COLORADO LEGACY LAND

*4601 DTC Boulevard, Suite 130, Denver, CO 80237*
*T. (303) 862-3928*

**April 3, 2018**

Colorado Department of Public Health and Environment
Water Quality Control Division / WQCD-B2-CAS
Compliance Assurance Section
Attention: Eric Mink
4300 Cherry Creek Drive South
Denver, CO 80246-1530

Dear Mr. Mink:

**Regarding:** February 2018 SW-AWD and SW-BPL Surface Water Monitoring Data for Sampling Stations, Schwartzwalder Mine, Paragraph 26, WQCD Order Number: IO 100601-1, June 1, 2010

Pursuant to Paragraph 26 of the above referenced Order, please find enclosed data reports from contract laboratories as received by Alexco Water and Environment, Inc. These data originate from the analysis of surface water samples collected in February 2018 at the Schwartzwalder Mine, monitoring stations SW-AWD and SW-BPL. A review of the data indicates that the total and dissolved uranium concentration at SW-BPL were below the 30-µg/L limit. Our review also indicates that arsenic was not detected at SW-BPL.

If you have any questions regarding this deliverable, please do not hesitate to contact me.

Sincerely,

Jim Harrington, Managing Director
**COLORADO LEGACY LAND**
Jim@ColoradoLegacy.Land

Distribution list:

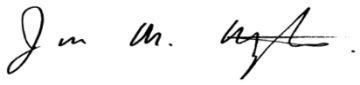
Eric Mink, CDPHE WQCD, Eric.Mink@state.co.us
Daniel Arnold, Denver Water, Daniel.Arnold@DenverWater.org
Michael Cunningham, DRMS, Michaela.cunningham@state.co.us
Lori Simpson, Alexco Water & Environnent Inc., lsimpson@alexcoresource.com
JoAnne Ary, Alexco Water & Environment Inc., jary@alexcoresource.com
Stephen Cohen, Alexco Water & Environment Inc., scohen@alexcoresource.com
Elizabeth Busby, Alexco Water & Environment Inc., ebubsy@alexcoresource.com

ALEXCO WATER & ENVIRONMENT

1700 County Rd. 143
Cañon City, CO 81212
T. (719) 275-7413
www.alexcoenv.com

Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Jim Harrington, Managing Director

**COLORADO LEGACY LAND**


# February 2018 Schwartzwalder 7-Day Surface Water Report

## Contents:

- AWD, table1, Sampled on: 13FEB2018
    - ELI: C18020442-001
    - SCG: 418126.A
- BPL, table1, Sampled on: 13FEB2018
    - ELI: C18020442-002
    - SCG: 418127.A

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Cotter Corporation
**Project:** Schwartzwalder Mine
**Lab ID:** C18020442-001
**Client Sample ID:** SW-AWD

**Report Date:** 03/26/18
**Collection Date:** 02/13/18 11:20
**DateReceived:** 02/16/18
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **MAJOR IONS** | | | | | | | |
| Fluoride | 0.3 | mg/L | | 0.1 | | A4500-F C | 02/20/18 12:42 / mvr |
| **INORGANICS** | | | | | | | |
| Cyanide, Weak Acid Dissociable | ND | mg/L | | 0.005 | | Kelada-01 | 02/22/18 10:18 / eli-b |
| **NUTRIENTS** | | | | | | | |
| Nitrogen, Nitrate+Nitrite as N | 0.01 | mg/L | | 0.01 | | E353.2 | 02/26/18 15:39 / dmb |
| Phosphorous, Total as Phosphate | ND | mg/L | | 0.03 | | Calculation | 03/16/18 11:27 / sec |
| Phosphorus, Total as P | ND | mg/L | | 0.005 | | E365.1 | 02/27/18 11:07 / dmb |
| **METALS, DISSOLVED** | | | | | | | |
| Aluminum | ND | mg/L | | 0.2 | | E200.7 | 02/26/18 12:31 / eli-b |
| Antimony | ND | mg/L | | 0.001 | | E200.8 | 02/26/18 16:47 / eli-b |
| Molybdenum | ND | mg/L | | 0.005 | | E200.8 | 02/26/18 16:47 / eli-b |
| Thallium | ND | mg/L | | 0.0002 | | E200.8 | 02/26/18 16:47 / eli-b |
| Uranium | 0.0027 | mg/L | | 0.0002 | | E200.8 | 02/26/18 16:47 / eli-b |
| **METALS, TOTAL** | | | | | | | |
| Aluminum | ND | mg/L | | 0.2 | | E200.7 | 02/23/18 01:49 / eli-b |
| Antimony | ND | mg/L | | 0.001 | | E200.8 | 02/23/18 06:07 / eli-b |
| Arsenic | ND | mg/L | | 0.001 | | E200.8 | 02/23/18 06:07 / eli-b |
| Boron | ND | mg/L | | 0.1 | | E200.7 | 02/23/18 01:49 / eli-b |
| Mercury | ND | mg/L | | 0.0001 | | E245.1 | 03/02/18 15:13 / eli-b |
| Molybdenum | ND | mg/L | | 0.005 | | E200.7 | 02/23/18 01:49 / eli-b |
| Thallium | ND | mg/L | | 0.0002 | | E200.8 | 02/23/18 06:07 / eli-b |
| Uranium | 0.0026 | mg/L | | 0.0002 | | E200.8 | 02/23/18 06:07 / eli-b |
| **RADIONUCLIDES, DISSOLVED** | | | | | | | |
| Radium 226 | 0.1 | pCi/L | U | | | E903.0 | 03/05/18 14:33 / arh |
| Radium 226 precision (±) | 0.1 | pCi/L | | | | E903.0 | 03/05/18 14:33 / arh |
| Radium 226 MDC | 0.2 | pCi/L | | | | E903.0 | 03/05/18 14:33 / arh |
| **RADIONUCLIDES, TOTAL** | | | | | | | |
| Gross Alpha | 3.6 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Alpha precision (±) | 1.7 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Alpha MDC | 1.6 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta | -0.9 | pCi/L | U | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta precision (±) | 2.2 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta MDC | 3.7 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Radium 226 | 0.2 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 226 precision (±) | 0.1 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 226 MDC | 0.1 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 228 | 0.7 | pCi/L | U | | | RA-05 | 03/23/18 10:39 / plj |
| Radium 228 precision (±) | 0.7 | pCi/L | | | | RA-05 | 03/23/18 10:39 / plj |
| Radium 228 MDC | 1.2 | pCi/L | | | | RA-05 | 03/23/18 10:39 / plj |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Cotter Corporation
**Project:** Schwartzwalder Mine
**Lab ID:** C18020442-001
**Client Sample ID:** SW-AWD

**Report Date:** 03/26/18
**Collection Date:** 02/13/18 11:20
**DateReceived:** 02/16/18
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **RADIONUCLIDES, TOTAL** | | | | | | | |
| Radium 226 + Radium 228 | 0.9 | pCi/L | U | | | A7500-RA | 03/23/18 16:21 / sec |
| Radium 226 + Radium 228 precision (±) | 0.7 | pCi/L | | | | A7500-RA | 03/23/18 16:21 / sec |
| Radium 226 + Radium 228 MDC | 1.2 | pCi/L | | | | A7500-RA | 03/23/18 16:21 / sec |
| **CLIENT PROVIDED FIELD PARAMETERS** | | | | | | | |
| Field Conductivity | 270 | umhos/cm | | | | FIELD | 02/13/18 11:20 / *** |
| Field pH | 7.97 | s.u. | | | | FIELD | 02/13/18 11:20 / *** |
| Field Temperature, C | 1.3 | °C | | | | FIELD | 02/13/18 11:20 / *** |

*** Field data provided by client

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

**Client:** Cotter Corp
**Analyte:** Bicarbonate (As $HCO_3$)

| | |
|---|---|
| Prep Date: | 02/24/2018 |
| Analysis Date: | 02/24/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2320 B. |
| Analytical Method ID: | Std. Methods 2320 B. |
| Instrument: | Titrimetric |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SE |

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 66 | | 10 | mg/L |

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**Client:** Cotter Corp
**Analyte:** Alkalinity (total as $CaCO_3$)

| | |
|---|---|
| Prep Date: | 02/24/2018 |
| Analysis Date: | 02/24/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2320 B. |
| Analytical Method ID: | Std. Methods 2320 B. |
| Instrument: | Titrimetric |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SE |

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 66 | | 10 | mg/L |

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Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Chloride

| | |
|---|---|
| Prep Date: | 02/16/2018 |
| Analysis Date: | 02/16/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | SM 4500-Cl--1997 |
| Analytical Method ID: | SM 4500-Cl--1997 |
| Instrument: | Titrimetric |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SE |

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 46 | | 2 | mg/L |

**Client:** Cotter Corp
**Analyte:** Sulfate, $SO_4^{2-}$

| | |
|---|---|
| Prep Date: | 02/20/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | ASTM D516-07 |
| Analytical Method ID: | ASTM D516-07 |
| Instrument: | Evo 160, UV/VIS |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL Dilution Factor: 2 |
| Analyst: | SE |

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 19.2 | | 0.24 | 1.18 | mg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Calcium, Ca – Dis

Prep Date: 02/15/2018
Analysis Date: 02/27/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 25
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 28,077 | | 250 | 1,250 | µg/L |

**Client:** Cotter Corp
**Analyte:** Magnesium, Mg – Dis

Prep Date: 02/15/2018
Analysis Date: 02/22/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 50
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 7,233 | | 30 | 155 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Potassium, K – Dis

Prep Date: 02/15/2018
Analysis Date: 02/22/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 1,588 | | 10 | 60 | µg/L |

**Client:** Cotter Corp
**Analyte:** Sodium, Na – Dis

Prep Date: 02/15/2018
Analysis Date: 02/21/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 100
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 13,329 | | 250 | 1,250 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Copper, Cu - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 0.251 | J | 0.21 | 1.07 | µg/L |

**Client:** Cotter Corp
**Analyte:** Copper, Cu - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 0.451 | | 0.21 | 1.07 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Silver, Ag - Dis

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | U | | 0.036 | 0.18 | µg/L |

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**Client:** Cotter Corp
**Analyte:** Silver, Ag - T

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | U | | 0.036 | 0.18 | µg/L |

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Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Chromium, Cr - T

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 4.81 | | 0.06 | 0.31 | µg/L |

**Client:** Cotter Corp
**Analyte:** Lead, Pb - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 0.08 | J | 0.04 | 0.18 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Manganese, Mn - Dis

Prep Date: 02/15/2018
Analysis Date: 02/20/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, GFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 6.89 | | 0.07 | 0.33 | µg/L |

**Client:** Cotter Corp
**Analyte:** Manganese, Mn - T

Prep Date: 02/15/2018
Analysis Date: 02/20/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, GFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 12.8 | | 0.07 | 0.33 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Zinc, Zn - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | U | | 1.6 | 8.08 | µg/L |

**Client:** Cotter Corp
**Analyte:** Zinc, Zn - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | U | | 1.6 | 8.08 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Iron, Fe - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 37.0 | | 4 | 10 | µg/L |

**Client:** Cotter Corp
**Analyte:** Iron, Fe - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 90.8 | | 4 | 10 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Residue – non, filterable (TSS)

| | |
|---|---|
| Prep Date: | 02/19/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2540 D |
| Analytical Method ID: | Std. Methods 2540 D |
| Instrument: | AE-240 Dual Range Analytical Balance |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SB |

| Location ID | Smp Date | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 4.4 | | 4 | mg/L |

**Client:** Cotter Corp
**Analyte:** Residue – filterable (TDS)

| | |
|---|---|
| Prep Date: | 02/19/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2540 C |
| Analytical Method ID: | Std. Methods 2540 C |
| Instrument: | AE-240 Dual Range Analytical Balance |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SB |

| Location ID | Smp Date | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-AWD | 02/13/18 | 418126.A | 176 | | 10 | mg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Cotter Corporation
**Project:** Schwartzwalder Mine
**Lab ID:** C18020442-002
**Client Sample ID:** SW-BPL

**Report Date:** 03/26/18
**Collection Date:** 02/13/18 11:36
**DateReceived:** 02/16/18
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **MAJOR IONS** | | | | | | | |
| Fluoride | 0.2 | mg/L | | 0.1 | | A4500-F C | 02/20/18 12:45 / mvr |
| **INORGANICS** | | | | | | | |
| Cyanide, Weak Acid Dissociable | 0.007 | mg/L | | 0.005 | | Kelada-01 | 02/22/18 10:26 / eli-b |
| **NUTRIENTS** | | | | | | | |
| Nitrogen, Nitrate+Nitrite as N | 0.02 | mg/L | | 0.01 | | E353.2 | 02/26/18 15:41 / dmb |
| Phosphorous, Total as Phosphate | ND | mg/L | | 0.03 | | Calculation | 03/16/18 11:27 / sec |
| Phosphorus, Total as P | ND | mg/L | | 0.005 | | E365.1 | 02/27/18 11:10 / dmb |
| **METALS, DISSOLVED** | | | | | | | |
| Aluminum | ND | mg/L | | 0.2 | | E200.8 | 02/22/18 21:27 / eli-b |
| Antimony | ND | mg/L | | 0.001 | | E200.8 | 02/22/18 21:27 / eli-b |
| Molybdenum | ND | mg/L | | 0.005 | | E200.8 | 02/23/18 19:28 / eli-b |
| Thallium | ND | mg/L | | 0.0002 | | E200.8 | 02/22/18 21:27 / eli-b |
| Uranium | 0.0103 | mg/L | | 0.0002 | | E200.8 | 02/23/18 19:28 / eli-b |
| **METALS, TOTAL** | | | | | | | |
| Aluminum | ND | mg/L | | 0.2 | | E200.7 | 02/23/18 02:01 / eli-b |
| Antimony | ND | mg/L | | 0.001 | | E200.8 | 02/23/18 06:10 / eli-b |
| Arsenic | ND | mg/L | | 0.001 | | E200.8 | 02/23/18 06:10 / eli-b |
| Boron | ND | mg/L | | 0.1 | | E200.7 | 02/23/18 02:01 / eli-b |
| Mercury | ND | mg/L | | 0.0001 | | E245.1 | 03/02/18 15:15 / eli-b |
| Molybdenum | ND | mg/L | | 0.005 | | E200.7 | 02/23/18 02:01 / eli-b |
| Thallium | ND | mg/L | | 0.0002 | | E200.8 | 02/23/18 06:10 / eli-b |
| Uranium | 0.0111 | mg/L | | 0.0002 | | E200.8 | 02/23/18 06:10 / eli-b |
| **RADIONUCLIDES, DISSOLVED** | | | | | | | |
| Radium 226 | 0.7 | pCi/L | | | | E903.0 | 03/05/18 14:33 / arh |
| Radium 226 precision (±) | 0.2 | pCi/L | | | | E903.0 | 03/05/18 14:33 / arh |
| Radium 226 MDC | 0.2 | pCi/L | | | | E903.0 | 03/05/18 14:33 / arh |
| **RADIONUCLIDES, TOTAL** | | | | | | | |
| Gross Alpha | 7.3 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Alpha precision (±) | 2.2 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Alpha MDC | 1.6 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta | 1.6 | pCi/L | U | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta precision (±) | 1.2 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Gross Beta MDC | 3.2 | pCi/L | | | | E900.0 | 02/22/18 23:32 / trs |
| Radium 226 | 0.4 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 226 precision (±) | 0.2 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 226 MDC | 0.2 | pCi/L | | | | E903.0 | 03/19/18 10:09 / arh |
| Radium 228 | 1.7 | pCi/L | | | | RA-05 | 03/13/18 08:09 / plj |
| Radium 228 precision (±) | 0.7 | pCi/L | | | | RA-05 | 03/13/18 08:09 / plj |
| Radium 228 MDC | 1.3 | pCi/L | | | | RA-05 | 03/13/18 08:09 / plj |

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

# LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

**Client:** Cotter Corporation
**Project:** Schwartzwalder Mine
**Lab ID:** C18020442-002
**Client Sample ID:** SW-BPL

**Report Date:** 03/26/18
**Collection Date:** 02/13/18 11:36
**DateReceived:** 02/16/18
**Matrix:** Aqueous

| Analyses | Result | Units | Qualifiers | RL | MCL/ QCL | Method | Analysis Date / By |
|---|---|---|---|---|---|---|---|
| **RADIONUCLIDES, TOTAL** | | | | | | | |
| Radium 226 + Radium 228 | 2.1 | pCi/L | | | | A7500-RA | 03/21/18 19:03 / sec |
| Radium 226 + Radium 228 precision (±) | 0.7 | pCi/L | | | | A7500-RA | 03/21/18 19:03 / sec |
| Radium 226 + Radium 228 MDC | 1.3 | pCi/L | | | | A7500-RA | 03/21/18 19:03 / sec |
| **CLIENT PROVIDED FIELD PARAMETERS** | | | | | | | |
| Field Conductivity | 239 | umhos/cm | | | | FIELD | 02/13/18 11:36 / *** |
| Field pH | 7.75 | s.u. | | | | FIELD | 02/13/18 11:36 / *** |
| Field Temperature, C | 4.7 | °C | | | | FIELD | 02/13/18 11:36 / *** |

*** Field data provided by client

**Report Definitions:**
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

**Client:** Cotter Corp
**Analyte:** Bicarbonate (As $HCO_3$)

| | |
|---|---|
| Prep Date: | 02/24/2018 |
| Analysis Date: | 02/24/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2320 B. |
| Analytical Method ID: | Std. Methods 2320 B. |
| Instrument: | Titrimetric |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SE |

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 72 | | 10 | mg/L |

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**Client:** Cotter Corp
**Analyte:** Alkalinity (total as $CaCO_3$)

| | |
|---|---|
| Prep Date: | 02/24/2018 |
| Analysis Date: | 02/24/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2320 B. |
| Analytical Method ID: | Std. Methods 2320 B. |
| Instrument: | Titrimetric |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SE |

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 72 | | 10 | mg/L |

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Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Chloride

Prep Date: 02/162018
Analysis Date: 02/16/2018
Approved Method Source: 40 CFR 136.3
Prep ID: SM 4500-Cl--1997
Analytical Method ID: SM 4500-Cl--1997
Instrument: Titrimetric

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 100 mL
Analyst: SE

| Location ID | SmpDate | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 39 | | 2 | mg/L |

**Client:** Cotter Corp
**Analyte:** Sulfate, $SO_4^{2-}$

Prep Date: 02/20/2018
Analysis Date: 02/20/2018
Approved Method Source: 40 CFR 136.3
Prep ID: ASTM D516-07
Analytical Method ID: ASTM D516-07
Instrument: Evo 160, UV/VIS

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 100 mL Dilution Factor: 2
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 22.5 | | 0.24 | 1.18 | mg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Calcium, Ca – Dis

Prep Date: 02/15/2018
Analysis Date: 02/27/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 50
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 48,079 | | 500 | 2,500 | µg/L |

**Client:** Cotter Corp
**Analyte:** Magnesium, Mg – Dis

Prep Date: 02/15/2018
Analysis Date: 02/22/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 50
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 6,836 | | 30 | 155 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Potassium, K – Dis

Prep Date: 02/15/2018
Analysis Date: 02/22/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 1,606 | | 10 | 60 | µg/L |

**Client:** Cotter Corp
**Analyte:** Sodium, Na – Dis

Prep Date: 02/15/2018
Analysis Date: 02/21/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 100
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 16,586 | | 250 | 1,250 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Copper, Cu - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | | 0.21 | 1.07 | µg/L |

**Client:** Cotter Corp
**Analyte:** Copper, Cu - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | J | 0.21 | 1.07 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
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**Client:** Cotter Corp
**Analyte:** Silver, Ag - Dis

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | | 0.036 | 0.18 | µg/L |

**Client:** Cotter Corp
**Analyte:** Silver, Ag - T

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | | 0.036 | 0.18 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Chromium, Cr - T

Prep Date: 02/15/2018
Analysis Date: 02/19/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 0.50 | | 0.06 | 0.31 | µg/L |

**Client:** Cotter Corp
**Analyte:** Lead, Pb - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: USEPA 200.9
Instrument: iCE 3500, STPGFAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 0.103 | J | 0.04 | 0.18 | µg/L |

Qualifiers:
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J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Manganese, Mn - Dis

| | |
|---|---|
| Prep Date: | 02/15/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 3030 E. |
| Analytical Method ID: | Std. Methods 200.9 |
| Instrument: | iCE 3500, GFAA |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 50 mL Dilution Factor: 10 |
| Analyst: | SE |

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 27.0 | | 0.70 | 3.3 | µg/L |

**Client:** Cotter Corp
**Analyte:** Manganese, Mn - T

| | |
|---|---|
| Prep Date: | 02/15/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 3030 E. |
| Analytical Method ID: | Std. Methods 200.9 |
| Instrument: | iCE 3500, GFAA |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 50 mL Dilution Factor: 10 |
| Analyst: | SE |

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 34.9 | | 0.70 | 3.3 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
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S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Zinc, Zn - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | | 1.6 | 8.08 | µg/L |

**Client:** Cotter Corp
**Analyte:** Zinc, Zn - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 3111 B.
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | U | | 1.6 | 8.08 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Iron, Fe - Dis

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 86.6 | | 4 | 10 | µg/L |

**Client:** Cotter Corp
**Analyte:** Iron, Fe - T

Prep Date: 02/15/2018
Analysis Date: 02/17/2018
Approved Method Source: 40 CFR 136.3
Prep ID: Std. Methods 3030 E.
Analytical Method ID: Std. Methods 200.9
Instrument: iCE 3500, FLAA

Matrix: Aqueous (water, wastewater, groundwater)
Sample volume used: 50 mL Dilution Factor: 1
Analyst: SE

| Location ID | Smp Date | SCG # | Results | Flags | MDL | RL | Units |
|---|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 223 | | 4 | 10 | µg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative

**Client:** Cotter Corp
**Analyte:** Residue – non, filterable (TSS)

| | |
|---|---|
| Prep Date: | 02/19/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2540 D |
| Analytical Method ID: | Std. Methods 2540 D |
| Instrument: | AE-240 Dual Range Analytical Balance |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SB |

| Location ID | Smp Date | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 6.5 | | 4 | mg/L |

**Client:** Cotter Corp
**Analyte:** Residue – filterable (TDS)

| | |
|---|---|
| Prep Date: | 02/19/2018 |
| Analysis Date: | 02/20/2018 |
| Approved Method Source: | 40 CFR 136.3 |
| Prep ID: | Std. Methods 2540 C |
| Analytical Method ID: | Std. Methods 2540 C |
| Instrument: | AE-240 Dual Range Analytical Balance |
| Matrix: | Aqueous (water, wastewater, groundwater) |
| Sample volume used: | 100 mL |
| Analyst: | SB |

| Location ID | Smp Date | SCG # | Results | Flags | RL | Units |
|---|---|---|---|---|---|---|
| SW-BPL | 02/14/18 | 418127.A | 188 | | 10 | mg/L |

Qualifiers:
E – Extrapolated value. Value exceeds calibration range
H – Analysis exceeded holding time
J – Estimated value detected below the RL/MRL
S – Spike recovery outside acceptance limits
U – Analyte not detected
X – See case narrative