

## CERTIFICATE OF ANALYSIS



**CLIENT** **Cherry Ridge Management**  
37 Hollingsworth Rd  
Cherryville BC  
VOE 2G2

TEL 1-250-547-9091  
FAX -

**ATTENTION** **Melanie Staker**

**RECEIVED / TEMP** May-28-12 09:15 / 10.0 °C  
**REPORTED** Jun-07-12  
**COC #(s)** 29574

**WORK ORDER** 2051384  
**PROJECT** Creek Monitoring

### 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/m<sup>3</sup> = 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: **Jennifer Shanko, ASCT**  
Administration Coordinator, Kelowna

### Locations:

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Richmond, BC V6V 2H9  
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[www.caro.ca](http://www.caro.ca)

## SAMPLE DATA



**CLIENT** Cherry Ridge Management  
**PROJECT** Creek Monitoring

**WORK ORDER #** 2051384  
**REPORTED** Jun-07-12

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

### General Parameters

#### North F Cherry Creek (2051384-01) Matrix: Water Sampled: May-27-12 14:05

|                                      |              |       |      |           |           |  |
|--------------------------------------|--------------|-------|------|-----------|-----------|--|
| Chloride                             | < 0.10       | 0.10  | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrate+Nitrite as N       | <b>0.039</b> | 0.020 | mg/L | N/A       | N/A       |  |
| Nitrogen, Nitrate as N               | <b>0.039</b> | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrite as N               | < 0.010      | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Total Kjeldahl             | <b>0.13</b>  | 0.05  | mg/L | May-28-12 | Jun-04-12 |  |
| Nitrogen, Total                      | <b>0.167</b> | 0.070 | mg/L | N/A       | N/A       |  |
| Phosphorus, Total Kjeldahl           | <b>0.06</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Phosphorus, Total Kjeldahl Dissolved | <b>0.04</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Turbidity                            | <b>1.2</b>   | 0.1   | NTU  | May-29-12 | May-29-12 |  |

#### South F Cherry Creek (2051384-02) Matrix: Water Sampled: May-27-12 13:20

|                                      |              |       |      |           |           |  |
|--------------------------------------|--------------|-------|------|-----------|-----------|--|
| Chloride                             | <b>0.85</b>  | 0.10  | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrate+Nitrite as N       | <b>0.146</b> | 0.020 | mg/L | N/A       | N/A       |  |
| Nitrogen, Nitrate as N               | <b>0.146</b> | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrite as N               | < 0.010      | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Total Kjeldahl             | <b>0.08</b>  | 0.05  | mg/L | May-28-12 | Jun-04-12 |  |
| Nitrogen, Total                      | <b>0.227</b> | 0.070 | mg/L | N/A       | N/A       |  |
| Phosphorus, Total Kjeldahl           | <b>0.03</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Phosphorus, Total Kjeldahl Dissolved | < 0.01       | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Turbidity                            | <b>1.3</b>   | 0.1   | NTU  | May-29-12 | May-29-12 |  |

#### Cherry Creek (at the Hall) (2051384-03) Matrix: Water Sampled: May-27-12 13:40

|                                      |              |       |      |           |           |  |
|--------------------------------------|--------------|-------|------|-----------|-----------|--|
| Chloride                             | <b>0.69</b>  | 0.10  | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrate+Nitrite as N       | <b>0.072</b> | 0.020 | mg/L | N/A       | N/A       |  |
| Nitrogen, Nitrate as N               | <b>0.072</b> | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrite as N               | < 0.010      | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Total Kjeldahl             | <b>0.22</b>  | 0.05  | mg/L | May-28-12 | Jun-04-12 |  |
| Nitrogen, Total                      | <b>0.291</b> | 0.070 | mg/L | N/A       | N/A       |  |
| Phosphorus, Total Kjeldahl           | < 0.01       | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Phosphorus, Total Kjeldahl Dissolved | < 0.01       | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Turbidity                            | <b>1.9</b>   | 0.1   | NTU  | May-29-12 | May-29-12 |  |

#### Shuswap River (Picnic Site) (2051384-04) Matrix: Water Sampled: May-27-12 10:00

|                                      |              |       |      |           |           |  |
|--------------------------------------|--------------|-------|------|-----------|-----------|--|
| Chloride                             | <b>0.19</b>  | 0.10  | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrate+Nitrite as N       | <b>0.071</b> | 0.020 | mg/L | N/A       | N/A       |  |
| Nitrogen, Nitrate as N               | <b>0.071</b> | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrite as N               | < 0.010      | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Total Kjeldahl             | <b>0.15</b>  | 0.05  | mg/L | May-28-12 | Jun-04-12 |  |
| Nitrogen, Total                      | <b>0.218</b> | 0.070 | mg/L | N/A       | N/A       |  |
| Phosphorus, Total Kjeldahl           | <b>0.04</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Phosphorus, Total Kjeldahl Dissolved | <b>0.03</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Turbidity                            | <b>1.2</b>   | 0.1   | NTU  | May-29-12 | May-29-12 |  |

#### Ferry Creek (2051384-05) Matrix: Water Sampled: May-27-12 10:20

|                                |             |       |      |           |           |  |
|--------------------------------|-------------|-------|------|-----------|-----------|--|
| Chloride                       | <b>1.16</b> | 0.10  | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Nitrate+Nitrite as N | < 0.020     | 0.020 | mg/L | N/A       | N/A       |  |
| Nitrogen, Nitrate as N         | < 0.010     | 0.010 | mg/L | May-29-12 | May-29-12 |  |

## SAMPLE DATA



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**WORK ORDER #** 2051384  
**REPORTED** Jun-07-12

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

### General Parameters, Continued

**Ferry Creek (2051384-05) Matrix: Water Sampled: May-27-12 10:20, Continued**

|                                      |              |       |      |           |           |  |
|--------------------------------------|--------------|-------|------|-----------|-----------|--|
| Nitrogen, Nitrite as N               | < 0.010      | 0.010 | mg/L | May-29-12 | May-29-12 |  |
| Nitrogen, Total Kjeldahl             | <b>0.23</b>  | 0.05  | mg/L | May-28-12 | Jun-04-12 |  |
| Nitrogen, Total                      | <b>0.231</b> | 0.070 | mg/L | N/A       | N/A       |  |
| Phosphorus, Total Kjeldahl           | <b>0.05</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Phosphorus, Total Kjeldahl Dissolved | <b>0.04</b>  | 0.01  | mg/L | May-28-12 | Jun-04-12 |  |
| Turbidity                            | <b>2.3</b>   | 0.1   | NTU  | May-29-12 | May-29-12 |  |

### Microbiological Parameters

**North F Cherry Creek (2051384-01) Matrix: Water Sampled: May-27-12 14:05**

|         |          |   |           |           |           |  |
|---------|----------|---|-----------|-----------|-----------|--|
| E. coli | <b>2</b> | 1 | CFU/100mL | May-28-12 | May-29-12 |  |
|---------|----------|---|-----------|-----------|-----------|--|

**South F Cherry Creek (2051384-02) Matrix: Water Sampled: May-27-12 13:20**

|         |     |   |           |           |           |  |
|---------|-----|---|-----------|-----------|-----------|--|
| E. coli | < 1 | 1 | CFU/100mL | May-28-12 | May-29-12 |  |
|---------|-----|---|-----------|-----------|-----------|--|

**Cherry Creek (at the Hall) (2051384-03) Matrix: Water Sampled: May-27-12 13:40**

|         |     |   |           |           |           |  |
|---------|-----|---|-----------|-----------|-----------|--|
| E. coli | < 1 | 1 | CFU/100mL | May-28-12 | May-29-12 |  |
|---------|-----|---|-----------|-----------|-----------|--|

**Shuswap River (Picnic Site) (2051384-04) Matrix: Water Sampled: May-27-12 10:00**

|         |          |   |           |           |           |  |
|---------|----------|---|-----------|-----------|-----------|--|
| E. coli | <b>3</b> | 1 | CFU/100mL | May-28-12 | May-29-12 |  |
|---------|----------|---|-----------|-----------|-----------|--|

**Ferry Creek (2051384-05) Matrix: Water Sampled: May-27-12 10:20**

|         |          |   |           |           |           |  |
|---------|----------|---|-----------|-----------|-----------|--|
| E. coli | <b>8</b> | 1 | CFU/100mL | May-28-12 | May-29-12 |  |
|---------|----------|---|-----------|-----------|-----------|--|

**ANALYSIS / REPORT INFORMATION****CLIENT** Cherry Ridge Management  
**PROJECT** Creek Monitoring**WORK ORDER #** 2051384  
**REPORTED** Jun-07-12

| <b>Analysis Description</b>          | <b>Method Reference(s) (* = modified from)</b> |                 | <b>LAB</b> |
|--------------------------------------|--|-----------------|------------|
|                                      | <b>Preparation</b>                             | <b>Analysis</b> |            |
| Total Kjeldahl Nitrogen              | EPA 351.2 *                                    | EPA 351.2       | KEL        |
| Phosphorus, Total Dissolved Kjeldahl | EPA 351.2 *                                    | EPA 351.2       | KEL        |
| Phosphorus, Total Kjeldahl           | EPA 351.2 *                                    | EPA 351.2       | KEL        |
| Chloride by IC                       | N/A  | APHA 4110 B     | KEL        |
| Nitrite-N by IC                      | N/A  | APHA 4110 B     | KEL        |
| Nitrate-N by IC                      | N/A  | APHA 4110 B     | KEL        |
| Turbidity                            | N/A  | APHA 2130 B     | KEL        |
| E. coli (by Endo)                    | N/A  | APHA 9222 G     | KEL        |