 | 91-115 | | | |
| Iron | 0.52 | 0.10 | mg/L | 0.469 | | 111 | 77-124 | | | |
| Lead | 0.178 | 0.0010 | mg/L | 0.193 | | 92 | 92-113 | | | |
| Lithium | 0.430 | 0.0010 | mg/L | 0.390 | | 110 | 85-115 | | | |
| Magnesium | 3.64 | 0.10 | mg/L | 3.31 | | 110 | 78-120 | | | |
| Manganese | 0.114 | 0.0020 | mg/L | 0.109 | | 105 | 90-114 | | | |
| Mercury | 0.00503 | 0.00020 | mg/L | 0.00456 | | 110 | 50-150 | | | |
| Molybdenum | 0.188 | 0.0010 | mg/L | 0.197 | | 95 | 90-111 | | | |
| Nickel | 0.245 | 0.0020 | mg/L | 0.242 | | 101 | 90-111 | | | |
| Phosphorus | 0.23 | 0.20 | mg/L | 0.233 | | 100 | 85-115 | | | |
| Potassium | 6.43 | 0.20 | mg/L | 5.93 | | 108 | 84-113 | | | |
| Selenium | 0.119 | 0.0050 | mg/L | 0.115 | | 103 | 85-115 | | | |
| Sodium | 8.42 | 0.20 | mg/L | 7.64 | | 110 | 82-123 | | | |
| Strontium | 0.348 | 0.010 | mg/L | 0.363 | | 96 | 88-112 | | | |
| Thallium | 0.0787 | 0.00020 | mg/L | 0.0794 | | 99 | 91-114 | | | |
| Uranium | 0.0166 | 0.00020 | mg/L | 0.0192 | | 86 | 85-120 | | | |
| Vanadium | 0.378 | 0.010 | mg/L | 0.376 | | 100 | 86-111 | | | |
| Zinc | 2.58 | 0.040 | mg/L | 2.42 | | 107 | 85-111 | | | |

Reference (B1L0007-SRM2)

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | | | | | | |
|------------|---------|---------|------|---------|--|-----|--------|--|--|--|
| Aluminum | 0.329 | 0.050 | mg/L | 0.296 | | 111 | 81-129 | | | |
| Antimony | 0.0504 | 0.0200 | mg/L | 0.0505 | | 100 | 88-114 | | | |
| Arsenic | 0.125 | 0.0050 | mg/L | 0.122 | | 102 | 88-114 | | | |
| Barium | 0.778 | 0.050 | mg/L | 0.777 | | 100 | 72-104 | | | |
| Beryllium | 0.0551 | 0.0010 | mg/L | 0.0488 | | 113 | 76-131 | | | |
| Boron | 3.58 | 0.040 | mg/L | 3.40 | | 105 | 75-121 | | | |
| Cadmium | 0.0512 | 0.00010 | mg/L | 0.0490 | | 105 | 89-111 | | | |
| Calcium | 10.7 | 2.0 | mg/L | 10.2 | | 105 | 86-121 | | | |
| Chromium | 0.255 | 0.0050 | mg/L | 0.242 | | 105 | 89-114 | | | |
| Cobalt | 0.0391 | 0.00050 | mg/L | 0.0366 | | 107 | 91-113 | | | |
| Copper | 0.525 | 0.0020 | mg/L | 0.487 | | 108 | 91-115 | | | |
| Iron | 0.58 | 0.10 | mg/L | 0.469 | | 123 | 77-124 | | | |
| Lead | 0.180 | 0.0010 | mg/L | 0.193 | | 93 | 92-113 | | | |
| Lithium | 0.438 | 0.0010 | mg/L | 0.390 | | 112 | 85-115 | | | |
| Magnesium | 3.70 | 0.10 | mg/L | 3.31 | | 112 | 78-120 | | | |
| Manganese | 0.114 | 0.0020 | mg/L | 0.109 | | 105 | 90-114 | | | |
| Mercury | 0.00505 | 0.00020 | mg/L | 0.00456 | | 111 | 50-150 | | | |
| Molybdenum | 0.189 | 0.0010 | mg/L | 0.197 | | 96 | 90-111 | | | |
| Nickel | 0.249 | 0.0020 | mg/L | 0.242 | | 103 | 90-111 | | | |
| Phosphorus | 0.21 | 0.20 | mg/L | 0.233 | | 92 | 85-115 | | | |
| Potassium | 6.52 | 0.20 | mg/L | 5.93 | | 110 | 84-113 | | | |
| Selenium | 0.122 | 0.0050 | mg/L | 0.115 | | 106 | 85-115 | | | |
| Sodium | 8.37 | 0.20 | mg/L | 7.64 | | 110 | 82-123 | | | |
| Strontium | 0.346 | 0.010 | mg/L | 0.363 | | 95 | 88-112 | | | |
| Thallium | 0.0790 | 0.00020 | mg/L | 0.0794 | | 99 | 91-114 | | | |
| Uranium | 0.0169 | 0.00020 | mg/L | 0.0192 | | 88 | 85-120 | | | |

QUALITY CONTROL DATA



CLIENT Regional District of Thompson Nicola
PROJECT Vavenby System CWS

WORK ORDER # K1K1163
REPORTED Dec-06-11

| Analyte | Result | Reporting Limit Units | Spike Level | Source Result | % REC | % REC Limits | % RPD | % RPD Limit | Notes |
|---------|--------|-----------------------|-------------|---------------|-------|--------------|-------|-------------|-------|
|---------|--------|-----------------------|-------------|---------------|-------|--------------|-------|-------------|-------|

Total Recoverable Metals, Batch B1L0007, Continued

Reference (B1L0007-SRM2), Continued

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | |
|----------|-------|------------|-------|-----|--------|
| Vanadium | 0.378 | 0.010 mg/L | 0.376 | 101 | 86-111 |
| Zinc | 2.60 | 0.040 mg/L | 2.42 | 108 | 85-111 |

Volatile Organic Compounds, Batch B1L0010

Blank (B1L0010-BLK1)

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | |
|--|---------------|-------------|---------------|------------|---------------|
| Bromodichloromethane | < 0.001 | 0.001 mg/L | | | |
| Bromoform | < 0.001 | 0.001 mg/L | | | |
| Chloroform | < 0.001 | 0.001 mg/L | | | |
| Dibromochloromethane | < 0.001 | 0.001 mg/L | | | |
| Trihalomethanes (total) | < 0.004 | 0.004 mg/L | | | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>0.0250</i> | <i>mg/L</i> | <i>0.0250</i> | <i>100</i> | <i>80-120</i> |

LCS (B1L0010-BS1)

Prepared: Dec-01-11, Analyzed: Dec-02-11

| | | | | | |
|--|---------------|-------------|---------------|------------|---------------|
| Bromodichloromethane | 0.016 | 0.001 mg/L | 0.0200 | 82 | 80-120 |
| Bromoform | 0.018 | 0.001 mg/L | 0.0200 | 91 | 80-120 |
| Chloroform | 0.017 | 0.001 mg/L | 0.0200 | 87 | 80-120 |
| Dibromochloromethane | 0.019 | 0.001 mg/L | 0.0200 | 97 | 80-120 |
| <i>Surrogate: 4-Bromofluorobenzene</i> | <i>0.0285</i> | <i>mg/L</i> | <i>0.0250</i> | <i>114</i> | <i>80-120</i> |